

Wayne State University

GRADUATE BULLETIN



2016-18



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General Information

This publication is for information purposes and is neither a contract nor an offer contract. The University reserves the right to change any provision or requirement at any time without notice.

Contained in the following section are the general rules and regulations for graduate study at Wayne State University. It is the responsibility of the student to meet and satisfy all University, College and program requirements

Calendar, Academic 2016 - 2018

Fall Term: 2016

Schedule of Classes Online: Mon., Feb. 29
Priority Registration: Mon., Mar. 28 - Sun., Aug 21
Open Registration: Mon., Aug. 22 - Tue., Aug. 30
University Year Appointments Begin²: Thu., Aug. 18
Classes Begin: Wed., Aug. 31
Holiday - University Closed: Mon., Sept. 5
Late Registration., Late Adds: Wed., Aug. 31 - Wed., Sept. 7
Last Day to Drop w/ Tuition Canceled (Census Date): Wed., Sept. 14
Early Assessment-Mid-Term Grading: Wed., Sept. 14 -Tue., Oct. 18
Classes Dropped Not Appear on Academic Record: Thu., Sep. 15- Wed., Sep. 28
Degree Applications Due: Fri., Sept. 30
Last Day to Withdraw: Sun., Nov 13
Holiday - No Classes: Wed., Nov. 23
Holiday - University Closed: Thu Nov. 24 - Sat., Nov. 26
Commencement: TBD
Classes End: Mon., Dec. 12
Study Day: Tue., Dec. 13
Final Exams: Wed., Dec. 14 - Tue., Dec. 20
Holiday - University Closed: Mon., Dec. 26 - Thur., Jan. 2

Winter Term: 2017*

Schedule of Classes Online: Mon., Oct. 10
Priority Registration: Mon., Oct. 31 - Sun., Jan 1
Open Registration: Mon., Jan 2 - Sun., Jan. 8
University Year Appointments Begin²: Mon., May. 16
Classes Begin: Mon., Jan. 9
Holiday - University Closed: Mon., Jan 16
Late Registration., Late Adds: Wed., Mon., Jan. 9 - Sun., Jan. 15
Last Day to Drop w/ Tuition Canceled (Census Date): Mon., Jan. 23
Early Assessment-Mid-Term Grading: Mon., Jan. 23 -Mon., Feb. 27
Classes Dropped Not Appear on Academic Record: Tue., Jan. 24- Sun., Feb. 5
Degree Applications Due: Fri., Feb. 10
Last Day to Withdraw: Sun., Mar 26
Holiday - No Classes: Mon., Mar. 13 - Sat., Mar. 18
Holiday - University Closed: N/A
Commencement: TBD
Classes End: Mon., Apr. 24
Study Day: Tue., Apr. 25
Final Exams: Wed., Apr. 26 - Tue., May. 2
Holiday - University Closed: N/A

Spring/Summer Term: 2017*

Term Begins: Mon., Jan. 23
Priority Registration: Mon., Feb. 6 - Sun., May 7
Classes Begin: Mon., May 8
Late Registration: Mon., May 8 - Sun., May 21
Last Day to Drop w/ Tuition Canceled: Sun., May 21
Holiday University Closed: Mon., May 29
Day Scheduled as a Monday: Fri., Jun. 2
Degree Applications Due: Fri., Jun. 9
Holiday University Closed: Tue., Jul. 4
Census Date: Wed., Jul. 5
Last Day to Withdraw: Sun., Jul. 16
Classes End: Fri., Jul. 28
Study Day: Sat., Jul. 29
Final Exams: Mon., Jul. 31 - Thur., Aug. 3

Spring Term: 2017*

Term Begins: Mon., Jan. 23
Priority Registration: Mon., Feb. 6 - Sun., May 7
Classes Begin: Mon., May 8
Late Registration: Mon., May 8 - Sun., May 14
Last Day to Drop w/ Tuition Canceled: Sun., May 14
Holiday University Closed: Mon., May 29
Day Scheduled as a Monday¹: Fri., Jun. 2
Degree Applications Due: Fri., Jun. 9
Holiday University Closed: N/A
Census Date: Wed., Jul. 5
Last Day to Withdraw: Sun., Jun. 11
Classes End: Fri., Jun. 23
Study Day: Sat., Jun. 24

Summer Term: 2017*

Term Begins: Mon., Jan. 23
Priority Registration: Mon., Feb. 6 - Tue., Jun 27
Classes Begin: Wed., Jun. 28
Late Registration: Wed., Jun 28 - Wed., Jul. 5
Last Day to Drop w/ Tuition Canceled: Wed., Jul. 5
Degree Applications Due: Fri., Jun. 9
Holiday University Closed: N/A
Census Date: Wed., Jul. 5
Last Day to Withdraw: Wed., Aug. 2
Classes End: Tue., Aug. 15
Study Day: Wed., Aug. 16
Final Exams: Thu Aug. 17 - Fri., Aug. 18

Fall Term: 2017

Schedule of Classes Online: Mon., Feb. 27
Priority Registration: Mon., Mar. 27 - Sun., Aug. 20
Open Registration: Mon., Aug. 21 - Tue., Sep. 29
University Year Appointments Begin²: Thu., Aug. 17
Classes Begin: Wed., Aug. 30
Holiday - University Closed: Mon., Sep. 4
Late Registration., Late Adds: Wed., Aug. 30 - Wed., Sep. 6
Last Day to Drop w/ Tuition Canceled (Census Date): Wed., Sep. 13
Early Assessment-Mid-Term Grading: Wed., Sep. 13 - Tue., Oct. 17
Classes Dropped Not Appear on Academic Record: Thu., Sep. 14 - Wed., Sep. 27
Degree Applications Due: Fri., Sep. 29
Last Day to Withdraw: Sun., Nov. 12
Holiday - No Classes: Wed., Nov. 22
Holiday - University Closed: Thu Nov. 23 - Sat., Nov. 25
Commencement: TBD
Classes End: Mon., Dec. 11
Study Day: Tue., Dec. 12
Final Exams: Wed., Dec. 13 - Tue., Dec. 19
Holiday - University Closed: Mon., Dec. 25 - Tue., Jan. 2

Winter Term: 2018

Schedule of Classes Online: Mon., Oct. 9
Priority Registration: Mon., Oct. 30 - Sun., Dec. 31
Open Registration: Mon., Jan 1 - Sun., Jan. 7
University Year Appointments Begin²: Mon., May. 15
Classes Begin: Mon., Jan. 8
Holiday - University Closed: Mon., Jan 15
Late Registration., Late Adds: Wed., Mon., Jan. 8 - Sun., Jan. 14
Last Day to Drop w/ Tuition Canceled (Census Date): Mon., Jan. 22
Early Assessment-Mid-Term Grading: Mon., Jan. 22 -Mon., Feb. 26
Classes Dropped Not Appear on Academic Record: Tue., Jan. 23- Sun., Feb. 4
Degree Applications Due: Fri., Feb. 9
Last Day to Withdraw: Sun., Mar 25
Holiday - No Classes: Mon., Mar. 12 - Sat., Mar. 17
Holiday - University Closed: N/A
Commencement: TBD
Classes End: Mon., Apr. 23
Study Day: Tue., Apr. 24
Final Exams: Wed., Apr. 25 - Tue., May. 1
Holiday - University Closed: N/A

Spring/Summer Term: 2018

Term Begins: Mon., Jan. 22
Priority Registration: Mon., Feb. 5 - Sun., May 6
Classes Begin: Mon., May 7
Late Registration: Mon., May 7 - Sun., May 20
Last Day to Drop w/ Tuition Canceled: Sun., May 20
Holiday University Closed: Mon., May 28
Day Scheduled as a Monday: Fri., Jun. 1
Day Scheduled as a Wednesday: Fri., Jul. 6
Degree Applications Due: Fri., Jun. 8
Holiday University Closed: Wed., Jul. 4
Census Date: Tues., Jul. 3
Last Day to Withdraw: Sun., Jul. 15
Classes End: Fri., Jul. 27
Study Day: Sat., Jul. 28
Final Exams: Mon., Jul. 30 - Thur., Aug. 2

Spring Term: 2018

Term Begins: Mon., Jan. 22
Priority Registration: Mon., Feb. 5 - Sun., May 6
Classes Begin: Mon., May 7
Late Registration: Mon., May 7 - Sun., May 13
Last Day to Drop w/ Tuition Canceled: Sun., May 13
Holiday University Closed: Mon., May 28
Day Scheduled as a Monday¹: Fri., Jun. 1
Degree Applications Due: Fri., Jun. 8
Holiday University Closed: N/A
Census Date: Tues., Jul. 3
Last Day to Withdraw: Sun., Jun. 10
Classes End: Fri., Jun. 22
Study Day: Sat., Jun. 23
Final Exams: Mon., Jun. 25 - Tue., Jun. 26

Summer Term: 2018

Term Begins: Mon., Jan. 22
Priority Registration: Mon., Feb. 5 - Tue., Jun 26
Classes Begin: Wed., Jun. 27
Late Registration: Wed., Jun 27 - Tues., Jul. 3
Last Day to Drop w/ Tuition Canceled: Tues., Jul. 3
Degree Applications Due: Fri., Jun. 8
Holiday University Closed: Wed., Jul. 4
Day Scheduled as a Wednesday: Fri., Jul. 6
Census Date: Tues., Jul. 3
Last Day to Withdraw: Wed., Aug. 1
Classes End: Tue., Aug. 14
Study Day: Wed., Aug. 15
Final Exams: Thu Aug. 16 - Fri., Aug. 17

1. An equal number of class days is needed for some laboratory courses. To make up for class days lost due to observance of holidays, substitute class days are scheduled.

2. University Year Appointments are a full nine months in length. Individual service assignments are the responsibility of the appropriate Dean, or, by delegation, the Department Chairperson

*Tentative.

Administration of the University

JOHN D. VANDER WEG, Ph.D., Associate Provost and Associate
Vice President for Academic Personnel
CHERYL WAITES, Ph.D., Dean of the School of Social Work
R. DOUGLAS WHITMAN, Ph.D., Dean of the College of
Education
SANDRA G. YEE, Ed.D., Dean of University Libraries and of
the School of Library and Information Science

Board of Governors

DIANE L. DUNASKISS
MARILYN KELLY
PAUL E. MASSARON, Vice-Chair
DAVID A. NICHOLSON
SANDRA HUGHES O'BRIEN
GARY S. POLLARD, Chair
DANA THOMPSON
KIM TRENT

M. ROY WILSON, *ex officio*

President and Cabinet

M. ROY WILSON, M.D., President of the University
KEITH WHITFIELD, Ph.D., Provost and Senior Vice President
for Academic Affairs
MARQUITA T. CHAMBLEE, Ph.D., Associate Provost
for Diversity and Inclusion and Chief Diversity Officer
WILLIAM DECATUR, J.D., Vice President, Finance
and Business Operations and Treasurer and Chief Financial Officer
AHMAD EZZEDDINE, Ph.D., Associate Vice President
for Educational Outreach and International Programs and
Senior Associate to the President for Special Initiatives
DAVID S. HEFNER, M.P.A., Vice President for Health Affairs
SUSAN BURNS, B.Mus., Vice President for Development
and Alumni Affairs, and President of the Wayne State
University Foundation
LOUIS LESSEM, J.D., Vice President and General Counsel
PATRICK O. LINDSEY, M.A., Vice President for Government
and Community Affairs
JULIE MILLER, M.A., Secretary to the Board of Governors
and Senior Executive Assistant to the President
STEPHEN M. LANIER, Ph.D., Vice President for Research
EDWARD (NED) STAEBLER, M.S., Vice President for
Economic Development
MICHAEL WRIGHT, M.B.A., Vice President of Marketing and
Communication and Chief of Staff

Academic Administrators

JOCELYN BENSON, J.D., Dean of the Law School
MONICA BROCKMEYER, Ph.D., Associate Provost for
Student Success
LAURIE LAUZON CLABO, Ph.D., Dean of the College of Nursing
R. DARIN ELLIS, Ph.D., Associate Provost
and Associate Vice President for Undergraduate Affairs
ROBERT FORSYTHE, Ph.D., Dean of the School
of Business Administration
FARSHAD FOTOUHI, Ph.D., Dean of the College of Engineering
JERRY HERRON, Ph.D., Dean of the Irvin D. Reid Honors College
DAREN HUBBARD, M.B.A., Chief Information Officer
and Vice President, Computing and Information Technology
SERRINE S. LAU, Ph.D., Dean of the Eugene
Applebaum College of Pharmacy and Health Sciences
CELESTE LEZUCH, M.S.A., Assistant Vice President for
Academic Administration
AMBIKA MATHUR, Ph.D., Dean of the Graduate School
MATHEW L. OUELLETT, Ed.D., Associate Provost and Director of
Office for Teaching and Learning
WAYNE RASKIND, Ph.D., Dean of the College of Liberal Arts
and Sciences
MATTHEW SEEGER, Ph.D., Dean of the College of Fine,
Performing and Communication Arts
JACK SOBEL, M.D., Dean of the School of Medicine

Foreword to University General Information

Mission of the University

Wayne State's mission is to create and advance knowledge, prepare a diverse student body to thrive, and positively impact local and global communities.

Our vision

Wayne State will be a pre-eminent, public, urban research university known for academic and research excellence, success across a diverse student body, and meaningful engagement in its urban community.

Our values

While our vision and mission show where we want to go, our values guide us on the way. They cut across organizational boundaries, bind us culturally, and permeate our strategic and tactical initiatives. They are the defining traits of the Wayne State community.

Collaboration: When we work together, drawing upon various talents and perspectives, we achieve better results.

Integrity: We keep our word, live up to our commitments and are accountable to ourselves and each other.

Innovation: We are unafraid to try new things and learn by both failure and success.

Excellence: We strive for the highest quality outcomes in everything we do.

Diversity and Inclusion: We value all people and understand that their unique experiences, talents and perspectives make us a stronger organization and better people.

Wayne State intends to remain one of the nation's most respected public research universities, and feels that these goals provide a way to make that happen. National recognition is not an end in itself; what matters most is how Wayne State's progress as shaped by these goals will position the university to benefit its students and, ultimately, its city, state, nation and the world.

History of the University

Wayne State University's story begins in 1868 with the founding of the Detroit Medical College, now the School of Medicine. In 1881, the Detroit Normal Training School was established, which is now the College of Education. The now-iconic Old Main Hall was built in 1896 as Central High School, which began adding college classes in 1913. Those classes evolved into the Detroit Junior College (offering a two-year general education program) in 1917, which became the College of the City of Detroit (with four-year degree programs) in 1923, and now is the College of Liberal Arts and Sciences.

In 1924, the College of Pharmacy was organized, and six years later the first regular graduate courses were offered in liberal arts and education. Frank Cody became the first president in 1933, with the existing colleges united into a university organization, eventually named Wayne University, taken from Wayne County in honor of General Anthony Wayne.

Wayne University continued to grow, adding the School of Social Work, the Law School, and the School of Business Administration. In 1956, it was renamed Wayne State University. In 1963, Wayne State was designated one of Michigan's three constitutionally established universities.

1868 — The Detroit Medical College, forerunner of the School of Medicine, was established.

1881 — The Detroit Normal Training School, forerunner of the College of Education, was established.

1917 — The Detroit Junior College, offering a two-year program in general education, was established in 'Old Main' and later developed into the College of Liberal Arts.

1923 — The Detroit Normal Training School became a four-year degree-granting institution under the name of the Detroit Teachers College. The first degrees were granted in 1924. The Detroit Junior College became the College of the City of Detroit with four-year degree programs. The first degrees were conferred in 1925.

1924 — The College of Pharmacy was organized.

1930 — The first regular graduate courses were offered in Liberal Arts and Education. The first Master's degrees were conferred in 1932.

1933 — The College of Engineering and the Graduate School were established.

1933 — The Colleges of Liberal Arts, Education, Engineering, Medicine and Pharmacy and the Graduate School were united by action of the Detroit Board of Education into a university organization, temporarily called the Colleges of the City of Detroit.

1934 — The name Wayne University was adopted, taken from Wayne County and, ultimately, from General Anthony Wayne.

1935 — The School of Public Affairs and Social Work was organized. In 1950 it became the present School of Social Work.

1937 — The Law School, established in 1927 as Detroit City Law School, came into the University.

1945 — The first doctoral programs were authorized in the fields of Chemistry, Physiological Chemistry and Education.

1945 — The College of Nursing, which began as a program in the College of the City of Detroit, became a separate college.

1946 — The School of Business Administration, originating in the College of Liberal Arts, became the tenth academic unit in the University.

1956 — Wayne University became Wayne State University by Act 183 of Michigan Public Acts of 1956.

1959 — Monteith College was established.

1959 — Wayne State University became a constitutionally established University by popularly adopted amendment to the Michigan Constitution.

1964 — The Division of Urban Extension was established.

1973 — The College of Lifelong Learning was established as successor to the Division of Urban Extension.

1973 — The College of Pharmacy and Allied Health Professions was established.

1985 — The School of Fine and Performing Arts and the College of Urban, Labor and Metropolitan Affairs were established.

1989 — The name of the School of Fine and Performing Arts was changed to the College of Fine, Performing and Communication Arts.

1993 — The College of Science was established.

2001 — The name of the College of Pharmacy and Allied Health Professions was changed to the Eugene Applebaum College of Pharmacy and Health Sciences.

2002 — The College of Lifelong Learning was discontinued and its programs transferred to other units.

2004 — The College of Liberal Arts and the College of Science were merged into the College of Liberal Arts and Sciences.

2005 — The College of Urban, Labor and Metropolitan Affairs was discontinued and its programs transferred to other units.

2008 — The Irvin D. Reid Honors College was established.

2009 — The Library and Information Science Program was established as the School of Library and Information Science.

2011 — The Warrior football team made its first appearance in the NCAA Division II championship game.

Location of the University - Maps

More than 100 buildings provide housing for the services, instructional and research needs of the University and its students and staff. Most academic and service units of the University are located on the main campus in Midtown of Detroit, largely bounded by York Street on the north, Woodward Avenue on the east, Forest Avenue on the south and Trumbull Street on the west. The major classroom, laboratory, library and other academic buildings are located east of the John C. Lodge Freeway; most of the athletics and recreational facilities are on the west side of the freeway.

The School of Medicine and its affiliated teaching hospitals and clinics are located a short distance south and east of the main campus in the Detroit Medical Center. The Eugene Applebaum College of Pharmacy and Health Sciences is also located on the medical campus. Certain smaller instructional and service units are located in other parts of the metropolitan area.

Organization of the University, Administrative

The general governance of Wayne State University is constitutionally vested in the Board of Governors, consisting of eight popularly elected members and the President of the University, who is named by the elected members. The President is the chief executive officer of the University and is charged by the Board of Governors with responsibility for its administration. For educational and administrative purposes, the University is organized into major academic units — schools, colleges, divisions, centers and institutes. The following schools, colleges and divisions offer degree programs in their respective areas and together constitute the heart of the University:

- Mike Ilitch School of Business
- College of Education
- College of Engineering
- College of Fine, Performing and Communication Arts
- Irvin R. Reid Honors College
- Graduate School
- Law School
- College of Liberal Arts and Sciences
- School of Library and Information Science
- School of Medicine
- College of Nursing
- Eugene Applebaum College of Pharmacy and Health Sciences
- School of Social Work

The Dean of the College or School is its chief executive officer. More than half the Colleges and Schools are organized into departments or divisions, each administered by a chairperson (or head). Academic standards, curricular development, course revision and similar academic matters are the primary responsibility of the faculty and dean of the College or School, although these matters are subject to review and approval by the Provost and Senior Vice President for Academic Affairs and by the President and, whenever they involve major educational policy decisions, by the Academic Senate.

The Graduate School is the central unit for the supervision and encouragement of graduate work in the University and has basic responsibility for the improvement and review of existing programs and the approval of new graduate programs. Except for applicants and candidates for the Doctor of Philosophy degree, the detailed supervision of graduate students' work is conducted by the College and School and, where appropriate, by the departments.

All degrees are granted by the University through the Colleges and Schools, except that the Dean of the Graduate School, with the

approval of the Graduate Council, recommends candidates for the Doctor of Philosophy degree, selected master's degrees and interdisciplinary graduate certificate programs.

Centers and Institutes

Wayne State University's centers and institutes play an integral role in the university's emphasis on encouraging innovative scholarship, providing service to society and strengthening its performance as a nationally recognized research university. WSU's centers and institutes embrace the multidisciplinary nature of scholarship and research within the university, and expand university boundaries by fostering collaborations with government, industry and organizations to enhance economic growth and the quality of life locally, nationally and globally. Our centers and institutes vary greatly in size, focus and mission. Some promote a primarily research-focused agenda, while others focus on instruction and/or community service.

The most recent version of WSU's policy on centers and institutes, adopted on November 30, 2005, identifies a two-tiered category of centers and institutes. Centers are grouped first into university or college centers. University centers are engaged in activities that involve more than one college/school and are under the direct administrative supervision of the President or designee. Within the university centers are Type I (primarily academic) or Type II (research centers) with oversight generally falling to the Provost or the Vice President for Research, respectively. A college center is engaged in activities that primarily involve one college/school and is under the direct administrative supervision of the dean of that college/school. For descriptions of the functions of all of the following Centers see Centers and Institutes, p. 60.

University Centers

Academic

- Center for Urban Studies
- Cohn-Haddow Center for Judaic Studies
- Developmental Disabilities Institute
- Humanities Center

Research

- Barbara Ann Karmanos Cancer Institute
- Center for Molecular Medicine and Genetics
- Institute of Environmental Health Sciences
- Institute of Gerontology
- Merrill Palmer Skillman Institute

School and College Centers

Business Administration

- Manufacturing Information Systems Center (MISC)

Education

- Center for School Health
- Center Self-Determination and Transition
- Institute for Learning and Performance Improvement
- Institute for the Study of the African American Child

Engineering

- Bioengineering Center
- Center for Automotive Research

Law

- Damon J. Keith Center for Civil Rights

Liberal Arts And Sciences

- Center for Excellence and Equity in Mathematics
- Center for Latino/a and Latin American Studies
- Center for the Study of Citizenship
- Confucius Institute
- Douglas A. Fraser Center for Workplace Issues
- Labor Studies Center

Medicine

C.S. Mott Center for Human Growth and Development
Cardiovascular Research Institute
Center to Advance Palliative-Care Excellence
Ligon Research Center of Vision

Social Work

Center for Social Work Practice

Accreditation

Wayne State University as a whole is accredited as a doctoral degree-granting institution by the regional accrediting agency, The Higher Learning Commission, 230 South LaSalle St., Suite 7-500, Chicago, Illinois 60604-1411; telephone: 800-621-7440. In addition, many specific programs and curricula are accredited individually by specialized or professional accrediting agencies. A report is produced annually for the Board of Governors which designates the accrediting agencies of the University's programs; the report is available from the Board of Governors' Office, 4231 Faculty Administration Building, and online at <http://provost.wayne.edu/apr/accreditations.php>. The principal accreditation agencies are as follows:

Mike Ilitch School of Business

School: Accreditation Council of AACSB International – *The Association to Advance Collegiate Schools of Business (AACSB)*

Education

College Accreditation: Teacher Education Accreditation Council (*TEAC*)

Art Therapy Program: *American Art Therapy Association*

Counselor Education (graduate only): *Council for Accreditation of Counseling and Related Educational Programs (CACREP)*

Education Leadership (Masters) Building Level Administrator: *Michigan Department of Education*

Educational Psychology, School and Community Psychology concentration (Ph.D. only): *National Association of School Psychologists*

Education Specialist Certificate, General Administration and Supervision: *Michigan Department of Education*

Health Education Programs: *Michigan Department of Education*

Kinesiology Doctoral Program: *National Academy of Kinesiology/Physical Education*

Rehabilitation Counseling and Community Inclusion (graduate only): *Council of Rehabilitation Education, INC. (CORE)*

Teacher Education Programs: *Michigan Department of Education*

Engineering

Division of Engineering (undergraduate): B.S. degrees in Chemical Engineering, Civil Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering: *Accreditation Board of Engineering and Technology, Inc. (ABET, Inc.)-Engineering Accreditation Commission*

Division of Engineering Technology (undergraduate) B.S. degrees in Electrical/Electronic Engineering Technology, and Mechanical Engineering Technology *Accreditation Board of Engineering and Technology, Inc. (ABET, Inc.)-Technology Accreditation Commission*

Fine, Performing And Communication Arts

Communication (B.A. in Public Relations): *The Public Relations Society of America, Inc.*

Dance: *National Association of Schools of Dance (NASD)*

Music: *National Association of Schools of Music (NASM)*

Theatre: *National Association of Schools of Theatre (NAST)*

Law

American Bar Association (ABA) and Association of American Law Schools (AALS) (Joint Committee)

Liberal Arts and Sciences

Chemistry (undergraduate only): *American Chemical Society (ACS)*

Communication Sciences and Disorders (Doctor of Audiology and M.A. in Speech Language Pathology only): *American Speech-Language-Hearing Association, Council on Academic Accreditation (CAA) in Audiology and Speech-Language Pathology*

Nutrition and Food Science (Coordinated Program in Dietetics): *Commission on Accreditation for Dietetic Education*

Political Science (Master of Public Administration): *Network of Schools of Public Policy, Affairs and Administration (NASPAA)*

Psychology (Clinical Training Program): *American Psychological Association (APA)*

Urban Planning (Master of Urban Planning): *Planning Accreditation Board (PAB)*

Library and Information Science

American Library Association (ALA)

Medicine

Continuing Medical Education: *Accreditation Council for Continuing Medical Education (ACCME)*

Doctor of Medicine Degree Program (M.D.): *Liaison Committee on Medical Education (LMCE), representing the American Medical Association and the Association of American Medical Colleges*

Genetic Counseling (Master of Science in Genetic Counseling): *American Board of Genetic Counseling*

Graduate Medical Education Programs, Affiliated Hospitals' Resident Physician Programs: *Accreditation Council on Graduate Medical Education (ACGME)*

Master of Public Health: *Council on Education for Public Health*

Medical Physics/Radiation Oncology: *Commission on Accreditation of Medical Physics Educational Programs, Inc.*

Nursing

Nursing (Baccalaureate programs, M.S.N., and D.N.P.): *Commission on Collegiate Nursing Education (CCNE)*

Nurse-Midwifery Program: *Commission for Midwifery Education and Commission on Collegiate Nursing Education (CCNE)*

Eugene Applebaum College of Pharmacy and Health Sciences

Clinical Laboratory Science: *National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)*

Mortuary Science: *American Board of Funeral Service Education, Inc. (ABFSE)*

Nurse Anesthesia: *American Association of Nurse Anesthesia (Council on Accreditation of Nurse Anesthesia Educational Programs)*

Occupational Therapy: *Accreditation Council on Occupational Therapy Education (ACOTE)*

Pharmacy (Doctor of Pharmacy): *Accreditation Council for Pharmacy Education (ACPE)*

Physical Therapy: *Commission on Accreditation in Physical Therapy Education (CAPTE), American Physical Therapy Association*

Physician Assistant Program: *Accreditation Review Committee on Education for the Physician Assistant, Inc. (ARC-PA)*

Radiation Therapy Technology (undergraduate): *Joint Review Committee on Education in Radiologic Technology (JRCERT)*

Radiologic Technology (undergraduate): *Joint Review Committee on Education in Radiologic Technology (JRCERT)*

Social Work

Bachelor of Social Work and Master of Social Work:
Council on Social Work Education (CSWE)

Equality of Opportunity Policy

Wayne State University is committed to a policy of non-discrimination and equal opportunity in all of its operations, employment opportunities, educational programs and related activities.

This policy embraces all persons regardless of race, gender, color, sex (including gender identity), national origin, religion, age, sexual orientation, marital status, familial status, disability, arrest record, weight, qualified Vietnam era veterans, qualified special disabled veterans, recently separated veterans and other protected veterans, or any other characteristic protected by applicable federal or state law. It expressly forbids discrimination, sexual harassment or any form of harassment in hiring, terms of employment, tenure, promotion, placement and discharge of employees, admission, training and treatment of students, extra-curricular activities, the use of University services, facilities and in the awarding of contracts.

This policy also forbids retaliation and/or any form of harassment against an individual as a result of filing a complaint of discrimination or harassment, or participating in an investigation of a complaint of discrimination or harassment.

Wayne State University, as an equal opportunity/affirmative action institution, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. In furtherance of this policy, the University is also committed to promoting institutional diversity to achieve full equity in all areas of University life and service and in those private clubs and accommodations that are used by University personnel. No off-campus activities sponsored by or on behalf of Wayne State University shall be held in private club facilities or accommodations which operate from an established policy barring membership or participation on the basis of race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability or veteran status. Affirmative action procedures, measures and program may be used to the extent permitted by law to establish, monitor and implement affirmative action plans for all budgetary units and the University as a whole.

Inquiries regarding equal opportunity Academic/Administrative policies or complaints may be made to the Office of Equal Opportunity, 4324 Faculty/Administration Building, Wayne State University, Detroit Michigan 48202; Telephone 313-577-2280 or <http://www.oeo.wayne.edu>

Handicapped, Non-Discrimination Policy

In accordance with federal requirements of the Americans with Disabilities Act of 1990 and the Rehabilitation Act of 1973, there shall be no discrimination on the basis of disability in Wayne State University's programs, operations and activities, in the hiring, terms and conditions or privileges of employment or any matter directly or indirectly related to such employment, or in the admission, education and treatment of students. (See Disability Services, Student (SDS), p. 55 for services available to disabled students.)

Drug and Alcohol Free Workplace Policy

Wayne State University is committed to providing a drug-free environment for its faculty, staff, and students. The Board of Governors has made this commitment a formal policy of the University. All faculty, staff and students must abide by the terms of the Board policy as a condition of employment or enrollment at the University. The unlawful possession, use, distribution, sale or manufacture of drugs or alcohol is prohibited on University premises, at University activities, and at University work sites.

Pursuant to that policy, the unlawful possession, use, distribution, dispensation, sale or manufacture of any illicit drugs, and the unlawful possession, use or distribution of alcohol on University property, or at any University work site, or as part of any University activity, is prohibited.

Any employee or student employee who is convicted of a criminal drug offense occurring at the workplace is subject to appropriate employee discipline in accordance with established University policies and collective bargaining agreements, and may be required to participate satisfactorily in a drug abuse or rehabilitation program as a condition of further employment or enrollment.

Any student or employee who, while on University premises or at any University activity, engages in the unlawful possession, sale, manufacture, distribution, or use of drugs or alcohol shall be subject to appropriate sanctions, in accordance with established University policies, the Student Code of Conduct, and collective bargaining agreements, and in conformity with local, State and federal law, up to and including expulsion or termination.

The University encourages employees who may have a problem with the use of illicit drugs or with the abuse of alcohol to seek professional advice and treatment. Individuals who seek assistance with such problems may obtain additional information on a confidential basis by telephoning the Employee Assistance Program (EAP) at 1-800-448-8326. Students may also seek referral assistance by contacting University Counseling and Psychological Services (CAPS), at 313-577-3398.

Sexual Discrimination, Harassment, and Assault Policy

Title IX of the Education Amendments of 1972 is a federal civil rights law that prohibits discrimination on the basis of sex in education programs and activities. Under Title IX, discrimination on the basis of sex can include sexual harassment or forms of sexual assault, such as rape, sexual assault or sexual battery.

Sexual discrimination is prohibited by Title IX and by University Policy. (WSUCA 2.28.01).

Sexual harassment is a form of sex discrimination that is prohibited by Title IX and by University policy. It is the policy of Wayne State University that no member of the University community may sexually harass another. (WSUCA 2.28.06).

Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communication of a sexual nature when:

- (a) Submission to such conduct or communication is made a term or condition either explicitly or implicitly to obtain employment, public accommodations or public services, education, or housing.
- (b) Submission to or rejection of such conduct or communication by an individual is used as a factor in decisions affecting such individual's employment, public accommodations or public services, education, or housing.
- (c) Such conduct or communication has the purpose or effect of substantially interfering with an individual's employment, public accommodations or public services, educational, or housing environment. (MCLA 37.2103 (h))

In the area of speech, what the law and this policy prohibit is speech as action: that is, sexual communication which is either directly coercive as demanding favors, or indirectly coercive, as rising to that level of offensiveness which interferes substantially with the victim's education or employment. The determination of what level of offensiveness is actually coercive, and therefore unlawful and prohibited by this policy, will in some cases be difficult. A significant element in the determination is provided by the fact that an unequal power relationship underlies sexual harassment. The more unequal the relationship, the greater the risk is of substantial interference with the victim's education or employment.

In the area of physical contact, physical contact which is unwelcome is so gravely offensive that it always has the effect of substantially interfering with the victim's employment or educational environment. Employees and students should not take for granted that they are welcome to touch other employees or students, since if their contact is in fact unwelcome, they will be in violation of the law and of this policy. (WSUCA 2.28.06.010-2.28.06.080).

Sexual harassment is also unwelcome behavior of a sexual nature that creates a hostile or abusive work or educational environment. Sexual harassment is also unwelcome behavior of a sexual nature that is severe or pervasive and interferes with an individual's work or performance in a course or program

Sexual assault is also prohibited by Title IX and by University policy (01-5 University Policy). Sexual assault includes, but is not limited to any of the following:

- a) Any intentional, unconsented, unwelcome physical contact or threat of unwelcome physical contact or attempt thereof, of: (i) an intimate body part of another person, such as a sexual organ, (ii) any body part of another person with one's sexual organs, or (iii) any part of another person's body with the intent of accomplishing a sexual act; or
- b) Unwanted, inappropriate disrobing of another person, or purposeful exposure of one's genitals to another without the other's consent; or
- c) Forcing, or attempting to force, any other person to engage in sexual activity of any kind without her or his consent; or
- d) Any behavior that is proscribed as "criminal sexual conduct" under the Michigan Penal Code, notwithstanding whether criminal charges have been brought against the individual alleged to have engaged in such behavior. This may include rape, attempted rape, sexual assault or sexual battery.

Date rape and acquaintance rape are forms of sexual assault.

For purposes of the University's statutes/policies on sexual discrimination, sexual harassment and sexual assault, consent shall not be deemed to have occurred if given by a person who is unable to make a reasoned judgment concerning the nature or harmfulness of the activity because of his or her intoxication, unconsciousness, mental deficiency or incapacity, or if the product of threat or coercion. WSUCA 2.28.06.060.

Any employee or student will be subject to disciplinary action for violation of any of these policies. If any staff, faculty or student of the University community learns of a sexual discrimination, harassment or assault incident, they should immediately report that incident to either the Title IX Coordinator or the Deputy Coordinator, who are:

Christopher Jones - Title IX Coordinator
Director, Office of Equal Opportunity
4324 Faculty Administration Building
656 W. Kirby Avenue; Detroit, Michigan 48202
Telephone: (313) 577-2280
Fax: (313) 577-7738

Website: <http://www.deo.wayne.edu/>
Email: Christopher.Jones@wayne.edu

The Title IX Coordinator's responsibilities include overseeing all Title IX complaints, identifying and addressing any patterns or systemic problems that arise during the review of such complaints, and coordinating the training, education, communication and administration of grievance procedures for faculty, staff, students and other members of the University community.

Students or employees having a complaint against a WSU faculty, staff member, coach, administrator or visitor for sexual harassment, sex discrimination or sexual assault, should contact the Title IX Coordinator.

Dean David Strauss - Title IX Deputy Coordinator
Dean of Students
351 Student Center; Detroit, MI 48202
Telephone: (313) 577-1010
Email: ak3096@wayne.edu

The Deputy Coordinator is responsible for Title IX compliance for matters involving students, including training, education, communication and administration of grievance procedures for all complaints against WSU students.

Students or employees having a complaint against a WSU student for sexual harassment, sex discrimination or sexual assault, should contact the Deputy Coordinator by phone or email or file a Student Care Report (available on Dean of Students' website): <http://www.doso.wayne.edu/>. Any such complaint can also be filed with the Title IX Coordinator.

The University statutes/policies prohibiting discrimination and sexual harassment/sexual violence can be found at: <http://www.bog.wayne.edu/code/> and <http://fisopsprocs.wayne.edu/policy/>. They are also listed on the website of the Office of Equal Opportunity: <http://www.deo.wayne.edu/> and the website of the Dean of Students Office: <http://www.doso.wayne.edu/>. The purpose of these policies is to assure the fullest possible awareness of WSU's stand on sexual discrimination/harassment/assault and to confirm and regularize WSU's procedures regarding the handling of complaints.

Additional Resources

In addition to filing a complaint with the Title IX Coordinator or Deputy Coordinator, in instances involving rape, sexual assault or sexual battery, students and/or employees should also contact the WSU Police Department at:

6050 Cass Avenue; Detroit, MI 48202
Emergency telephone: (313) 577-2222
Non-emergency telephone: (313) 577-2224
Website: <http://www.police.wayne.edu>

Workplace Violence, Policy on

Wayne State University is committed to providing a work and educational environment that is free from threats, assaults, or acts of violence. Threats of violence or of physical harm, and any form of physical or sexual assault or threats of physical assault are prohibited. This includes conduct that harasses, disrupts, or interferes with another person's work performance or creates an intimidating, offensive or hostile work or educational environment.

The University has also adopted a Campus Safety Ordinance (BOG 2.87.03) which applies to all property owned, leased or otherwise controlled by Wayne State University and applies to all individuals when present on such property, regardless of whether the individual has a concealed weapons permit or is otherwise authorized by law to possess, discharge or use any device referenced in this ordinance. This ordinance states that, except as provided in sections 4 or 6 of the ordinance, no person shall, while on any property owned, leased, or otherwise controlled by WSU: (1) possess or carry on his or her person any firearm, explosive or chemical weapon; (2) carry on his or

her person any sword, switchblade knife, or other knife with a blade longer than three inches; and (3) carry on his or her person any other object or device with the intent of intimidating or injuring another person. Upon conviction of any violation of this ordinance, the violator shall be sentenced to a fine not to exceed \$500.00. In addition, violations of this policy may result in disciplinary action under existing University administrative policies.

University personnel are expected to notify appropriate management personnel of any violent or threatening behavior, when that behavior is work-related, carried out on University property, or is connected to University employment. Any individual who has obtained a personal protection order that identifies the workplace as a protected area should provide that information to the Wayne State University Police Department.

Foreword to the Graduate School

Mission of the Graduate School

The mission of the Wayne State University Graduate School is to provide leadership in advancing graduate education and cultivate a supportive environment for research, scholarly activities and other creative endeavors that are integral to successful graduate students, faculty members and programs. It assures the quality and integrity of graduate programs and monitors the academic requirements for the Ph.D. degree, specific master's degrees and graduate certificates. The Graduate School also administers and regulates funds that support graduate studies and disseminates information related to graduate programs and policies. The University's Carnegie designation within the classification of Research Universities with very high research activity is reflective of a deep commitment to excellence in graduate education, relevance in academic curriculum, and leadership in research and scholarship. Accordingly, the Graduate School is committed to the highest standards of academic performance and ethical behavior.

History and Procedures of the Graduate School

Wayne State University's graduate and professional programs were established early in the history of the University and were unified within the newly-created Graduate School in 1933. Since that time, the Graduate School has grown steadily both in terms of quality and size and now ranks as one of the largest graduate schools in the nation. The University's Carnegie classification is reflective of a deep commitment to excellence in graduate education, relevance in academic curriculum, and leadership in research and scholarship.

The Graduate School is the central unit for the supervision and encouragement of graduate work in the University and has basic responsibility for the improvement and review of existing programs. The Graduate School monitors every significant stage in the doctoral student's career and ensures that all University-wide requirements have been fulfilled. Ph.D. Plans of Work must be approved by the Graduate School. A Ph.D. applicant cannot advance to Ph.D. candidacy without the Graduate School's approval. After the dissertation defense, the Graduate School conducts a final audit of the student's record to certify him or her for graduation.

For additional information, see the separate sections in this bulletin on Graduate School Admission (Admission, Graduate School, p. 17), Graduate School Services for Students, Graduate Council (Graduate Council, p. 14), Graduate Faculty (Graduate Faculty, p. 14), and Financial Aid (Financial Assistance, Graduate, p. 26). See also the Graduate School's Website: <http://www.gradschool.wayne.edu/>

Directory for the Graduate School

UNIVERSITY ADDRESS

Wayne State University, Detroit, Michigan 48202;
Telephone Area Code: (313)

University Website: <http://wayne.edu/>

Graduate School Website: <http://wayne.edu/gradschool>

GRADUATE SCHOOL

Main Office
5057 Woodward, Suite 6305, Detroit MI 48202
Telephone: 577-2170; *Fax:* 577-2903

OFFICE OF GRADUATE ADMISSIONS

5057 Woodward, Suite 6305, Detroit MI 48202
Telephone: 577-4723; *Fax:* 577-0131
Email: gradadmissions@wayne.edu
Website: <http://wayne.edu/admissions/graduate>
(The Graduate Admission application is available at the website.)

GRADUATE COUNCIL OFFICE

5057 Woodward, Room 6304
Telephone: 577-8050

GRADUATE ASSISTANTSHIPS

Inquiries should be directed to the chairperson of the department in which the student intends to major.

INTERNATIONAL STUDENT ADVISING

Office of International Students and Scholars
Welcome Center, 42 W. Warren, Suite 416
Telephone: 313-577-3422
Website: <http://oiss.wayne.edu>

LOANS AND COLLEGE WORK-STUDY

Office of Student Financial Aid
Welcome Center, 42 W. Warren
Telephone: 577-2100
<http://wayne.edu/financial-aid/>

STUDENT EMPLOYMENT

Career Services
1001 Faculty/Administration Building
Telephone: 577-3390
Website: <http://careerservices.wayne.edu/>

BULLETIN REQUESTS

Bulletins now reside online at: <http://bulletins.wayne.edu>

CAMPUS HOUSING

Office of Housing and Residential Life
598 Student Center
Telephone: 577-2116
<http://housing.wayne.edu>

REGISTRATION

Welcome Center, 42 W. Warren
Telephone: 577-3541
<http://classschedule.wayne.edu>

WSU POLICE DEPARTMENT (PUBLIC SAFETY)

University Police Department
6050 Cass Ave.
Telephone: 577-2222
<http://police.wayne.edu/>

Graduate Council

The Graduate Council, the policy-formulating body for the Graduate School, is composed of two members elected from the regular graduate faculty of each of the various schools and colleges of the University, at least one graduate student member, the Dean of the Graduate School, and three members of the graduate faculty appointed by the Dean of the Graduate School. The Council meets monthly during the academic year, and all meetings are open to the University community.

In 1968, the Board of Governors established the Graduate Council and granted it the 'authority and responsibility for the development of basic policies for the graduate education system and for the encouragement, improvement and evaluation of graduate programs throughout the University.' In addition to reviewing new and existing graduate programs, the Council sets admission standards for graduate programs, makes recommendations for graduate faculty appointments, establishes criteria and evaluates applications for the Graduate-Professional Scholarship program, and awards all Ph.D. degrees, select master's degrees, and interdisciplinary graduate certificates.

Graduate Faculty

The Graduate Faculty consists of faculty members who are eminently qualified by virtue of preparation and competence to teach and direct research at the graduate level. Appointment to the Graduate Faculty does not modify a faculty member's responsibility to or affiliation with his or her department, division, college, or other instructional or administrative unit. The Dean of the Graduate School, on behalf of the Graduate Council, may appoint members of the WSU faculty to the Graduate Faculty, upon recommendation of their departments or divisions and with the approval of their deans.

Appointments to the Graduate Faculty are for a period of five years. Upon completion of the term, a qualified candidate may be recommended for reappointment to the Graduate Faculty by the department chairperson and the college dean.

Degree and Certificate Programs, University

The following table lists the major academic programs and degrees offered by Wayne State University. Academic programs are defined as any combination of courses leading to the designation of a major, or to a separate degree designation. An asterisk (*) appended to a subject area indicates that a departmental honors major is also available in that field at the undergraduate level. Detailed descriptions of the programs may be found in the appropriate sections of the Undergraduate or Graduate Bulletin. For an index to all degree types offered by the University as well as degree abbreviations used in the following list see Symbols and Abbreviations, p. 17.

Mike Ilitch School of Business

Accounting*: B.A., B.S., P.B.C., M.S.
Business Administration: G.C., M.B.A., Joint J.D./M.B.A., Ph.D.
Finance*: B.A., B.S.
Global Supply Chain Management*: B.A., B.S., Joint J.D./M.B.A.
Information Systems Management*: P.B.C.
Management Information systems: B.A., B.S.
Management*: B.A., B.S.
Marketing*: B.A., B.S.
Taxation: M.S.

College of Education

Administration and Supervision: E.S.C.
Applied Behavior Analysis: G.C.
Art Education*: B.A., B.S., T.C., M.Ed.
Bilingual/Bicultural Education: B.G.C., T.C.
Career and Technical Education: T.C., M.Ed.
College and University Teaching: G.C.
Counseling: M.A., M Ed, E.S.C., Ed.D., Ph.D.
Counseling Psychology: M.A.
Curriculum and Instruction: E.S.C., Ed.D., Ph.D.
Early Childhood Education: M.Ed.
Education Evaluation and Research: M.Ed., Ed.D., Ph.D.
Educational Leadership: M.Ed.
Educational Leadership and Policy Studies: Ed.D., Ph.D.
Educational Technology: B.G.C.
Elementary Education*: B.A., B.S., T.C., M.A.T.
English as a Second Language: B.G.C.
English Education (Elementary)*: B.A., B.S., T.C.
English Education (Secondary)*: M.Ed.
Evaluation and Research, Education: M Ed, Ed.D., Ph.D.
Foreign Language Education: T.C.
Health Education*: B.S., T.C., M.Ed.
Kinesiology*: B.S., T.C., M.Ed., Ph.D.
Learning Design and Technology: B.A., B.S., M.Ed., E.S.C., Ed.D., Ph.D.
Mathematics Education (Elementary)*: B.A., B.S.,
Mathematics Education (Secondary)*: T.C.
Music Education: T.C.
Online Teaching: G.C., B.G.C.
Psychology, Educational: M.Ed., Ph.D.
Psychology, School and Community: M.A.
Psychology, School: G.C.
Reading: M.Ed., E.S.C.
Reading, Language and Literature: Ed.D.
Rehabilitation Counseling and Community Inclusion: M.A.
Science Education (Elementary)*: B.A., B.S.,
Science Education (Secondary)*: T.C.
Secondary Education: T.C., M.A.T.

Social Studies Education (Elementary)*: B.A., B.S.
Social Studies Education (Secondary)*: T.C.
Special Education*: B.A., B.S., T.C., E.S.C
Sports Administration: M.A.
Teaching and Learning: M.Ed

College of Engineering

Advanced Energy Storage Systems: U.C.
Alternative Energy Technologies: G.C., M.S.
Biomedical Engineering: B.S., M.S., Ph.D.
Chemical Engineering*: B.S., M.S., Ph.D.
Civil Engineering*: B.S., M.S., Ph.D.
Computer Engineering: M.S., Ph.D.
Computer Science*: B.S., M.S., Ph.D.
Computer Technology: B.S.C.T.
Construction Management: B.S.C.M.
Control Systems: U.C.
Electrical Engineering*: B.S., M.S., Ph.D.
Electric-drive Vehicle Engineering: G.C., M.S.
Electrical/Electronic Engineering Technology: B.S.E.E.T.
Electric Transportation Technology: B.S.E.T.T.
Electromechanical Engineering Technology: B.S.E.M.T.
Engineering Entrepreneurship: U.C.
Engineering Management: B.G.C., M.S.
Engineering Technology: M.S.E.T.
Injury Biomechanics: B.G.C.
Industrial Engineering*: B.S., M.S., Ph.D.
Manufacturing Engineering: M.S.
Manufacturing Engineering Technology: B.S.M.E.T.
Materials Science and Engineering: M.S., Ph.D.
Mechanical Engineering*: B.S., M.S., Ph.D.
Mechanical Engineering Technology: B.S.M.E.T.
Polymer Engineering: G.C.
Sustainable Engineering: G.C.
Systems Engineering: B.G.C.

College of Fine, Performing and Communication Arts

Art*: B.A., B.F.A., M.A., M.F.A.
Art History*: B.A., M.A.
Communication*: M.A., Ph.D.
Communication and New Media: G.C.
Communication Studies*: B.A.
Dance*: B.S., B.F.A.
Design and Merchandising: B.A., B.S.
Dispute Resolution: G.C., M.A.D.R., Joint J.D./M.A.D.R.
Film*: B.A.
Health Communication: G.C.
Journalism*: B.A.
Media Arts and Studies*: B.A.
Music: B.A., B.Mus., T.C., M.A., M.Mus.
Orchestral Studies: G.C.
Public Relations*: B.A.
Theatre*: B.A., B.F.A., M.F.A.
Theatre and Dance: M.A.

Law School

Corporate and Finance Law: LLM
Joint J.D./M.B.A. in Business Administration
Joint J.D./M.S. in Criminal Justice
Joint J.D./M.A.D.R. in Dispute Resolution
Joint J.D./M.A. in Economics
Joint J.D./M.A. in History
Joint J.D./M.A. in Political Science
Labor and Employment Law: L.L.M.
Law: J.D.
Taxation: L.L.M.
United States Law: L.L.M.

College of Liberal Arts and Sciences

African American Studies: B.A.
Anthropology*: B.A., M.A., Ph.D.
Asian Studies*: B.A.
Astronomy: B.A.
Audiology: Au.D.
Biochemistry and Chemical Biology*: B.S.
Biological Sciences*: B.A., B.S., M.A., M.S., Ph.D.
Biomedical Physics: B.S.
Chemistry*: B.A., B.S., M.A., M.S., Ph.D.
Chicano-Boricua Studies (Co-Major Program): B.A.
Classics*: B.A., M.A.
Communication Sciences and Disorders: B.A., Ph.D.
Computer Science: B.A.
Criminal Justice*: B.S., M.S., Joint J.D./M.S.
Dietetics: B.S., P.B.C.
Economic Development: G.C.
Economics*: B.A., M.A., Joint J.D./M.A., Ph.D.
Employment and Labor Relations: M.A.E.L.R.
English*: B.A., M.A., Ph.D.
Environmental Science: B.S.
Film Studies: B.A.
French* (see Romance Languages)
Geology: B.A., B.S., M.S.
Gender, Sexuality, and Women's Studies*: B.A.
German*: B.A., M.A.
Global Studies: B.A.
History*: B.A., M.A., Joint J.D./M.A., joint M.A./M.L.I.S., joint M.A./M.Ed., Ph.D.
Honors, College (Co-Major): B.A.
Industrial/Organizational Psychology: M.A.
Information Systems Technology: B.A.
International Studies (Co-Major Program): B.A.
Italian (see Romance Languages)
Language Learning: M.A.
Linguistics*: B.A., M.A.
Mathematical Statistics: M.A.
Mathematics*: B.A., B.S., M.A., M.S., Ph.D.
Mathematics, Applied: M.A.
Modern Languages: Ph.D.
Molecular Biotechnology: M.S.
Near Eastern Languages*: B.A., M.A.
Near Eastern Studies*: B.A.
Nutrition and Food Science*: B.A., B.S., M.A., M.S., Joint M.A./M.P.H., Ph.D.
Peace and Security Studies: G.C.
Philosophy*: B.A., M.A., Ph.D.
Physics*: B.A., B.S., M.A., M.S., Ph.D.
Political Science*: B.A., M.A., Joint J.D./M.A., Ph.D.
Psychology*: B.A., B.S., M.A., Ph.D.
Public Administration: M.P.A.
Public Affairs*: BPA
Public Health: B.S.
Public History: M.A.
Romance Languages* (French, Italian, or Spanish): B.A., M.A.
Slavic Studies: B.A.
Social Work and Anthropology: Ph.D.
Sociology*: B.A., M.A., Ph.D.
Spanish (see Romance Languages)
Speech-Language Pathology: M.A.
Urban Planning: M.U.P.
Urban Studies: B.A.
World History: B.G.C.

School of Library and Information Science

Archival Administration: G.C.
Information Management: G.C.
Library and Information Science: M.L.I.S., S.P.L.

Library and Information Science/History: Joint M.L.I.S./M.A.
Public Library Services for Children and Young Adults: G.C.

School of Medicine

Anatomy and Cell Biology: M.S., Ph.D.
Basic Medical Sciences: M.S.
Biochemistry and Molecular Biology: M.S., Ph.D.
Cancer Biology: M.S., Ph.D.
Clinical and Translational Science: B.G.C.
Genetic Counseling: M.S.
Immunology and Microbiology: M.S., Ph.D.
Medical Physics: G.C., M.S., Ph.D., D.M.P.
Medical Research: M.S.
Medicine: M.D., Joint M.D./Ph.D., Ph.D.
Molecular Genetics and Genomics: M.S., Ph.D.
Pathology: Ph.D.
Pharmacology: M.S., Ph.D.
Physiology: M.S., Ph.D.
Psychiatry and Behavioral Neurosciences: M.S.
Public Health: M.P.H., Joint M.D./M.P.H., Joint M.P.H./M.A.- N.F.S.
Public Health Practice: G.C.
Translational Neuroscience: Ph.D.

College of Nursing

Adult Gerontology Nurse Practitioner – Acute Care: G.C., MSN, D.N.P.
Adult Gerontology Nurse Practitioner – Primary Care: M.S.N., D.N.P.
Advanced Public Health Nursing: M.S.N.
Complimentary Therapies in Healthcare: G.C.
Family Nurse Practitioner: D.N.P.
Neonatal Nurse Practitioner: M.S.N., D.N.P.
Nurse Midwife: G.C., M.S.N., D.N.P.
Nursing*: B.S.N: Ph.D.
Nursing Education: G.C.
Nursing Practice: D.N.P.
Pediatric Nurse Practitioner - Primary Care: G.C., M.S.N., D.N.P.
Pediatric Nurse Practitioner - Acute Care: G.C., M.S.N., D.N.P.
Psychiatric Mental Health Nurse Practitioner: G.C., M.S.N., D.N.P.
Women's Health Nurse Practitioner: M.S.N., D.N.P.
Women's Health Nursing: G.C.

Eugene Applebaum College of Pharmacy and Health Sciences

Anesthesia: M.S.
Anesthesia, Pediatric: G.C.
Clinical Laboratory Science: B.S.
Forensic Investigation: P.B.C.
Health Sciences: B.H.S.
Mortuary Science: B.S.
Occupational Therapy: M.O.T.
Pathologists' Assistant*: B.S.
Pharmaceutical Sciences: M.S., Joint Pharm.D./Ph.D., Ph.D.
Pharmacy: Pharm.D.
Physical Therapy: D.P.T.
Physician Assistant Studies: M.S.
Radiation Therapy Technology: B.S.
Radiologic Technology: B.S.

School of Social Work

Alcohol and Drug Abuse Studies: G.C.
Clinical Social Work Theory and Practice: G.C.
Disabilities: G.C.
Social Welfare Research and Evaluation: G.C.
Social Work: B.S.W, M.S.W, Ph.D.
Social Work and Anthropology: Ph.D.

Symbols and Abbreviations

The following index identifies standard abbreviations for University degrees and certificates.

Degree and Certificate Programs

Au.D.: Doctor of Audiology
B.A.: Bachelor of Arts
B.F.A.: Bachelor of Fine Arts
B.G.C.: Bridge Graduate Certificate
B.H.S.: Bachelor of Health Science
B.Mus.: Bachelor of Music
B.P.A.: Bachelor of Public Affairs
B.S.: Bachelor of Science
B.S.C.M.: Bachelor of Science in Construction Management
B.S.C.T.: Bachelor of Science in Computer Technology
B.S.E.E.T.: Bachelor of Science Electrical Electronic Engineering Technology
B.S.E.M.T.: Bachelor of Science in Electromechanical Engineering Technology
B.S.E.T.T.: Bachelor of Science in Electric Transportation Technology
B.S.M.E.T.: Bachelor of Science in Mechanical Engineering Technology
B.S.M.E.T.: Bachelor of Science in Manufacturing Engineering Technology
B.S.M.S.: Bachelor of Science in Mortuary Science
B.S.N.: Bachelor of Science in Nursing
B.S.W.: Bachelor of Social Work
D.M.P.: Doctor of Medical Physics
D.N.P.: Doctor of Nursing Practice
D.P.T.: Doctor of Physical Therapy
Ed.D.: Doctor of Education
E.S.C.: Education Specialist Certificate
G.C.: Graduate Certificate
J.D.: Juris Doctor
L.L.M.: Master of Laws
M.A.: Master of Arts
M.A.D.R.: Master of Arts in Dispute Resolution
M.A.E.L.R.: Master of Arts in Employment and Labor Relations
M.A.T.: Master of Arts in Teaching
M.B.A.: Master of Business Administration
M.D.: Doctor of Medicine
M.Ed.: Master of Education
M.F.A.: Master of Fine Arts
M.L.I.S.: Master of Library and Information Science
M.Mus.: Master of Music
M.O.T.: Master of Occupational Therapy
M.P.A.: Master of Public Administration
M.P.H.: Master of Public Health
M.S.: Master of Science
M.S.E.T.: Master of Science in Engineering Technology
M.S.N.: Master of Science in Nursing
M.S.W.: Master of Social Work
M.U.P.: Master of Urban Planning
P.B.C.: Post-Baccalaureate Certificate
Pharm.D.: Doctor of Pharmacy
Ph.D.: Doctor of Philosophy
P.M.C.: Post-Master's Certificate
S.C.P.: Specialist Certificate Program
S.P.L.: Specialist in Library and Information Science
T.C.: Teaching Certificate
U.C.: Undergraduate Certificate

Admission, Graduate School

Office of Graduate Admissions
5057 Woodward, 6th Floor, Suite 6304
Detroit MI 48202
Telephone: 313-577-4723; Fax: 313-577-0131
Email: gradadmissions@wayne.edu
Website: <http://wayne.edu/admissions/graduate/>

Admission, Regular

To be considered for graduate admission, an applicant must hold or be completing an earned baccalaureate degree or its equivalent from a college or university of recognized standing and have adequate preparation with discernible ability to pursue graduate studies in the major field elected. These criteria are subject to standards set by the individual Colleges and Schools, which reserve the right to revise or amend their entrance requirements beyond the minimal requirements of the University. Note: Proof of the earned bachelor's degree must be submitted before regular admission will be granted.

Before any student can be considered for admission to graduate study, the following must be submitted to the Office of Graduate Admissions: A completed online Application for Graduate Admission and an official transcript from any college or university at which a bachelor's degree was earned. A transcript is considered official only if it is sent directly from the institution where the course work was completed and bears an official seal. International applicants are expected to submit additional documentation for regular admission (see International Students, p. 20). Note: The applicant is also responsible for arranging to take any examinations that may be specified by the Office of Graduate Admissions, the College, or the Department in which the student intends matriculation.

Some academic programs may require an additional departmental application for admission. Students are advised to contact the department to which they are applying and request full particulars on admission procedures.

In most departments (see the departmental sections of this bulletin for variants), a regular admission may be authorized for the domestic master's degree applicant upon the department's recommendation, if the applicant's grade point average is 2.75 ('C'=2.00) or above for the upper division (approximately the last sixty semester credits) of his/her undergraduate course work and if he/she holds a bachelor's degree from a regionally accredited institution.

All baccalaureate graduates of unaccredited institutions must present a 3.00 ('B') or better upper-division grade point average to be considered for graduate admission. Course work completed after the baccalaureate which is presented as the qualifying basis for graduate admission cannot be applied toward a graduate degree at Wayne State University.

Doctoral applicants must present higher entrance qualifications than those required of master's degree applicants. A doctoral applicant is required to have an undergraduate grade point average of 3.0 ('B'=3) or above for the upper division of the undergraduate, bachelor's degree course work and must have completed an undergraduate major or substantial specialized work in his/her proposed doctoral major field. Certain departments require the completion of a master's degree with superior scholarship before considering acceptance of a student as a doctoral applicant. Applicants with less than a 3.0 grade point average in undergraduate course work may be eligible for admission to doctoral study if they have subsequently achieved a grade point average of 3.0 or better in substantial graduate course work in the proposed doctoral field.

The individual colleges reserve the right to refuse a non-resident admission if such admission prevents registration of a qualified Michigan resident. This ruling may not be invoked to secure admission to a Michigan resident if his/her grade point average entitles him/her to qualified status only.

Admission, Qualified

In most Departments, qualified admission to a master's or certificate program may be authorized if an applicant's grade point average is between 2.50 and 2.74 or if his/her degree is from a non-accredited institution, provided the major Department and the Graduate Officer of the appropriate School or College have reviewed the applicant's academic experience, extra-scholastic qualifications and reasons for pursuing graduate study and have recommended his/her admission to the Graduate School.

Upon recommendation of the Department and the Graduate Officer of the appropriate College or School, qualified status may be granted to an applicant whose grade point average is below 2.5, if, since the time his/her baccalaureate degree was conferred, he/she has shown substantial evidence of academic or extra-scholastic qualifications of such merit as to warrant special consideration.

Applications from students who have completed substantial course work at, and/or graduated from, institutions which were not accredited by one of the six regional U. S. accrediting institutions (MSA/CHE, NEASC, NCA, NASC, SACS, or WASC-Sr.) at the time studies were undertaken, will have a special review. If requested, the applicant will be required to furnish documentation of the nature and level of the credit obtained, the bases on which the credit was awarded, institutional operating practices, library holdings, physical facilities, faculty qualifications, and any other matters that may be relevant to an evaluation of credit. The director of admissions is authorized to deny admission to any applicant whose previous education does not conform to Graduate School standards. The Office of Graduate Admission may also make recommendations concerning the appropriateness for transfer of previously completed graduate course work.

All graduate admission procedures and regulations are subject to revision by the University Graduate Council at any time.

Application Dates, Graduate Admission

The Office of Graduate Admission will make every effort to process applications in time for the semester of the student's choice. However, only complete applications received by the last recommended dates shown below are ensured academic review before the semester starts. Unless an application and all supporting materials are received by the date indicated, there may not be adequate time for the desired program to review the application and make the admission decision.

Fall Term — Classes begin Late August: **apply by June 1**
Winter Term — Classes begin Early January: **apply by October 1**
Spring Term — Classes begin Early May: **apply by February 1**

For international students, the application form and all transcripts and documents must be on file in the Office of Graduate Admission at least four months prior to the start of the term in which the applicant plans to begin graduate studies.

Several Colleges and Departments have earlier deadlines. Doctoral programs also have earlier application deadlines. Students should consult the School/College and Department sections of this bulletin, the program's website, or the Office of Graduate Admissions for complete information.

Admission: Change of Graduate Status

A Change of Graduate Status is a type of admission only for those students who have previously been admitted to and registered as

regular graduate students at WSU. For such students, a Change of Graduate Status is used to request: 1) to change from one graduate program or level to another graduate program or level; or 2) to add a second graduate program to the one in which the student is already enrolled. A department's normal admission criteria apply to Change of Graduate Status applicants. The Application Form is downloadable from the Graduate School website: <http://gradschool.wayne.edu/current/forms.php>

Students should submit the form and transcripts, if needed, to the Graduate Office of the School/College of the new program. Other admission documents required by the department should be submitted directly to the department. The School/College Graduate Office prepares and sends the application and documents to the department for decision. The Graduate Office notifies the student of the admission decision, and, if admission was approved, notifies the Records Office of the change to be made to the student's record. The department's regular admission deadlines apply. No fees are charged for a Change of Status application.

The Change of Graduate Status application should NOT be used by the following students: those who have never been admitted through the Office of Graduate Admissions, those who were admitted but did not register, those who were admitted on a Permit to Register or as Guest students, and those who have been registered in graduate classes only as Non-Matriculated students through the College of Liberal Arts and Sciences.

Admission, Graduate Non-Degree

An applicant who wishes to take graduate courses but does not wish to be in a degree program may request admission on a non-degree basis. The eligible applicant will be admitted to a particular College but not to an individual major program. In most instances, a non-degree student may, with the Department's approval, register for any courses for which he/she has the necessary preparation.

The applicant for a non-degree graduate classification is cautioned that *only one semester of full-time graduate study, or part-time registrations not to exceed nine credits, is normally permitted in this classification.* Beyond these limits, registration as a non-degree student requires the approval of the Graduate Officer of the student's College. Not more than nine credits, subject to the approval of the Graduate Officer, may be applied at a later date toward the residency and credit requirements for either the master's or Ph.D. degree. For the Ed.D. degree, credit earned beyond the nine-credit limitation will be reviewed by the appropriate Division and the Education Graduate Officer for possible application toward the degree.

If a student in non-degree status decides to seek admission to a graduate degree program, he/she should apply to the appropriate College Graduate Office for a Change of Status *before* completing nine credits. There is no assurance that credits earned while holding a non-degree classification will be acceptable in a degree program, or that prerequisites may not have to be specified if the student later becomes a degree applicant. Also, financial aid is not available to students in Non-Degree status.

Admission, Graduate Guest

Graduate students actively pursuing degrees and who are in good standing at other accredited colleges and universities may be admitted to elect a limited number of credits at Wayne State University. Interested students may obtain a *Graduate Guest Application* from the Graduate Admissions website: <http://wayne.edu/admissions/graduate/applying/app-instructions/>. This must be signed by their home institution before it can be accepted for consideration. **A guest admission is valid for only one semester and must be renewed with each subsequent registration.** A maximum of twelve semester credits may be earned as a Graduate Guest Student. Admission as a Graduate Guest student does not constitute permission to register as a degree applicant.

Admission, Senior Rule

In their last undergraduate semester, Wayne State students with a 3.0 (or above) upper division grade point average have the option of taking a limited number of graduate credits. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements. Undergraduate and graduate courses combined may not exceed sixteen credits for the final semester of baccalaureate degree course work. A Senior Rule student must register for at least one credit which is required for the undergraduate degree in order to be eligible for this status. Students who have completed all required registrations for the baccalaureate may not obtain Senior Rule status. Completion of the *Application for Graduate Admission* is required, and students are advised to consult their advisors and the Office of Graduate Admissions. Application deadlines for Senior Rule admission are the same as for regular graduate admission. Students who qualify and are recommended by the Department or College will be admitted for one semester. Graduate admission will be regularized upon evidence that the student has completed all requirements for the bachelor's degree; it is the student's responsibility to provide this transcript.

As a courtesy, the University permits a student to pay undergraduate fees for the graduate courses elected in a Senior Rule status. It is recommended that students elect only courses numbered 5000-6999 in their Senior Rule semester.

Admission: 'AGRADE' — Accelerated Graduate Enrollment

Several Colleges have established an accelerated combined undergraduate and graduate program (AGRADE) in which highly qualified seniors in the college may enroll simultaneously in some undergraduate and graduate programs of the College. A maximum of sixteen credits may be applied towards both undergraduate and graduate degrees in a student's major field if that program is an AGRADE participant. Those who elect the AGRADE program may expect to complete the Bachelor's and Master's degrees in five years of full-time study.

AGRADE Credits: Students may elect a minimum of three and a maximum of sixteen AGRADE credits. These will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, AGRADE credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program.

Eligibility: AGRADE applicants must have an outstanding overall g.p.a. and have performed at a superior level in their major, as determined by the major department. The earliest date by which a student may apply for the AGRADE program is during the semester in which he/she completes ninety credits toward the undergraduate degree.

Application: A student seeking AGRADE status should present to the Graduate Admissions Committee of his/her major department all of the materials which that department requires for normal admission (except the GRE; where required, the GRE scores should be forwarded at the normal point in the formal graduate admission process).

Admission and program requirements are described in the respective School and College sections of this bulletin, the Undergraduate Bulletin, and department advising offices.

Permit to Register Admission Status

This is a one-term-only admission status which may be granted to applicants with incomplete applications for graduate admission, at the discretion of the academic department, and upon presentation of

evidence of an earned baccalaureate degree with an acceptable grade point average and the application fee. Registration beyond the initial semester requires the submission of a regular graduate admission application, official transcripts and other required documentation as determined by the university and department. Admission as a graduate Permit-to-Register student does not obligate Wayne State University to accept the applicant in the future for a graduate degree, nor is there any assurance that credit earned in this status will be accepted toward a graduate degree.

This option is not available in all University Schools and Colleges. Applicants are encouraged to discuss admission options with the staff of the Office of Graduate Admissions. In addition, financial aid is not available to students in Permit to Register status.

Michigan Intercollegiate Graduate Studies (MIGS) Program

The Michigan Intercollegiate Graduate Studies (MIGS) Program enables graduate students of Michigan public institutions to take advantage of educational opportunities at other Michigan public institutions offering graduate degrees. Any graduate student in good standing in a master's, specialist, or doctoral program at a member institution is eligible to participate with approval of the appropriate academic unit. Students on a MIGS enrollment pay tuition and other fees at the host institution. All credits earned under a MIGS enrollment are accepted by a student's home institution as if offered by that institution. *This type of enrollment is limited to one term for master's or specialist degree students, or two terms for doctoral degree students.* Students interested in this program should contact the Office of Graduate Admissions for further information. The MIGS application is available at <http://gradschool.wayne.edu/future/grad-admission.php>

Windsor, University of — WSU, Exchange Program Agreement

Wayne State University and the University of Windsor have entered into an exchange agreement whereby students from each institution may enroll in selected courses at the other institution. Courses available are limited to those not offered at the student's home institution. Limitations also apply to the number of courses and credits a student may take under this agreement. Wayne State University and the University of Windsor students who wish to participate in the program must be in good standing at their home institution and must have prior approval of the appropriate academic unit that the course(s) will be accepted as part of the student's course of study. Students who participate in the Wayne State University/University of Windsor program pay tuition and fees at the home institution and receive credit for the course(s) only at the home institution. Students should consult the Director of International Programs, Office of the Provost and Senior Vice President for Academic Affairs, for further information.

Admission, Post-Bachelor

The Post-Bachelor status is granted to college/university graduates who wish to take Wayne State University courses through the 6000 level for *undergraduate credit only*. The status serves two groups of students:

- Those who wish to pursue vocational or avocational interests without intending to use Wayne State University credit to earn another degree at Wayne State University;
- Those who seek admission to a graduate program but need to raise their undergraduate grade point average and/or fulfill specific undergraduate course requirements for graduate admission consideration.

The following special rules apply to Post-Bachelor Admission:

a) **Under no circumstances will credit earned in this status apply toward a graduate degree program.**

b) The applicant must present evidence of a degree earned from an accredited institution (official transcript or diploma).

c) Post-Bachelor status students are not eligible for financial aid from Wayne State University, except in certain circumstances depending on the program; for a list of eligible programs, students should check the Office of Student Financial Aid's website: <http://www.finaid.wayne.edu>

d) Applications for Post-Bachelor status from students new to Wayne State University should be made to the Office of Undergraduate Admissions, Welcome Center, 42 W. Warren, Wayne State University.

e) An applicant who earned an undergraduate degree from Wayne State University, or who was previously admitted and registered in a Wayne State graduate program, should contact the Records Office to be re-admitted to the University as a Post-Bachelor student. Post-Bachelor applicants in the Colleges of Education and Nursing must obtain authorization directly from the College.

International Students

To be considered for graduate admission, international applicants must have completed an appropriate university-level program comparable in subject matter and credits to a program for which a bachelor's degree is awarded at Wayne State University.

The fact that a degree in another country may have a similar name to a degree offered in the United States does not mean the two degrees require similar lengths and content of study or that they should be accepted as equivalents. *All graduate applicants must:* 1) present an excellent scholastic record; 2) have sufficient financial resources for minimum tuition, supplies and living expenses; and 3) have a sufficient proficiency in English (see the section on English Proficiency Requirement — International Students, below).

FINANCIAL AID: University-sponsored financial assistance for international students is extremely limited and unconfirmed awards should not be included in financial projections.

English Proficiency Requirements

Graduate applicants who graduated from colleges/universities in other countries must demonstrate proficiency in English. To fulfill this requirement an applicant must satisfy one of the following criteria:

1) Complete baccalaureate degree requirements at an accredited U.S. institution or in a country where English is the native language.

2) Present an acceptable score on the Michigan English Language Assessment Battery (MELAB).

3) Present an acceptable score on the Test of English as a Foreign Language (TOEFL) or equivalent test such as the IELTS.

Some units may elect to grant qualified graduate admission to academically-talented International Students whose TOEFL scores fall slightly below the University minimum score. Interested students should contact the chairperson or director of their prospective program, to determine whether the program offers such qualified admission. For further information on the English Proficiency policy, please consult the Office of Graduate Admissions.

Admission, Faculty

Tenured Wayne State University faculty members holding the rank of Assistant Professor or above may be admitted to Wayne State graduate degree programs outside the faculty member's school/college, under certain specified conditions. Untenured tenure-track faculty members are not eligible to pursue a graduate or professional degree at Wayne State while in University employment. Faculty

members who are not tenured and not on the tenure track may enroll in degree programs outside their own unit with the approval of the dean of their college. For further information, contact the Dean of the Graduate School.

Admission: Special Status Students

Visiting Doctoral Guest

The Graduate School may issue a Visiting Doctoral Guest certificate to persons with an earned doctorate who come to Wayne State for scholarly study under the sponsorship of a department. Such Guests may obtain University library privileges and attend classes upon invitation of the department. No official record of attendance is kept on such Guests. For further information, contact the Graduate School.

Visiting Scholar

The Graduate School may issue a Visiting Scholar certificate to persons who have an advanced degree, such as an M.D., or are earning a doctoral degree, and who have come to Wayne State for scholarly study under the sponsorship of a department. Scholars may obtain University library privileges and attend classes upon invitation of the department. No official record of attendance is kept on such Scholars. For further information, contact the Graduate School.

Tuition and Fees

Listed below are the tuition and fees in effect at the time of publication of this Bulletin. Graduate level tuition varies by college and academic program according to the following schedule. **Tuition and Fees are subject to change without notice by action of the Board of Governors.** In accordance with action of the Board of Governors, a portion of these fees is used for operation of the Student Center. Current tuition and fee information is available on our website at: <http://www.reg.wayne.edu/students/tuition.php>

Tuition and Fees, Graduate

Business Administration, Engineering (except for Global Exec. Track of Industrial Engineering - see below), and Library Science

Resident: \$713.09 per credit
Non-Resident: \$1,429.50 per credit

Education (except for Division of Kinesiology), Graduate School, Liberal Arts and Sciences, and Social Work

Resident: \$614.40 per credit
Non-Resident: \$1,330.71 per credit

Education (Division of Kinesiology) and Eugene Applebaum College of Pharmacy and Health Sciences

Resident: \$698.51 per credit
Non-Resident: \$1,414.92 per credit

Fine, Performing and Communication Arts

Resident: \$645.11
Non-Resident: \$1,361.52

Global Executive Track Doctoral Program in Industrial Engineering

Resident: \$1,426.18 per credit
Non-Resident: \$2,142.59 per credit

Law School (J.D. Program)

Resident Year 1: \$955.77 per credit
Resident Years 2, 3, 4 and Unranked: \$937.95 per credit
Non-Resident Year 1: \$1,048.52 per credit
Non-Resident Years 2, 3, 4 and Unranked: \$1030.70 per credit

M.D. Program

Resident Year 1: \$636.75 per credit
Resident Year 2: \$621.25 per credit
Resident Years 3 and 4: \$609.05 per credit
Non-Resident Year 1: \$1,325.10 per credit
Non-Resident Year 2: \$1,292.80 per credit
Non-Resident Years 3 and 4: \$1,267.45 per credit

Medicine: Graduate Programs (excluding M.D.)

Resident: \$765.35 per credit
Non-Resident: \$1,444.86 per credit

Nursing

Resident: \$838.22 per credit
Non-Resident: \$1,554.63 per credit

Fees, Student

Graduate/Professional Registration Fee

There is a \$285.86 registration fee, except that students enrolled in the Visitor Program shall pay half of the regular registration fee

Student Services Fee

Graduate students are assessed a \$49.40 fee per credit per term. Year 1 M.D. students are assessed \$24.60 fee per credit. Years 2 M.D. students are assessed a \$24.00 fee per credit. Year 3 and 4 M.D. students are assessed \$23.00 per credit hour. The Student Services Fee is used primarily to maintain, upgrade and replace student computing and technology resources on campus. A small portion is also used to fund student activities on campus, and to enhance programs directed toward improving on-campus activities, including athletics.

Application Fees

Admission Application Fee

Graduate applications and applications for the English Language Institute must be accompanied by a non-refundable \$50.00 fee. There is no application fee for members of the Alumni Association, their spouses and/or dependents, or for applicants sixty years of age or older, except for applicants to the Law School and School of Medicine.

Application Fee, School of Medicine

Persons who have submitted a first application to the School of Medicine through the American Medical College Application Service (AMCAS), and who are asked to submit additional material (secondary application), are required to pay a non-refundable fee of \$30.00 for the processing of the secondary application.

Application Fee, Law School

Applicants to the Juris Doctor (J.D.) program will pay a non-refundable application fee of \$50.00

Student Exchange and Visitors Information Service (SEVIS) Fee

International students and scholars/visitors who must be reported through the federal SEVIS system shall be charged a \$50.00 non-refundable fee for each term of enrollment.

Late Registration Fee

Any student registering after the Priority registration date (as indicated in the Schedule of Classes website: <http://www.classsschedule.wayne.edu>) must pay either a \$35.00 Late Registration Fee if registration is completed before the start of classes or \$70.00 if completed after the start of classes. Late Registration Fees will be waived for new students in their first term of WSU enrollment.

Late Payment Fees

A student who does not satisfy his/her tuition and fee assessment by the prescribed dates on the e-Bill invoices shall be assessed a \$25.00 Late Payment Fee if the past due balance is less than \$500.00, or a \$40.00 Late Payment Fee if the past due balance is \$500.00 or more. Late payment fees will be assessed each term after the tuition cancellation period ends and continue on a monthly basis until the account is paid in full or sent to collections.

Returned Check Fee

A \$35.00 fee will be assessed to students' accounts for any check and/or ACH check payments returned to the University for any reason. Students who pay off prior term balances with a check returned to the University for non-payment will be unregistered from any classes for which s/he registers after writing the returned check.

Course Material Fees

These fees are required of some classes in which a relatively large portion of instructional costs is due to the necessary use of consumable resources. The fee is noted in the fee column after the course

listing on the Schedule of Classes website (<http://www.classschedule.wayne.edu>) The fee is automatically assessed. The fee may be canceled when a course is officially dropped within the tuition and fee cancellation period specified in each semester's term calendar. For additional information, contact the Department offering the course. Courses listed as having special fees require payment of the fee in addition to the tuition.

First Professional/Medicine Program Student Support Fee

Year 1 students in the First Professional Medicine Program pay a student support fee of \$860.50 per year. Year 2 students in the M.D. program pay a student support fee of \$839.50. Year 3 and 4 students in the M.D. program pay a student support fee of \$823.00. The fees are used to fund microscope rentals, photocopy expenses, teaching materials, National Board examination fees and other course-related expenses.

Examination Fee for Credit by Examination

The fee for an examination taken to establish credit by examination is \$10.00 per credit. Such examinations will be approved under provisions established by the Schools and Colleges. Credit allowed on the basis of transcript entries from another institution is not applicable to this provision.

Music Fees

Students registering for music courses taken as private lessons pay a fee of \$200.00 for each one credit hour course and/or \$400.00 for each three credit hour course. (Note: These fees are in addition to any tuition and fees that are assessed by the University). In the event of withdrawal, the student will receive a refund of the difference between the fee assessed and the cost to the University of any lessons that were provided.

Graduation/Certificate Fee

There is a \$40.00 fee for students who apply for a degree or certificate. The fee does not apply to graduate students, law students and undergraduates who started in fall 2014 or after.

Transcript Fee

Transcripts are issued free-of-charge, up to ten copies per calendar year. A fee of \$5.00 per transcript is charged for copies in excess of ten. A fee of \$20.00 is assessed for each emergency transcript. An emergency transcript is one which requested by 1:00 p.m. and mailed out for overnight delivery the next business day.

Locker Fee

Students registering for certain activity courses in physical education who wish to use locker facilities are charged a fee.

Bowling Fee

Students electing a course in bowling must pay a bowling lane rental fee at the first meeting of class. The fee is non-refundable.

Payment of Tuition and Fees

Disclosure Statement

The University reserves the right to update and/or change this information at anytime.

Student Financial Obligation for Payment of Tuition and Fees

When registering for courses each semester students are required to electronically sign a "Financial Responsibility Agreement." This agreement represents a binding contract obligating the student to pay all tuition and fees assessed including any collection, attorney, and/or litigation costs associated with collecting those fees, in the event of non-payment.

Payment Due Dates

Students registering during priority registration period are expected to pay the balance as follows:

FALL SEMESTER - August 15

WINTER SEMESTER - December 15

SPRING/SUMMER SEMESTER - April 15

Students registering on or after these payment dates are expected to pay the balance in full at the time of registration.

Students who register for short-term courses are required to pay the balance in full at the time of registration.

Students adding credits after the tenth day of the term must pay the additional tuition and fee assessment at the time the credits are added.

Failure to pay the balance in full by the specified due dates or dishonoring payment plan schedules will result in the assessment of monthly "late payment fees" and financial "holds" preventing registration, drop/add, release of official transcripts, diplomas, degrees and other university services.

Please refer to the published eBill Schedule and Payment Due Dates on the Office of University Bursar's website:

<http://fisops.wayne.edu/bursar/e-bills/eBill-Schedule.php>

Checks, Money Orders, and Cash: Wayne State University accepts personal and certified checks, money orders, and cash as payment for tuition and fees. Payments can be mailed, however, please do not mail cash. Checks or money orders should be made payable to Wayne State University. All checks must be issued in U.S. dollars, and drawn on or payable through a U.S. or Canadian bank. The student's name and University AccessID number should be written on the check or money order. Personal checks are not accepted on delinquent balances.

Fee-free ACH Checks: Wayne State University also accepts fee-free automated clearing house (ACH) check payments using WSU Pipeline. Checks (paper or ACH) returned by the bank are subject to returned check fees.

Credit Card Payments

Wayne State University does not accept credit card payments. Credit card payments can be applied to a student's University account by a third party processor, CASHNet SmartPay. CASHNet SmartPay will assess a convenience fee (2.9%) on all credit card payments. To make a credit card payment log into WSU Pipeline and select credit card payment which will automatically invoke the CASHNet SmartPay process. Discover, MasterCard and American Express cards are accepted.

Installment Payment Plans (IPP)

Wayne State University has two affiliations which enables it to offer interest free installment payment plans for students. Installment payment plans allow students and/or parents to make payments in easy monthly installments. Students can enroll for the fall and winter semester or choose both as an annual plan. A plan is not offered for a spring/summer semester. The plans are offered through the following companies:

Sallie Mae/Tuition Pay; 1-800-635-0120

<https://tuitionpay.salliemae.com/TuitionPay/Welcome.aspx?wayne>

Tuition Management Systems (TMS); 1-800-722-4867;

<https://wayne.afford.com/>

There is a nominal fee for enrolling. Contact the company for terms and conditions.

Sponsored Tuition Programs

Certain employers participate in direct tuition billing arrangements as part of their employee benefits programs. Students with questions about the University's procedures or required documentation for a specific plan should contact the Student Accounts Receivable Office at 313-577-6623.

IMPORTANT: Students who do not drop their courses during the tuition cancellation period for the term are financially obligated to pay for the courses even if they have not attended any class sessions. See the Registration Calendar at: <http://reg.wayne.edu/students/registration-calendar.php> for tuition cancellation deadlines.

Students with questions regarding any information presented in Payment of Tuition and Fees section above should contact the Office of the University Bursar at 313-577-3653.

Registration is not permitted beyond the prescribed registration date unless extenuating circumstances beyond the control of the student warrant an exception to University Policy as determined by the University Registrar. In such cases, full tuition, Registration Fee and Late Registration Fee must be paid in advance of registration.

Short Term Courses

Payment of the full tuition and the non-refundable Registration Fee is required on the date of registration or no later than the first class meeting date. Late Payment Fees are assessed to any student who has not paid his/her tuition and fee assessment by the due date.

Special Adjustments

The University Registrar is authorized to make adjustments in the application of the policies stated in this section when unusual circumstances warrant. Examples of circumstances which may warrant special consideration include: serious illness or death of the student or someone closely related, or mis-advisement by a University representative. Tuition cannot be canceled for reasons such as changes in work schedule or other employment demands, claims of lack of information, insufficient funds, unawareness of the difference between tuition and student financial aid, undocumented reasons, or for reasons that are within the control of the student. Non-attendance, except for situations falling under the University non-attendance policy (below), is not in and of itself a reason for tuition and fee cancellation. Students (or an authorized representative in the case of death or serious illness) must submit their applications and supporting documentation to the Office of the Registrar. A medical withdrawal is a complete withdrawal from all courses, supported by medical reports from the attending physician. Requests for exceptions to tuition and fee policies must be submitted within approximately two months of the end of the term, as follows:

- Fall Term - March 1
- Winter Term - July 1
- Spring/Summer Term - November 1

Deadlines falling on weekends will be extended to the next business day.

University Non-Attendance Policy

The University Non-Attendance Policy will allow 100% tuition cancellation only for students in their first term of attendance at Wayne State University. Instructors for all courses must verify the student did not attend classes after the tuition cancellation deadline. This policy is designed to provide relief to those students who in their first semester at Wayne State may not be familiar with the University's Tuition Cancellation Policy.

Where the student has otherwise proceeded properly, (s)he may be granted full cancellation of tuition and fees assessed for the class(es) involved:

- If the University cancels the class(es), or
- If the University re-schedules the class(es) after the student has registered and (s)he is now unable to attend, or

If an authorized University representative has taken action which causes financial loss related to tuition, e.g., authorizing a student's schedule when the student does not have the necessary prerequisite(s).

Appeal Procedures: If a student (or an authorized representative in the case of death or serious illness) is dissatisfied with the Registrar's decision with reference to this policy, the student (or an authorized representative) may appeal to the Tuition and Fee Appeals Board through the University Ombudsperson.

University policy allows for a Request for Medical Withdrawal. A medical withdrawal is a complete withdrawal from all courses. For approved requests, the University Medical Withdrawal Policy will grant 100% tuition and fee cancellation if a student stops attending ALL classes before the end of the 10th week of the scheduled class meeting period in a full fall/winter term. Medical documentation will need to confirm that medical attention was provided during this time period. For medical withdrawals occurring during the 11th or 12th week, tuition cancellation will be granted at the rate of 60%. There is no tuition cancellation after the twelfth week of the term. These periods are adjusted proportionally for courses that do not run the full term. While a request is under review tuition payments should be made as scheduled.

Holds on Records

Initial eligibility to register for classes each semester is based on a student's admission status with the University. All students must be authorized by the University in order to enroll in classes. 'Holds' may be placed on student records, and registration denied to a student, for academic reasons (e.g., probation or dismissal), a disciplinary problem, money owed to the University, failure to return library books and/or other supplies and equipment, and/or non-compliance with program, Departmental, School/College, or University regulations.

A 'Hold' will be placed on the records of any student who has past due indebtedness to the University. While the hold is in effect, registration for a subsequent term will not be permitted, official transcripts of academic work taken at the University will not be furnished, degree or enrollment certification will not be provided, nor will a diploma be issued.

Tuition Cancellation

Tuition may be canceled in accordance with the following schedule when students officially drop classes using the Academics on-line portal, by submitting a properly completed Register/Drop/Add form, or by sending a certified letter to the Office of the Registrar. A certified letter requesting to drop classes sent through the U.S. Postal Service shall be considered effective on the date it is received in the Office of the Registrar.

Students who officially drop classes before the conclusion of the first two weeks of classes (for the Fall and Winter terms) are entitled to 100% tuition cancellation, and the dropped classes do not appear on the academic record.

Students are contractually liable for tuition unless they take official action during the tuition cancellation period to drop classes.

Students who officially drop fifteen-week classes after the second week of classes (for the Fall and Winter terms) are not entitled to any tuition cancellation; however, classes dropped prior to the conclusion of the fourth week of classes do not appear on the students' academic record.

The tuition cancellation schedule shown below applies to courses that start in accordance with the Official University Academic Calendar. The tuition cancellation schedule for courses with specially approved starting dates is dependent upon the starting date of the course. Questions about the tuition cancellation schedule should be referred to the University Registrar.

Classes meeting fewer than four weeks: Students who officially drop scheduled classes before the first day of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting four to eight weeks: Students who officially drop scheduled classes before the second week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting nine to fifteen weeks: Students who officially drop scheduled classes before the third week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting sixteen to twenty-seven weeks: Students who officially drop scheduled classes before the fourth week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting twenty-eight or more weeks: Students who officially drop scheduled classes before the seventh week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Tuition Regulations and Review Procedures

The following regulations and review procedures are established by Wayne State University for tuition and fee purposes. Wayne State University recognizes three means by which an individual may establish eligibility for in-state tuition and fees:

By establishing residence by presence in the State of Michigan;

By establishing attendance at Michigan high schools; or

By establishing military service status.

Establishing Residence by Presence in Michigan

Generally, in order to establish residence by presence in the State of Michigan, an individual must document at least six months of continuous physical presence in the State. The six months continuous residence must be completed before the first day of classes for the semester in which in-state tuition is sought. Even if someone is present in Michigan for six months, the person may not qualify for in-state tuition; it depends on whether the person is in Michigan for educational purposes or some other reason. Under limited circumstances which clearly demonstrate that a student's presence in the State of Michigan is not primarily for educational purposes, the student may be eligible for in-state tuition prior to the passage of the six-month presence requirement.

Temporary Absences

In general, a person's residence is the place where he or she actually lives with the intention of making it the person's permanent home and to which he or she intends to return from temporary absences. A person may be temporarily absent from Michigan without affecting his or her previously established residence. Full-time attendance at a school outside Michigan or enlistment in a military service are examples of temporary absences. Other types of absences for more than six months will be presumed not to be temporary.

Presence for Educational Purposes

Coming to Michigan from another state or country in order to attend Wayne State University or another school does not establish residence. A non-resident at the time of his or her enrollment remains a non-resident throughout his or her presence as a student, except where it can be established that presence in the State of Michigan is primarily for purposes that are not educational, with enrollment only incidental to the primary purpose of being in Michigan. If a student enrolls in undergraduate school for more than eight credits, or in graduate school for more than six credits, or in Law School for more than ten credits in any one full length semester, within six months after arrival in Michigan, Wayne State University normally presumes that the student is in Michigan for the purpose of attending school. Applicants must demonstrate that their presence in Michigan is primarily for purposes that are not related to enrollment.

Factors Considered in a Residence Classification

The following circumstances, although not conclusive, support a claim for in-state tuition on the basis of residence.

The student is employed in Michigan on a permanent, full-time basis or has accepted an offer of permanent employment in Michigan.

The student's parents (or in the case of divorce, one parent) are legal residents of Michigan as shown by their permanent employment in Michigan and/or their establishment of a primary household in Michigan, and the applicant previously was a resident of Michigan and has maintained significant connections to Michigan.

The student's spouse or partner is employed in Michigan on a permanent, full-time basis and the applicant moved to Michigan as a consequence of that employment; and

The student has severed ties to his or her previous state of residence so that he or she no longer can reasonably be considered to be a resident of another state.

Factors Typically Not Supporting Residence Classification

The following circumstances, standing alone, do not typically support residence, inasmuch as they may be common to a temporary or short-term presence in Michigan:

- Employment by the University as a fellow, scholar, assistant, or in any position normally filled by students;
- A statement of intention to establish residence in this state;
- Payment of local and state taxes; or
- Automobile registration, driver's license, continued presence in Michigan during vacation periods.

Although insufficient to establish residence, certain of these factors may be taken into consideration in determining whether a student has severed ties to the student's previous state of residence.

For purposes of these regulations, the age of majority is eighteen years. Except as provided in paragraph "g" of this section, a minor does not have the capacity to establish his or her own legal residence. Normally, the legal residence of a minor follows:

- That of the parents or surviving parent; or
- That of the parent to whom custody of the minor has been awarded by a divorce or other judicial decree; or
- That of the parent with whom the minor in fact makes his or her home, if there has been a separation without a judicial award of custody; or
- That of an adoptive parent, where there has been a legal adoption, even though the natural parents or parent may be living; or
- That of a "natural" guardian, such as grandparent with whom the minor in fact makes his or her home, where the minor has permanently left his or her parental home and reasonable expectation of substantial financial support from the parents has been dissolved. A natural guardian is someone who, although not legally the minor's parent or guardian, performs the same sort of parental duties.
- If a Michigan resident parent or guardian of a minor moves his or her residence to another state, the minor shall remain eligible for resident tuition status as long as he or she continues to attend school regularly in this state.

g. A minor who has permanently left his or her parental home, and who has no reasonable expectation of significant financial support from his or her

parents or legal guardian, etc., may qualify for resident status even if under eighteen years of age.

Non-U.S. Citizen

A non-U.S. citizen may apply for resident status in the same manner as a citizen, if he or she is in the United States for other than a temporary educational purpose. In order to demonstrate this, applicants

must provide evidence from the U.S. Department of Citizenship and Immigration Services of one of the following:

- a. A U.S. permanent resident alien with a green card.
- b. An applicant for U.S. permanent residence whose Petition for Alien Relative, or Employment-based Immigration Petition for Alien Worker has been approved, or who has been issued an Employment Authorization document pending adjustment of status. These individuals will have documentation of this status such as an I-130 (Petition for Alien Relative) or I-140 (Immigration Petition for Alien Working) Approval Notice, or an I-151 or I-551 Notice of Action indicating approval of petition to become an immigrant.
- c. An alien with a current valid visa type issued for purposes of working in the United States, and currently working in the State of Michigan. These currently include visa types of A, E, G, H, I, L, R, and TN.
- d. An Alien granted asylum or refugee status.

Attendance of Michigan High Schools

An individual may be eligible for in-state tuition on the basis of high school attendance if he or she demonstrates that he or she:

- a. Attended an accredited Michigan high school for at least three years and thereafter graduated from an accredited Michigan high school or obtained his or her GED in Michigan; and
- b. Enrolls at Wayne State University within twenty-eight months of graduating from high school or obtaining a GED.

An individual does not need to be a legal resident of Michigan or a citizen of the United States to qualify for in-state tuition on the basis of attendance at Michigan schools.

Military Service

Individuals on active duty in the U.S. Military who are stationed in Michigan and their dependents are eligible for Michigan in-state tuition. Stationing orders and proof of relationship (for dependents) must be provided with the application.

Veterans and their dependents are eligible for Michigan in-state tuition. The term "veteran" means a citizen of the United States or a resident alien whose most recent separation from any branch of the armed forces of the United States was under conditions other than dishonorable after having served on active duty for 90 consecutive days or more or by reason of disability incurred while serving on active duty.

Individuals who are members of the National Guard of any state, or who were separated from the National Guard of any state under conditions other than dishonorable, and their dependents are eligible for Michigan in-state tuition.

Without regard to the foregoing, any individual using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), Chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, and/or the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the State of Michigan while attending Wayne State University (regardless of his/her formal state of residence) is eligible for Michigan in-state tuition.

Good Neighbor Provisions

Residents of Fulton, Lucas, Ottawa, and Williams counties in Ohio, or residents of Ontario, Canada, who are enrolled in eligible graduate programs will pay in-state tuition. WSU Tuition and Fee Regulations published each academic year identify specific academic programs eligible for this provision.

Great Lakes Policy (Undergraduate Only)

Residents of the states of Ohio, Indiana, Illinois, Wisconsin, Minnesota, New York, or Pennsylvania, or the province of Ontario, Canada, who are enrolled in eligible undergraduate programs and who are not eligible for the Good Neighbor Policy may pay tuition and fees at 110% of the then-current in-state rate.

Online Programs

Students enrolled in programs which are offered online in their entirety will have the out-state portion of their tuition waived. WSU Tuition and Fee Regulations published each academic year will identify the specific academic programs eligible for this provision.

Review Procedures

Initial Classification and Appeal

a. The student is responsible for registering under proper residence or tuition status and advising the University of changes in circumstances, which might affect tuition status. Questions concerning a student's residence or tuition status prior to enrollment should be raised with the Office of Admissions. Questions arising after enrollment should be raised with the Registrar's Office.

b. After enrolling, a student may challenge the initial classification made by the Office of Admissions by filing an Application for Residence Classification or Change in Tuition Status with the Registrar's Office.

c. Except for documented delays caused by University personnel, such applications must be filed by:

September 30 for the Fall semester and the Medical Year semester

January 31 for the Winter semester

July 31 for the Spring/Summer semester

Deadlines falling on weekends or on days when the University is closed will be extended to the next business day. Applications received after these dates will be processed for the following semester.

Further Appeal

A student may appeal the initial tuition decision as follows:

a. By filing a written notice of appeal with the Registrar within thirty (30) days after the student is notified of the classification decision. The notice of

appeal shall include reasons for the appeal, the period for which resident status is claimed, and a complete statement of the facts on which the appeal is based, together with supporting affidavits or other documentary evidence. Failure to file notice within thirty (30) days shall constitute a waiver of any right to further appeal. The student has the right to consult the University Ombuds Office at any time, and the student may particularly want to utilize the Ombudsperson's services at this point in the review procedures.

b. A student may appeal the Registrar's decision by filing a written notice of appeal with the Office of the General Counsel within fifteen (15) days from the date of the Registrar's decision. Failure to file written notice of appeal of the Registrar's decision with the Office of the General Counsel within fifteen (15) days shall constitute a waiver of any right to further appeal.

c. A student may appeal the decision of the Office of the General Counsel within fifteen (15) days with the Office of the President. Failure to file written notice of appeal of the General Counsel's decision with the Office of the President within fifteen (15) days shall constitute a waiver of any right to further appeal. After the notice of appeal, the President or his designee shall review the student's appeal and render a final decision.

Erroneous Classification

a. If an erroneous classification of non-residence occurs, an adjustment for the appropriate period and amount will be made.

b. If an erroneous classification of residence occurs, the student shall be reclassified as a non-resident student. If the cause of his or her incorrect classification shall be found to be due to any material concealment of facts or false statement made by the student before the time of the original classification, the student will be required to pay all tuition and fees which would have been charged to him or her and

also will be subject also to appropriate discipline in accordance with University Student Code of Conduct. If it is determined that there is no such concealment of facts by the student, fees shall be adjusted only for current and future semesters.

Effective Dates of Residence Regulations

Amended statute as adopted on September 20, 2013, will be effective for the Winter Semester 2014.

Legislative History: Adopted 52:_____ (28 November 2007); April 20, 2011 Prior Acts: Official Proceedings 24:3315, 28:3860, 3

Financial Assistance, Graduate

Financial Aid, Office of Student (OSFA)

Welcome Center, 42 W. Warren Avenue,
P.O. Box 2340, Detroit MI. 48202
Telephone: 313-577-2100 or Fax: 313-577-6648
Website: <http://wayne.edu/financial-aid>

The Office of Student Financial Aid (OSFA) provides need-based and non-need-based financial aid to help eligible students meet the expenses of their education. Financial aid is intended to supplement, not to replace, students' financial resources. Financial need is determined from the information that students submit on the Free Application for Federal Student Aid (FAFSA). Descriptions of the specific services that OSFA provides are stated below.

Information concerning scholarships is available online at <http://wayne.edu/scholarships/>. Wayne State University offers a variety of University-wide scholarships that are awarded based on financial need, scholastic achievement, and/or leadership qualities. To apply for University-wide scholarships, students must complete the online application: <http://wayne.edu/scholarships/>. Note: Scholarships that have need as a criterion require submission of the FAFSA.

Service Hours: Walk-in service is provided in the lobby of the Welcome Center Monday through Thursday, 8:30 a.m. to 6:00 p.m., and Friday 8:30 a.m. to 5:00 p.m. June through August, appointments and walk-in services end at 5:00 p.m. Monday through Friday.

Financial Aid Types

Financial aid at Wayne State University is awarded in the form of a 'package,' or combination of aids, and generally consists of four types: grants, scholarships, loans, and employment. The amount of need-based financial aid that a student may receive cannot exceed his/her financial need, which is based on the information provided on his/her FAFSA. Students may be eligible for non-need-based aid in the form of scholarships or unsubsidized federal loans. Additional information about types of aid is available on our website: <http://wayne.edu/financial-aid>.

Grants

Grants are gift assistance awarded on the basis of financial need and do not require repayment. The Free Application for Federal Student Aid (FAFSA) is required. *Note:* Graduate students are not eligible for the Federal Pell Grant, which is limited to students who have not earned the first bachelor's or professional degree.

Scholarships

Scholarships are gift assistance awarded on the basis of academic achievement or other special ability and do not require repayment. In some such awards, financial need is a factor.

Loans

Loans are money that must be repaid at a future date, usually following graduation or when the student ceases to be enrolled on at least a half-time basis. Need- and non-need-based loans are available.

Work-Study

Work-study is on- or off-campus part-time employment with eligible employers that pays at least the federal minimal wage. Work-study is awarded on the basis of financial need. Students interested in work-study should carefully read the Student Guide to On-Campus Employment, which explains the hiring process and the terms and conditions of employment. The Guide is available from the Office of Career Services, located in Room 1001 of the Faculty/Administration

Building, and also online at: <http://careerservices.wayne.edu/student-employment.php> (click "Guide to Student On-Campus Employment"). To request work-study, complete the online application at <https://wayne.edu/financial-aid/forms/apply/#cws> in addition to the FAFSA.

Financial Aid, Application for (FAFSA)

How and When to Apply for Financial Aid: Each academic year, students applying for financial aid do so by completing the Free Application for Federal Student Aid (FAFSA) online at <http://www.fafsa.ed.gov>. The federal processor, the U.S. Department of Education will electronically transmit the FAFSA data to the university's financial aid office if the applicant lists the WSU federal code, 002329, on the FAFSA.

Help to Complete the FAFSA: Help completing the FAFSA is provided online throughout the application process. Help also is available by telephone from the Federal Student Aid Information Center: 1-800-4-FED-AID (1-800-433-3243) during regular business hours (Eastern Time), Monday through Friday.

Application Deadlines

Fall/Winter Application Priority Date: The application priority date for financial aid consideration at WSU is March 1 for fall and winter semesters. The priority date is the date by which the FAFSA should be submitted to facilitate determination of student eligibility for financial aid before the beginning of the fall semester. The priority date is not a deadline. Students may submit the FAFSA after the priority date.

Applicants are strongly encouraged to use the IRS Data Retrieval Tool when completing the FAFSA. The IRS Data Retrieval Tool will immediately upload tax data to the student and/or the parent section of the FAFSA. This tool cannot be used until one to two weeks after electronically filing a tax return and six to eight weeks after filing a paper tax return. Therefore, applicants and, if dependent, their parents should e-file their federal tax return(s) as early as possible in February or March.

Spring/Summer Financial Aid Request Priority Date: A spring/summer Loan Consideration Request Form and Work-study Consideration Request Form are required in addition to the FAFSA. The spring/summer supplemental forms and deadline dates are available on the OSFA Web site at <http://wayne.edu/financial-aid/apply/spring-summer.php>.

Academic Calendar: At WSU, the spring/summer semester is the third term of the school year; a new school year begins each September and ends the following August. Thus, the spring/summer semester is considered a separate and concluding part of the previous fall and winter semesters. (Examples: The spring/summer semester 2017 is part of the 2016-17 school year; the spring/summer semester 2018 is part of the 2017-18 school year.) Note: If the FAFSA has been submitted for the academic year, it is not necessary to submit it again for the spring/summer semester.

Financial Need Determination

The Student Aid Report (SAR) lists the financial aid applicant's answers to the questions on the FAFSA. Based on those answers, the SAR either states the student's Expected Family Contribution (EFC) or instructs the student to take additional action which will allow an EFC to be determined. The EFC is a measure of the student's financial strength and is used in determining financial need. The SAR also indicates whether the financial aid application has been selected for the verification process.

How Financial Need Is Determined: To determine financial need, OSFA subtracts the student's EFC from the average cost of attendance (COA) for his/her program at Wayne State University. COA minus EFC = financial need.

Verification: The process by which an educational institution confirms the accuracy of the data reported on an individual student's FAFSA is called verification. The federal processor selects the FAFSA applications for which the data submitted must be verified. If the federal processor selects a student's FAFSA for verification, he/she must provide documentation to confirm the information on the FAFSA. The Office of Student Financial Aid will list the documents required in *Academica* and notify the student to view his/her financial aid data in *Academica* via an email to his/her WSU email address. OSFA strongly encourages students to periodically review their financial aid data in *Academica* for possible updates.

Note: If an application is selected for verification, the student must complete the verification process before his/her eligibility for financial aid can be determined, and therefore, before financial aid can be paid

The Cost of Attendance (COA): The cost of attendance (COA), which is also called a budget, includes tuition and fees; on-campus room and board or a housing and food allowance for off-campus living expenses; and allowances for books, supplies, transportation; and miscellaneous expenses. The COA is an *estimated average* and may not reflect any particular student's actual educational expenses.

Certain budget components may be adjusted to include dependent care directly related to attendance at WSU; costs related to a disability; computer purchase for educational purposes; costs to obtain a first professional license; and an allowance for reasonable costs directly related to one's program of study.

Michigan Resident Cost of Attendance: The average projected total cost of attendance for the 2015-16 academic year is \$19,862 for a Michigan resident graduate student enrolled full-time and living with his/her parents. The components for this COA are outlined on our website at <http://wayne.edu/financial-aid/resources/cost-of-attendance>.

Out-of-State Resident Cost of Attendance: The average projected total cost of attendance for the 2015-16 academic year is \$38,998 for a non-Michigan resident graduate student enrolled full-time living away from home. Components for COA are also outlined on our website at <http://wayne.edu/financial-aid/resources/cost-of-attendance>.

Current Tuition and Fees: Tuition and fees are subject to change by the WSU Board of Governors without notice. The schedule of current tuition and fees is available on the Office of Registrar website: <http://reg.wayne.edu/students/tuition.php>

Special Circumstances: The Office of Student Financial Aid recognizes that students may have extenuating financial circumstances that the standard need analysis form (FAFSA) does not consider. Applicants may request a review of extenuating circumstances that they believe affect their financial aid eligibility by submitting a Special Circumstances Appeal Form. Detailed information concerning the appeal process is on the financial website at <http://wayne.edu/financial-aid/forms/appeal/>. Please note: To obtain a Special Circumstances Appeal Form, a student first must discuss his/her circumstances with a Financial Aid Officer Eligibility and Conditions of Financial Aid.

Eligibility and Conditions of Financial Aid

Students must be enrolled in an eligible degree- or certificate-granting program to receive financial aid funds. Enrollment must be at least half-time to be considered eligible for most types of aid. At the graduate level, enrollment for four to seven credits is considered half-time and enrollment for eight or more credits is considered full-time during fall and winter semesters. During the summer semester, enrollment for one credit is considered halftime and enrollment for two or more credits is considered full-time. More information about enrollment requirements is available on our website at <http://wayne.edu/financial-aid/receiving/requirements>.

Post-bachelor students have specific aid eligibility limitations. Post-bachelor students who are completing prerequisites for regular admission to a graduate program must complete a Prerequisite Courses Request Form and a Plan of Work before financial aid eligibility can be determined.

Post-master's students are not eligible to receive Federal Direct, Perkins, or Graduate PLUS loan funds. Students with this status may apply for a private/alternative loan or enroll in a tuition payment plan.

Calculating "Earned" versus "Unearned" Financial Aid

OSFA must follow federal regulations in determining the amount of "earned" versus "unearned" federal financial aid disbursed to a student who then leaves school without completing the semester. The refund percentage is determined by the student's effective date of withdrawal from all classes, which is the last recorded date of attendance.

If a student completes 60% or less of a semester, s/he will be considered to have "earned" the same percentage of financial aid as the percentage of the semester completed. The percentage will be calculated by dividing the completed number of days by the total number of days in the semester. The percentage of "unearned" aid will correspond to the percentage of the semester not completed. If a student completes more than 60% of a semester, s/he will be considered to have earned 100% of the financial aid disbursed for that semester and no return of federal financial aid will be calculated.

If a student has not "earned" all of the financial aid received, he/she may be required to repay those funds. Additional information is available on our website <http://wayne.edu/financial-aid/receiving/cancellation>. Detailed information is provided in the WSU Withdrawals and Return of Title IV Policy, which can be downloaded from our website: <http://wayne.edu/financial-aid/receiving/cancellation>.

Satisfactory Academic Progress (SAP)

Federal financial aid regulations require OSFA to apply reasonable standards for measuring whether a student is making progress toward his/her degree or certificate. The standards, which are called satisfactory academic progress (SAP), must be met for a student to remain eligible to receive financial aid. Academic progress is measured each semester.

WSU Satisfactory Academic Progress Standards are comprised of three components: 1) the cumulative grade point average, which is 3.0 for graduate programs; 2) the pace of progress toward the degree or certificate must be at least 67%, which is determined by dividing the cumulative number of credits completed by the cumulative number of credits attempted; 3) the maximum time frame for completing the degree or certificate, which is 150% of the average published length in credits of the program. Note: Full-time or part-time enrollment is not a factor in determining the pace of progress or the time frame since only credit hours are the units of measurement.

The WSU Satisfactory Academic Progress Policy is available online: <http://wayne.edu/financial-aid/receiving/sap>.

Consequences of Withdrawing from Courses

A student's satisfactory academic progress may be affected if he/she withdraws from courses (some or all) during a semester. A student who does not comply with SAP standards may be denied financial aid for subsequent semesters. Note: Information/instruction about filing an appeal if aid is denied due to SAP non-compliance is available on our website: <http://wayne.edu/financial-aid/receiving/sap/sapappeal>.

If a student withdraws from all courses, he/she may be required to repay a portion of the financial aid received. Please see the section above titled Calculating "Earned" versus "Unearned" Financial Aid.

If a student's withdrawal from one or more courses results in less-than-half-time enrollment status, he/she will not be eligible for new federal loan funds. At the end of the grace period on the loans received, repayment will begin. Detailed information about grace

periods and loan repayment is available on the Federal Student Aid website: <http://studentaid.ed.gov/repay-loans/understand>. A student should contact his/her lender to make payment arrangements or request a loan deferment or forbearance. Detailed information about loan deferment and forbearance also is available on the Federal Student Aid website: <http://studentaid.ed.gov/sa/repay-loans/deferment-forbearance>.

The amount in federal student loans that a student can receive has annual and aggregate loan limits. Detailed information is available on the Federal Student Aid website: <http://studentaid.ed.gov/types/loans>. Students are strongly encouraged to consider these limits in developing their graduate education plan.

Financial Aid Disbursement

Financial Aid Disbursement: Financial aid (except work-study) is paid in two disbursements if the award is for the academic year (fall and winter semesters). Half of the award is paid in the fall semester and half is paid in the winter semester. One-semester loans have one disbursement.

Work-Study Payments: Work-study earnings are paid biweekly in the form of a paycheck. The department in which the student is employed submits a record of the hours worked to the Payroll Office, and the Payroll Office authorizes payments.

Note: Only half of an academic year (fall and winter) work-study award can be earned each semester. Students cannot earn the total amount of a work-study award during only one semester. The spring/summer semester is the third term of the school year. Since the spring/summer semester is separate from the fall and winter semesters, unused funds from a fall and/or winter work-study award cannot be earned in the spring/summer semester.

Enrollment Requirements for Federal Direct Loans: Financial aid is awarded based on the assumption of full-time enrollment. Since the actual enrollment status of some students is less-than-full-time, at the time financial aid is disbursed OSFA reviews the number of credits for which each student is enrolled. At least half-time enrollment at the time of disbursement is required to receive a Federal Direct Unsubsidized Loan and a Federal Grad PLUS Loan.

Records and Registration

Registrar, Office of the

5057 Woodward; Telephone: 313-577-3550, Fax: 313-577-3769
Website: <http://reg.wayne.edu/>

The Office of the Registrar supports the instructional, research and service missions of the University by providing a wide variety of academic services to students, faculty and staff. The office consists of several units: The Office of the Registrar prepares academic calendars, assesses tuition and fees, determines residency, and reviews all appeals for exceptions to University enrollment policies. Records and Registration oversees registration, adds, drops, course withdrawals, grading, student personal and academic data, and transcripts/academic records. Curricular Services oversees the preparation of Graduate and Undergraduate Bulletins, each term's Schedule of Classes, degree audit tools, graduation applications and diplomas. Transfer Credit evaluates coursework from other universities for undergraduate credit at Wayne State University.

Registration and Scheduling

313-577-3541; Fax: 313-577-8192
Website: <http://reg.wayne.edu/students>

Registration is the process of officially enrolling in classes for a particular term. The Class Schedule Website, provided by the Office of the Registrar in advance of each term, lists the days, times and locations for registration and explains registration procedures. Prior to registering, students should review the information at the Schedule of Classes website: <http://classschedule.wayne.edu> Students can build a schedule and register on this site.

A student may not attend any class for which he/she is not officially registered.

POST-BACHELOR STATUS: Students wanting graduate credit should NOT to register 'post-bachelor.' This status allows students holding bachelor's degrees from accredited institutions to elect only courses open to undergraduate students (numbered below 7000), which may be used to fulfill prerequisite requirements for graduate admission. Credits for courses elected as a post-bachelor student do *not* count toward graduate credit. For Post-Bachelor admission criteria, see Admission, Post-Bachelor, p. 19.

Registration Online

Complete instructions for registration appear in the Schedule of Classes, on the Web at <http://wayne.edu/register/>. Additional information and assistance is available by sending an email to registration@wayne.edu. In-person assistance is provided at the Student Service Center, located in the Welcome Center on the corner of Woodward and Warren Avenues.

1. To register on the Web, the student needs to know his/her WSU Access ID and password. For information and help with the Access ID and password, contact the Computing and Information Technology Help Desk at 313-577-HELP; or email: helpdesk@wayne.edu; or consult the Web: <http://wayne.edu> (click 'WSU Directories', then click 'WSU People Search' and search your 'name').
2. Registration may be done on any computer with internet access.
3. The Web address for registration is <http://academica.wayne.edu>. Students should log in using their Access ID and password. Then click on: Student Resources, Registration, Register—Add/Drop, Register/Drop/Add (from the Student Services Menu listed on the left); and then follow the prompts on each webpage.

Additional information and assistance is available by calling Registration and Scheduling, 313-577-3541. How-To Videos can be accessed at <http://reg.wayne.edu/videos/index.php>.

Academica

Website: <http://academica.wayne.edu>

Academica is a secure gateway that provides unified access to Wayne State information, services, and computing systems. This comprehensive environment is a one-stop location where WSU students, faculty, and staff can conveniently use online self-service functions and easily access many computing systems, such as the Wayne Connect e-mail system and the Blackboard Learning System. Using Academica, students also have continual access to specific information and helpful tools needed for communication, collaboration, teaching and learning, and University administration. Current students can use secure self-services to check financial aid, register for and drop/add classes, pay tuition and fees, check holds and final grades, obtain enrollment verifications and transcripts, self-register for training programs/workshops, and more.

Accessing Academica: Use a current Web browser on any computer connected to the Internet to access Academica (<http://academica.wayne.edu>) and then log in using a WSU Access ID (e.g., xy6789) and password. As soon as a student applies for admission or an employee is hired, a unique Access ID is automatically created. Instructions on how students and employees can look up an Access ID and find the initial password they need for full access to WSU computing services and resources are on the following Website: <http://computing.wayne.edu/accessid>.

Blackboard Courses Online: see Blackboard (Courses on the Web), p. 58.

Degree Audit

Wayne State University is transitioning from the old STARS for Degree Audit to new degree audit software called Degree Works. Degree Works is a new degree tracking tool that allows you to see your progress toward graduation and help you and your advisor determine which courses you still need to take. Along with your advisor, you can also map out which courses you will take in future semesters, putting you on the right path for graduation. Information on the new degree audit tool can be found at: <https://wayne.edu/degreeworks>.

Dropping and Adding Courses

Registered students may drop and/or add classes on the date(s) indicated on the Registration Calendar. Note the following requirements:

1. The regulations pertaining to dropping and adding courses are stated as they pertain to regular courses fifteen weeks or more in duration. These regulations are applied proportionately to courses that are offered for less than fifteen weeks. Students can click on the Course Reference Number (CRN) on the class schedule website to view specific deadline dates for each course(s). Students can also contact the Registration Office, registration@wayne.edu, for any questions regarding these regulations.
2. Students who do not officially drop their courses within the first two weeks of classes are financially obligated to pay for the courses even if they have not attended any class sessions.
3. Students who officially drop full term courses before the conclusion of the first two weeks of classes (for the Fall and Winter terms) are entitled to 100% tuition cancellation, and the courses do not appear on the students' academic records.
4. Students who officially drop fifteen-week courses after the second week of classes (for the Fall and Winter terms) are not entitled to any tuition cancellation; however, courses dropped prior to the conclusion of the fourth week of classes do not appear on students' academic

records. After the fourth week of classes, courses dropped are considered a — Withdrawal. The Withdrawal will include a notation of 'P' — Passing, 'F' — Failing, or 'N' — Never Attended, beginning in 2006-07.

5. Students are not permitted to add courses after the first week of the term without instructor and departmental permission. Departments are required to enter a late add permit/override for students if exceptions are made to permit adding of classes during the second week.

6. Students are required to submit their withdrawal through Academica for their instructors' approval for withdrawals processed after the fourth week of the term. Once logged into Academica, click on Student Resources, then Registration, then Course Withdrawal and follow the prompts on each page. Masters-level students will be required to complete a SMART check before the withdrawal is completely processed. Again, follow the prompts.

7. Students are not permitted to withdraw from courses after the end of the tenth week of class for full term classes. The withdrawal deadlines are published in each term's academic calendar. Withdrawal dates for less than full term courses are adjusted proportionally. Late withdrawal requests will not be approved. Medical withdrawal requests have separate deadlines.

Classes for which a grade has been earned cannot be withdrawn.

College of Engineering: Students are not permitted to withdraw from courses after the fifth week of classes without written approval of their advisor. Some departments have more stringent restrictions on withdrawing from of courses

Grading System: University

Final grades are available through Academica (<http://academica.wayne.edu>). Grades are not mailed to students.

Grades, Graduate

The graduate grading system is intended to reflect higher standards of critical and creative scholarship than those applied at the undergraduate level. To receive a graduate grade in courses open to both undergraduate and graduate students, the graduate student is expected to do work of superior quality and is required to do any additional work specified by the instructor.

To be awarded a graduate degree, a student must have achieved at least a 'B' (3.0) overall grade point average. Grades of 'B-minus' and below are unsatisfactory for graduate level work. A limited number of 'B-minus', 'C-plus,' or 'C', though unsatisfactory, may be applied toward a graduate degree provided they are offset by a sufficient number of higher grades to maintain a grade point average of 3.0. Grades below 'B' can constitute reason for dismissal from a program at the department or program's discretion. Students should consult with their departments and advisors regarding unsatisfactory grades and their impact on good academic standing. All graduate teaching assistants and graduate research assistants must maintain a minimum grade point average of 3.0 in order to continue their assistantship appointments. Every effort is made to assist students whose work suffers as a result of a condition beyond their control, or interruption of study for military service.

Law School and School of Medicine: This grading system does not apply to Law School students in the J.D. program or students in the four-year M.D. program of the School of Medicine. Students enrolled in those programs should see the appropriate sections of this bulletin and should consult with appropriate Program Directors for more information.

Final grades for graduate courses are recorded under the following system.

A — Excellent: 4.0 grade points per credit hour

A-minus: 3.67 grade points per credit hour

B-plus: 3.33 grade points per credit hour

B — Good: 3.0 grade points per credit hour

B-minus: (Below Graduate Standards) 2.67 grade points per credit hour

C-plus: (Below Graduate Standards) 2.33 grade points per credit hour

C — Below Graduate Standards: 2.0 grade points per credit hour

F — Failure: 0 grade points per credit hour

M — Marginal Pass in designated courses such as field work, practicums and internships (not considered in calculation of the grade point average).

S and U — Satisfactory and Unsatisfactory performance in non-degree courses and in certain designated courses such as field work, practicums and internships. The grade of 'S' is given for all dissertation credits upon final acceptance of the dissertation in partial fulfillment of the requirements for the Ph.D. and Ed.D. degrees. 'S' and 'U' grades are not considered in the calculation of the grade point average but courses completed with an 'S' grade may count toward a degree.

Marks, Graduate

Effective Fall Term 2006

The mark of 'I' (Incomplete)

This mark is given to a graduate student when he/she has not completed all of the course work as planned for the term and when there is, in the judgment of the instructor, a reasonable probability that the student will complete the course successfully without again attending regular class sessions. The student should be passing at the time the grade of 'I' is given. A written contract specifying the work to be completed should be signed by the student and instructor. Responsibility for completing all course work rests wholly with the student.

The mark of 'I' will be changed to a letter grade when the student completes the course work as arranged with the instructor or, if the instructor has left the University, with the Chairperson of the department or other instructional unit. **Work must be completed within one calendar year.** There are no extensions.

The mark of 'I' will not be awarded if, in the instructor's judgment, it is necessary for the student to attend subsequent sessions of the class. It is a violation of University policy for a student to 'sit in' on a course for which he/she is not registered. If regular attendance is necessary to complete coursework, the student must register for the class for the semester in which attendance is planned. The student will be assessed tuition and applicable fees for the second registration. If the student decides to register for the course subsequent to the assignment of an 'I', then the mark of 'I' for the original election will be changed to a 'WP' (Withdrawal Passing) and the student will be responsible for tuition and applicable fees for the second registration. Students are responsible for notifying their department and the department offering the course that they have re-registered for the course so that the 'I' is not changed to an 'F'.

Any unchanged mark of 'I' will, within one calendar year from the time it was received, be changed to a grade of 'F' or failure. There are no extensions permitted under this policy, and the grade shall not be changed once the 'F' is posted.

The mark of 'WF' (Withdrawal Failing)

This mark is given when the student withdraws from a course in accordance with University policy and the student had earned a fail-

ing grade as of the date the withdrawal is approved. The mark of WF does not count towards a student's grade point average.

The mark of 'WN' (Withdrawal Non-Attendance)

This mark is given to students who did not attend any classes and/or did not complete any assignments and/or did not participate in credit-earning activities by the withdrawal date. The mark of WN does not count towards a student's grade point average.

The mark of 'WP' (Withdrawal Passing)

This mark is given when the student withdraws from a course in accordance with University policy and the student had earned a passing grade as of the date the withdrawal is approved. The mark of WP does not count towards a student's grade point average.

The mark of 'Y' (Deferred)

This mark is given when the student is up-to-date in the work of a course planned to continue beyond the semester (i.e., essay, thesis, dissertation and certain courses taken in sequence).

The mark of 'Z' (Audit)

This mark is given when the student has formally registered for the course for audit. The student's Academic Dean or his/her designee must provide written audit authorization to the student at the time of registration.

The mark of 'NR' (Not Reported)

This mark is a non-punitive mark posted automatically when there has been no grade reported by the instructor.

Change of Grade or Mark

Once recorded in the Office of the Registrar, grades/marks will be changed only if the instructor posts the grade change in the online grade/mark change system in Pipeline. Most changes must be posted within one calendar year. (Deferred (Y) grades are the exception.) Failure grades that are posted as a result of a student not completing an incomplete course may not be changed. After a degree has been awarded, the grades associated with that degree may not be changed. Other change of grades or marks older than a year must be approved by the department chair and the Associate Dean of the school or college that offered the course.

Credits, Definition of

A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than: 1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester hour of credit, or the equivalent amount of work over a different amount of time; or 2) at least an equivalent amount of work for other activities, including laboratory work, internships, practicums, studio work, and other academic work leading to the award of credit hours.

Grade Point Average (g.p.a.)

The grade point average (g.p.a.) is the numerical index of the student's scholastic average. Points are assigned to each letter grade (see University Grading System, above) for each hour of credit. To compute your grade point average, multiply the grade points assigned to each course grade by the number of credits for each course; add the results and divide by the total number of credits.

For example, a grade of 'A' in a class carrying 3 credits would be assigned 12 grade points (3 x 4), and a grade of 'C' in a class carrying 4 credits would be assigned 8 grade points (4 x 2). In this example, the grade point average is: 20 (total grade points) divided by 7 (total credits attempted) = 2.85 g.p.a.

Credit for special examinations, transfer credit, and courses in which a mark of 'I', 'W', 'WF', 'WN', or 'WP' or a grade of 'S', 'U', 'M', 'P', and 'N,' has been earned are excluded from grade point average computation.

Law School: This grade point system does not apply to Law School students.

Transcript Request Policy

Official transcripts bear the seal of the University and the signature of the Registrar. They are sent directly to the receiving party. Transcripts are issued free of charge, up to ten copies per year. A fee of \$5.00 per transcript is charged for copies in excess of ten. A fee of \$20.00 is assessed for each emergency transcript. An emergency transcript is one which is mailed for overnight Delivery. The next day service only applies to addresses within North America. Other international emergency transcripts (at the \$20.00 fee) will be delivered within five business days. If next day service is required, the transcript office should be contacted for pricing differences.

Students may request transcripts via Academica, <http://academica.wayne.edu>, (using their Access ID). A transcript may also be requested by postal mail, by faxing a request to 313-577-0945, or in person at the Welcome Center. There are no on demand transcript requests. Due to the signature requirement for releasing educational records, the University cannot accept telephone requests for transcripts. Requests by postal mail should be addressed to: Wayne State University Student Records, Attn: Transcripts, 5057 Woodward Avenue, Suite 4101, Detroit, MI 48202.

To ensure prompt attention, the student should include his/her name (including name while in attendance, if different), student identification number, social security number, date of birth, last term of attendance, his/her authorizing signature, and the name and address to which the transcript is to be sent. Transcripts are not issued to anyone outside the University without the written permission of the student. Requests for official transcripts will not be honored if the student or former student has an outstanding financial obligation to the University.

For students who provide an email address for each recipient, the transcripts will be sent electronically.

Attendance and Performance, Responsible

Students must show diligence and are normally expected to complete the courses they elect. Irresponsible attendance is wasteful of both student and University resources. Those students who consistently receive excessive marks of 'I' (incomplete), 'WF' (Withdrawal Failing), 'WN' (Withdrawal Non-Attendance), or 'WP' (Withdrawal Passing) may be refused the privilege of further registration by the dean or the dean's designee of their school or college.

Records, Release of Student

The University recognizes the educational records of students as being privileged and has a policy designed to ensure that this information is not improperly divulged without the consent of the student. The University is subject to the Family Education Rights and Privacy Act (FERPA) and has promulgated regulations pursuant thereto. Copies of the regulations and a list of student records maintained by the University are available for inspection in the Office of the Registrar. The University reserves the right to provide anonymous academic information to other schools and colleges when it is to be used for curriculum evaluation purposes. Additional information about student rights under FERPA can be found at <http://reg.wayne.edu/students/privacy.php>

Directory Information, Student

Effective Winter Term 2000, Wayne State University policy permits the release of certain Student Directory information. The specific items are: name, address, telephone number, age (or date of birth), major, level, degrees received, previous institutions attended, honors, awards, e-mail addresses, participation in sports or student activities, and height and weight for members of athletic teams.

Unless a student informs the Office of the Registrar that he or she does not want this information released, it will be available to third parties on request. In addition, the student's name, WSU e-mail address, College/School, and major will be visible in the University's Electronic Directory on the Internet. Students who do not want this information released must formally request withholding by completing the Release of Directory Information form, available from the Office of the Registrar and on the Office website: <http://reg.wayne.edu/>.

ID, Student (WSU OneCard)

42 W. Warren, Suite, 257; Welcome Center; 313-577-CARD

Website: <http://www.onecard.wayne.edu/>

The WSU OneCard is a multi-purpose identification and debit card all in one. It is a convenient, easy-to-use card designed to provide students with access to a wide variety of campus services including parking, door access, copying and printing services food and bookstore purchases, and more, all without having to use cash. The OneCard is needed to access the fitness center, the complimentary campus shuttle and serves as the Library Card for the WSU Libraries. Students may obtain the OneCard from the OneCard/Parking Service Center located in the Welcome Center, 42 W. Warren Ave., Suite 257, 8:30 a.m. - 5:00 p.m. Monday through Friday.

There are several ways to add money to the OneCard (up to \$500):

Online: Login to Academica. Click on "University Resources", then click on "access OneCard Account". Once in OneCard portal you check deposit to your OnCard, View your Balance or even upload a new OneCard photo. The minimum amount that can be deposited is \$15.00. Funds deposited online are available within fifteen minutes.

In Person: Bring a check or money order to the OneCard/Parking Service Center to the Welcome Center, Room 257. Funds deposited by check or money order are available the next business day.

Cash System Value Terminals (CSVT): CSVT machines, located across campus, allow one to add value to his/her card using cash. Simply insert the card in the machine, select the deposit function, and deposit the cash. Denominations of \$1, \$5, \$10, and \$20 are accepted. CSVT machines do not give change.

CSVT machines are located in the following University buildings: Alex A. Manoogian Hall, Eugene Applebaum College of Pharmacy and Health Sciences Building, G. Flint Purdy Library, Student Center Building, Med Commons/Shiffman Library, State Hall, David Adamany Undergraduate Library (2 machines), University Tower Apartments, Law School Library, Ghafari Hall, Oakland Center, Welcome Center, Helen L. DeRoy Apartments, The Towers Residential Suites, Atchison Hall and the WSU Bookstore.

Academic Regulations, Graduate

Continuance in graduate status is contingent upon the student keeping informed of all rules, regulations and requirements and complying with all official procedures of the Graduate School, the individual college or school and department. The student is responsible for fulfilling all course and degree requirements in proper sequence with satisfactory scholarship. In case of doubt regarding any matter affecting his/her standing as a graduate student, the student should consult with his/her advisor. The primary responsibility of keeping informed of policy and procedures rests with the student. Regulations contained herein should not be construed as exhaustive.

Program Load, Normal

A full-time graduate student is one who is enrolled for eight or more credits during academic-year semesters; a graduate student is considered full-time during the spring/summer term if she/he enrolls for at least two credits. The definition of normal course load will vary depending upon the requirements of each program.

Auditing Courses

To audit a course, a student must indicate that he/she wishes to audit the course rather than receive academic credit, at the time of registration. Registration to audit a course is subject to the following regulations:

1. Students must pay the tuition assessment for the course, which is the same as if it were taken for academic credit;
2. A student is not permitted to take quizzes and examinations in audited courses;
3. A student may not normally change from audit status after registering for the course. In some cases, exceptions may be permitted during the term with the written recommendation of the instructor and the written approval of the Dean of the college/school in which the student is enrolled. The instructor's recommendation and Dean's approval must be included with the student's Drop/Add Form indicating the desired change.

The Graduate School does not encourage students to audit graduate-level courses.

Undergraduate Registration for Graduate Courses

Highly qualified undergraduate students may, under special circumstances, take a 7000-level course for undergraduate credit only. Such students should seek approval to register through the Dean's Office of their school or college. (See also: 'Under the Senior Rule,' below.)

Dual Enrollment

Graduates registering for Undergraduate Courses: Graduate students may take undergraduate courses to be recorded on an undergraduate transcript. This is often done to satisfy prerequisites not completed at the undergraduate level. Fees are assessed at the graduate level for all courses.

Senior Rule Dual Enrollment

In their last semester, undergraduate students with a 3.0 (or above) upper division grade point average who have completed all general education competencies (mathematics, basic composition, intermediate composition, oral communication, critical thinking, and computer literacy), have the option of taking a limited number of graduate

credits. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements. Undergraduate and graduate courses combined may not exceed sixteen credits for the final semester of baccalaureate degree course work. A Senior Rule student must register for at least one credit which is required for the undergraduate degree in order to be eligible for this status. Students who have completed all required courses for the baccalaureate degree may not obtain Senior Rule status. Completion of the Application for Graduate Admission form is required, and students are advised to consult their advisers and the Office of Graduate Enrollment Services. Application deadlines for Senior Rule admission are the same as for regular graduate admission. Students who qualify and are recommended by the Department or College will be admitted for one semester. Graduate admission will be regularized upon evidence that the student has completed all requirements for the bachelor's degree, see Admission, Senior Rule, p. 19.

The University permits a student to pay undergraduate fees for the graduate courses elected in a Senior Rule status. It is recommended that students elect only courses numbered 5000-6999 in their Senior Rule semester.

Dual Enrollment with the University of Michigan

A student enrolled at either Wayne State University or the University of Michigan may elect a course or courses in the other institution if the course fits his/her program but is not available in his/her home institution. The student must have written approval of the department chairperson in his/her major area at the home college and the approval of his/her Dean. The election must also be approved by the department which offers the course. Students desiring to participate in Wayne State University and University of Michigan dual registration should obtain the necessary forms from the Office of the Registrar and pay the appropriate tuition at their home institution.

Retaking Courses

Graduate Students: A graduate program may, if it wishes, allow a student to retake a graduate course in which the student earned a grade of 'B-minus' or lower. This prerogative is exercised by the program through the use of the override provisions in the University's registration system which will prevent students from independently retaking courses. The number of courses and the number times a course may be retaken is determined by the program. The original grade for the course will remain on the student's transcript, but only the final grade received in retaking of the course will be used in computation of the student's grade point average. Students will not receive University financial aid for courses that are retaken. It is the student's responsibility to be apprised of his/her program's repeat policy.

Mike Ilitch School of Business: No course in which a student has received a passing grade or mark may be retaken without the prior written approval of the Director of Student Services of the Mike Ilitch School of Business.

College of Engineering: No course may be retaken without the prior written approval of the respective department's Graduate Program Chairperson and the Associate Dean of Engineering for Graduate Studies. Students may not retake any course in which a grade of 'A' or 'B' was received.

Eugene Applebaum College of Pharmacy and Health Sciences—Faculty of Health Sciences: No course may be retaken without the consent of the advisor(s) delegated for each professional curriculum.

Examination, Credit by

A student wishing to obtain credit toward an advanced degree for knowledge essential to his/her program of study, acquired by means precluding formal transfer to Wayne State University, may petition for an advanced credit examination in a course or courses covering the relevant area of study. The petition requesting such advanced credit

shall state the basis for the request in terms of the student's competence at the graduate level in the particular academic area. The established examination fee must be paid before the examination is taken. All grades will be recorded on the student's transcript. Such grades will not be used in computing the grade point average. The fulfillment of any requirement through credit by examination does not relieve the student of the residence requirement for degree.

Courses, Graduate

Graduate work is classified either as course work, in which students meet as an assembled group, or as research. Generally, courses numbered 5000 and above may be considered graduate level; in some departments, certain 5000- and 6000-level courses are not permitted for graduate credit and are so designated. Courses numbered 7000 and above are open only to graduate students.

Directed Study

Independent study may be authorized provided the area of interest is an integral part of the student's graduate program and is not covered by courses scheduled while completing one's course requirements. Before a Ph.D. student may register in directed study, he/she must complete the Ph.D. directed study petition form, *Doctor of Philosophy Petition and Authorization for Directed Study*, and obtain the written permission of his/her department's graduate director. The petition must contain information about the nature, scope, and significance of the course, and indicate the major requirements the student must fulfill. Master's students must provide the same information and obtain the written permission of their college/school Graduate Officer.

Business Administration: All courses numbered 6000-6100 and 7000 or higher are open *only* to students formally admitted to a Wayne State graduate program, or to qualified guest students. Enrollment in these courses must be approved by a graduate advisor or be consistent with a student's Plan of Work. Students in an undergraduate, post-bachelor, or non-matriculated status are not eligible.

Law School: In addition to the above approvals, graduate students must obtain the written permission of the Law School Dean to elect Law School courses or directed studies.

Credits, Major and Minor Graduate

For definition of Credit, see Credits, Definition of, p. 31.

Major Credits: Credits earned in the student's major field are designated as major credits. The dissertation, thesis, or essay must be in the major field.

Minor Credits: Credits earned in departments other than the major are classified as minor or cognate credits. Election of minor credit is encouraged to enable the student to broaden his/her program. In doctoral programs, minor courses should be related to the major and six or more graduate credits approved by the unit graduate director will constitute a minor.

Transfer of Credits — Graduate

In work toward the master's degree, credit beyond the twenty-four credits which must be earned in residence may be transferred from accredited graduate schools, provided such credit is 'B' or better and certified as graduate-level credit on an official transcript. Departments and schools/colleges may further restrict the number of credits that may be transferred. A student wishing to transfer graduate credit toward the Ph.D. degree must file a petition with the Graduate School, approved by his/her advisor and departmental graduate director, requesting such transfer. The petition must be supported by an official transcript showing a minimum grade of 'B' for the courses to be transferred; 'B-minus' and credit earned with 'S' and 'P' (satisfactory or pass) grades are not acceptable for transfer. Transfer credits must be appropriate to the student's degree program. Doctoral dissertation credits will not be transferred. Courses accepted for

transfer credit from outside or within Wayne State University cannot have provided credit toward a prior degree except when the master's or another pre-doctoral certificate or degree is applied to the doctoral degree. Admission to Wayne State University based upon a previously earned master's degree *does not* guarantee that those credits are applicable to a graduate degree at Wayne State University.

Extension Credits

Credits earned at other than Michigan institutions cannot be applied toward a graduate degree nor an education specialist certificate.

Mike Ilitch School of Business: A maximum of six semester credits (two courses) may be transferred from other graduate institutions.

Credit Load, Maximum

A student with a strong academic record who is devoting full-time to graduate study may register for a maximum of *sixteen credits per semester*. Graduate Assistants are required to register for at least six credits each semester. The University considers a program of eight graduate credits per academic-year semester and two credits per spring/summer semester to be full-time study.

Short-Term and Travel-Study Courses for Graduate Credit

Short-Term, Workshop-Institute-Conference, and Travel-Study courses offered for graduate credit must be proposed, approved and authorized well in advance via the appropriate form (obtainable from the Graduate School). After an initial authorization, courses to be repeated with no substantial change may be petitioned and approved by memorandum on the basis of the original on file.

Short-Term Courses are those created or adapted to meet for a time period of less than one-half an academic semester— i.e., less than 7-1/2 weeks. Such courses offered for graduate credit will provide for at least fifteen contact hours and the requisite proportion of outside preparation for *each* hour of credit. It is assumed that short-term courses will not differ from regular fifteen-week courses in terms of objectives, content, contact hours, or academic expectations, unless such a difference is reflected by a proportioning of graduate credits.

Workshop-Institute-Conference Courses (WIC)

WIC courses are those specially formulated experiences which, because of their usually 'applied' nature, lend themselves to an exceptionally brief but intensive time span. They differ from short-term courses in their concentration, usually spanning from a single day to two or three weekends. Offered for graduate credit, these courses provide for a minimum of twenty-five contact hours and an appropriate proportion of additional work for *each* hour of credit. Since these experiences vary greatly in their purposes and the degree of participation expected of the student, they are offered for credit only infrequently and enroll only those students for whose academic programs they would be directly relevant. Graduate grading will be on an 'S' and 'U' basis only.

Travel-Study Courses

These are courses created or adapted to take special advantage of the opportunity to relate a particular course of study to the cultures, mores, or institutions studied. Such courses may involve either domestic or foreign travel. All are offered through the Educational Outreach Division. Graduate credit for travel-study courses will be graded on an 'S' and 'U' basis only.

CREDIT RESTRICTIONS: Graduate students may not register for any course or combination of courses in these categories that permit the accumulation of graduate credits at a rate greater than one credit hour per week. Registrations that exceed this rate will be canceled in advance if discovered and, in no case will the excess credit be

counted toward the requirements for a Wayne State graduate degree.

Obligations to the Instructional Process

Since education is a cooperative effort between teacher and student, both parties must fulfill obligations if the integrity and efficacy of the instructional process are to be preserved.

Responsibilities of Faculty Members

1. To contribute to and remain abreast of the latest developments in their fields;
2. To continually pursue teaching excellence;
3. To treat all students with respect and fairness without regard to ancestry, race, religion, political belief, country of origin, sex, sexual preference, age, marital status, or handicap;
4. To encourage differing viewpoints and demonstrate integrity in evaluating their merit;
5. To attend regularly and punctually, adhere to the scheduled class and final examination times, and arrange for notification of absence and coverage of classes;
6. To establish and maintain appropriate office hours;
7. To present, early in the semester, the following course information:
 - a) course objectives and general outline;
 - b) classroom procedures to be followed, expectations concerning class attendance, and proposed dates of major evaluations (including examinations, papers, and other projects);
 - c) grading policy;
 - d) where appropriate, a schedule of class-related activities, including class meetings and laboratory sessions;
 - e) lists of texts and/or other materials needed for the course;
 - f) late enrollment, withdrawal, and other special policies.
8. To provide and adhere, within reasonable limits, to the written syllabus of the course;
9. To know course matter thoroughly and prepare and present the material conscientiously;
10. To be informed of University services and recommend their use to students when advisable;
11. To follow these policies concerning written work and grades:
 - a) grade and return written work promptly;
 - b) submit final grades by the scheduled time;
 - c) retain written materials not returned within the semester (e.g., final examinations, major term papers) for one academic semester in accordance with unit policy and allow students to examine such materials;
12. To implement unit procedures for student evaluation of faculty teaching, with attention to preserving student anonymity;
13. To behave appropriately in dealing with students so as to maintain a scholarly atmosphere

Responsibilities of Students

1. To inform themselves of and to fulfill all requirements of the University and those of the College and Department from which they expect to receive their degree;
2. To fulfill conscientiously all assignments and requirements of their courses;
3. To attend classes regularly and punctually;
4. To maintain a scholarly, courteous demeanor in class;
5. To uphold academic honesty in all activities;

6. To notify the instructor as early as possible if prevented from keeping an appointment or carrying out an assignment;
7. To discuss with the instructor any class-related problem and follow established procedures in the resolution of these problems;
8. To adhere to the instructor's and general University policies on attendance, withdrawal, or other special procedures.

It is expected that faculty and students will fulfill their obligations to the instructional process. If, however, a complaint does arise, the parties should meet in an effort to resolve the matter. When such a discussion fails to resolve the problem or is inappropriate given the circumstances, the head of the academic unit should be contacted. If this contact fails to satisfy the complaint, the College's published procedures should be followed. Although the University Ombudsperson is not a direct part of the appeal process, students and faculty may consult the Ombudsperson at any point during such proceedings.

Attendance Policy, Classroom

Whenever attendance forms a basis for a portion or all of a course grade, students must be provided with explicit written information concerning that fact during the first week of classes. Such information shall be specific with regard to the penalty incurred for each absence and the means, if any, to compensate for the absence. It should be recognized that there may be certain situations where the student may not be permitted to make up the absence(s). This policy shall be applicable to all courses within the University, regardless of setting.

Deception, Fraud and Misuse of Documents

Intentionally furnishing false information to the University is explicitly prohibited, as is forgery, alteration, unauthorized possession, or misuse of University documents, records and identification cards. The University reserves the right to rescind degrees if the award of the degree was based in whole or in part on deception, fraud, or other unacceptable academic conduct, or misuse of University documents.

Rights and Responsibilities, Student

Upon the recommendation of the Student-Faculty Council, the University (Faculty) Council, the President-Deans Conference and the President, the Board of Governors, in January, 1967, approved a comprehensive statement of Student Rights and Responsibilities for the University. Copies of this document are available to students and faculty in the offices of the deans of each College and the Dean of Students Office.

Law School: The faculty of the Law School has approved a set of academic regulations specifically applicable to Law School students, copies of which are available to all students enrolled in the Law School.

Code of Conduct, Student

High standards of student conduct play a major role in creating an environment of excellence and the Student Code of Conduct is used to maintain these standards. The code: 1) establishes the expectations that students are accountable for their behavior; 2) describes acceptable student conduct, both academic and non-academic; 3) describes disciplinary policies and procedures; 4) specifies the rights of students and other parties; and 5) specifies prohibited conduct and sanctions to be imposed if such conduct occurs. Examples of prohibited conduct subject to the Student Code of Conduct include, but are not limited to, academic misbehavior, knowingly furnishing false information to the University, disorderly behavior, theft, damage of property, illegal drugs, weapons on campus, physical assault, unauthorized entry, violation of criminal law, etc.

The University Student Conduct Officer, housed in the Dean of Students Office, monitors the student disciplinary process and is responsible for coordinating matters involving student discipline; describing the disciplinary procedures; and informing students and other parties of their rights. Copies of the Student Code of Conduct can be found online at <http://www.doso.wayne.edu/codeofconduct.pdf> or in the Dean of Students Office, 351 Student Center.

Appeal Procedure (Grade), College/School

Students should first seek to settle grade disputes informally with the instructor. Each College and School has established formal grade appeal procedures. These procedures are available from the Dean's Office of the College or School. In most instances, formal grade appeals must be filed within thirty days of the time the student has or should have received his/her final grade.

Appeal Procedure, Academic

In matters where a College's signed final decision is based upon the evaluation of a student's academic performance, and when review procedures available to him/her within the College have been exhausted, the student may request the Provost to review that decision on the record. The college of record for doctoral students is the Graduate School since the Graduate School is responsible for oversight of doctoral academic processes and certifying doctoral degrees. A written Request for a Provost Review must be made by the student himself/herself, with a copy to the Dean of the College, postmarked within thirty calendar days of the postmark of the College's final decision, which is to be sent to the address provided by the student in the College's review procedures. The Request for a Provost Review should outline any additional arguments the student wishes to be taken into consideration by the Provost's review. The Provost's review of the College's decision will proceed as soon as practicable after notification by the student of his/her wish to seek review.

The student may also file with the Provost a Request for a Postponement of the effect of the College's final decision. Such a Request must be postmarked within seven calendar days of the postmark of the College's final decision, and a copy must be sent to the Dean of the College. Upon receiving a Request for Postponement, the Provost will immediately contact the Dean. Unless the College demonstrates clearly and convincingly that the injury to the College or to third persons that would result from such a postponement would outweigh the injury to the student from denying the postponement, the effect of the decision rendered by the College must be postponed until the date that the Provost issues a decision regarding the underlying Request for Provost Review. The Provost will inform the student and the Dean of her/his decision regarding the Request for Postponement within three school days after receiving the request. Exceptions to this procedure may be granted by the Provost upon a showing of good and sufficient cause.

Scholarship (Academic Standards)

A graduate degree is evidence of scholarly attainment; of ability to achieve academic excellence; of critical and creative ability with capacity to apply and to interpret what has been learned through research, the essay, the thesis, or the dissertation and the several examinations; of ethics in use of the work of others and in interpersonal relationships. See Grading System: University, p. 30.

Ethics, Student

Academic Records: The submission of fraudulent academic records for admission or transfer of credit by a student may be cause for the student's dismissal.

Academic Work: Academic work submitted by a student for credit is assumed to be of his/her own creation, and if found not to be, will constitute cause for the student's dismissal.

Nepotism, Academic

Faculty members are not to place themselves, or allow themselves to be placed, in situations amounting to 'academic nepotism,' i.e., teaching or otherwise directing the credit study or research of a student who is also a close relative. Concomitantly, students are not to take courses from close relatives or engage in research for academic credit under the direction of close relatives. All such credit will be disallowed.

Freedom of Information Act, Michigan's

The Freedom of Information Act (PA 242) provides that a member of the public, in accordance with certain guidelines, has a right to inspect and receive copies of public records maintained by the University. A public record is broadly defined and includes written documents, pictures, recordings, punch cards, magnetic cards, etc., which are maintained by the University in the course of official responsibilities. However, certain records are exempt from disclosure.

Media Relations Office

Located in 3100 Academic/Administrative Building, the Media Relations Office is responsible for accepting requests for public records, and the Director of that office is the University officer in charge of providing this service. Under statute, a fee can be charged for records released and is based on the cost of labor involved in the search, examination and duplication of records, as well as the mailing costs. Only the Office of General Counsel may authorize the denial of a FOIA request.

Degree and Certificate Requirements, Graduate

Certificates: Graduate and Bridge Graduate Programs

Programs leading to Graduate Certificates and to Bridge Graduate Certificates are available through several University units and are open to students who meet the general graduate admission requirements of the University; individual programs may have additional admissions requirements. The specific number of credits required for completion varies by program, though Certificate programs must consist of at least twelve graduate credits.

Graduate Certificates may be earned independently of or concurrently with a graduate degree. A Graduate Certificate program must be completed within three years, a minimum grade point average of 3.0 in certificate courses must be maintained, and only nine semester credits of certificate course work may be applied toward a graduate degree.

Bridge Graduate Certificates are certificate programs designed to provide students with specialized knowledge that may subsequently be applied toward the requirements of a designated Master's degree and may be viewed as transitional to a Master's program. The program is for students who hold at least a baccalaureate degree and are admissible to graduate studies.

The Bridge Graduate Certificates are generally housed in the same unit as the Master's program that proposes it. The Certificate program consists of at least twelve graduate-level credits be completed within three years and a minimum grade point average of 3.0. No transfer credits are accepted into a Bridge program. The curriculum consists of courses from the corresponding Master's program. All courses in the Bridge Certificate may be applied toward the requirements of the designated Master's degree, given that they meet the approval of the Master's program and the six-year time limit for Master's degrees. For specific certificate requirements interested students should consult the specific certificate program descriptions in this Bulletin or contact the sponsoring department.

Dual-Title Graduate Degrees

A dual-title degree program is designed to provide additional valuable course work not prescribed in an existing major program. The dual-title degree program consists of two components: an area of study, in which there are graduate course offerings and faculty strength but no graduate degree program, and one or more major degree programs that adopts the area of study and integrates its content into the coursework and progressive stages of the major program, including the Qualifying Examination, thesis and dissertation. The dual-title areas of study are not available as separate graduate degree programs.

Potential dual-title areas of study typically are interdisciplinary with courses and faculty housed in various departments. When incorporated into an existing program, they provide students with knowledge and skills graduates of traditional programs do not have. Dual-title areas often exist in new and emerging fields, generally where the most significant advances in research occur. The addition of a dual-title area to an existing degree program enables graduates to acquire the most current knowledge and up-to-date research skills beneficial to the major program.

Joint Degrees

A joint degree program is a formally approved and authorized program between two cooperating graduate or graduate and profes-

sional programs that permits the use of a limited number of credits to fulfill requirements in both programs. The joint degree programs offer exceptionally talented students the opportunity to acquire expertise and knowledge in a shorter time than is possible by completing two separate degrees in sequence.

Master's Degrees

In addition to the following regulations, requirements may be specified by the individual graduate departments.

The minimum Graduate School requirement for the master's degree is thirty credits, at least twenty-four of which must be taken at the University. In those master's degree programs where the college, school or department requires more than the Graduate School minimum, their requirements take precedence. The Graduate School recognizes three general master's degree plans, though not all plans are offered in each department (for exact information, see listings under individual departments in the appropriate sections of this bulletin):

PLAN A requires a total of thirty credits, including a total of eight credits for a thesis (some departments require less).

PLAN B requires a total of thirty credits, including a minimum of two credits for an essay.

PLAN C requires a total of thirty credits. The essay or thesis is not required.

Candidacy for Master's Degree

Admission as an applicant does not assure acceptance as a candidate for a degree. Candidacy is a necessary but not sufficient requirement for graduation.

Generally, students enrolled in master's degree programs are expected to file a Plan of Work by the time eight to twelve graduate credits have been earned. The applicant shall be advanced to the rank of 'Candidate' upon approval of the Plan of Work by the College Graduate Office. In most colleges candidacy must be authorized by the time twelve graduate credits have been earned or subsequent registration will be denied. In preparing the Plan, the student and advisor should evaluate with care the personal and professional objectives of the student as well as all degree and departmental requirements.

Essays, Master's Degree

Under Plan B, students are required to complete an essay prior to the granting of a master's degree. The essay must show evidence of scholarly study and writing and be related to the student's major. Students should consult their departments regarding any additional requirements for essays, as well as for correct essay manuscript style.

Theses, Master's

Under Plan A, departments require the completion of a thesis prior to the granting of a master's degree. The thesis may be of a research, expository or critical nature and should be selected and planned with care;. It must be an original work, in or related to the student's major field of specialization. Work submitted for credit in other courses cannot be used in fulfilling thesis requirements. Neither the results of the research nor the publication of findings may be restricted by any non-University agency. The results of the research may be published prior to submission and acceptance of the thesis, with the approval of the thesis advisor.

The presentation of a thesis generally brings to a close the pursuit of the master's degree. In essence such manuscripts represent a tangible summation of the many hours spent in study and research to acquire a higher education. For this reason such scholarly documents must evidence only the highest standards of research and

writing. They must show consistency in punctuation, style and format. For format requirements and format templates, see the Graduate School website: <http://www.gradschool.wayne.edu/>

Advisors have primary responsibility for approval of the thesis. Such approval includes all academic and professional evaluations and judgments as to originality, adequacy, accuracy, significance, methodology, justification or conclusions and correctness of style. Approval shall not be recorded until the work and manuscripts are fully verified and accepted.

Additional Essay or Thesis Elections and Fee Policy

A master's student who has enrolled for all elections (including essay or thesis) stipulated by his/her Plan of Work, and who has completed all the requirements of these elections, but has not completed the essay or thesis, will be required to register for at least one credit (the appropriate amount to be determined by the department) of essay or thesis direction until such time as the student:

- a) completes the requirements for the degree;
- b) declares him/herself no longer a candidate for the degree; or
- c) exceeds the time limit allotted for securing the degree.

For these credits, the student will pay customary fees and will register as an auditor. No degree credit will be granted for these elections which are beyond the required credits for an essay or thesis. A mark of 'Z' (Auditor) will be recorded on the student's record for additional elections.

College of Nursing: The additional elections and fee policy also applies to field studies and research practicums.

Time Limitation for Master's Degree

Students have a six-year time limit to complete all requirements for the master's degree. The six-year period begins with the end of the semester during which the student has taken work which applies toward meeting the requirements of the degree. The individual college or school reserves the right of revalidation of over-age credits which are between six and ten years old and which represent courses completed at Wayne State University. Such authority rests with the Graduate Officer of the college or school. Students are not permitted to revalidate credits earned at other institutions. In revalidation cases the advisor and the student must set a terminal date for completion of all degree requirements, including such additional requirements as may be prescribed to revalidate the over-age credits. Time extensions beyond these conditions are authorized only for conditions clearly beyond the student's control.

A student registered in a non-degree graduate classification is cautioned that only one semester of full-time graduate study, or part-time registration not to exceed nine credits, is permitted in this classification. Not more than nine credits may be applied toward the credit requirements for the master's degree.

Please see the appropriate school and college sections of this bulletin for specific master's program information.

Doctor of Philosophy Degrees (Ph.D.)

In addition to the following regulations, additional requirements for doctoral degrees may be specified by the individual graduate departments.

Requirements for the degree of Doctor of Philosophy emphasize an overall understanding of and high competence in a field of knowledge, familiarity with cognate disciplines, facility in the use of research techniques, and responsibility for the advancement of knowledge. The meeting of the requirements for the doctorate is tested primarily by examinations and the presentation of the dissertation rather than by a summation of courses, grades and credits.

Admission, Ph.D. Program

A student may be admitted to the status of Ph.D. applicant if he/she meets all Graduate School requirements for admission, presents a grade point average of 3.0 ('B'=3) for the upper division of the undergraduate course work and is accepted for study toward the degree by his or her school or college and major department. Additional requirements (e.g., letters of recommendation, undergraduate research experience, personal interview, specific coursework, service learning) are specified by departments and programs. Students presenting less than a 3.0 undergraduate grade point average are required to complete a master's degree program, or its equivalent, prior to consideration for admission to a Ph.D. program.

Advising, Initial Ph.D.

An advisor is assigned to the student at the beginning of his/her program and represents the Department in helping plan the student's program. The advisor provides academic guidance, approves required documents and monitors student progress. The initial advisor serves until the time the student identifies a dissertation director, who then assumes advising responsibilities.

Responsibilities, Graduate Faculty and Ph.D. Student

Course work and research leading to the doctoral degree is a matter of shared responsibilities between faculty members and Ph.D. students. The Graduate Council has established the following reciprocal obligations:

Ph.D. program faculty are responsible for:

1. Admitting qualified students whose research interests can be accommodated within those of the program.
2. Ensuring that students receive competent and sustained advising from their entry into the program until degree requirements are completed or the student is separated from the program.
3. Monitoring and evaluating student progress toward the degree and for communicating the results of the evaluation to the student on an annual basis.
4. Assisting students in locating potential dissertation directors.
5. Offering guidance and instruction in those research areas in which they have expertise. To this end individual faculty members are responsible for deciding whether or not to serve as a dissertation director for any given student. This responsibility rests solely with the faculty, who are expected to make decisions based on reasonable academic criteria.

Ph.D. program students are responsible for:

1. Identifying research areas in which the Ph.D. program can provide guidance. The selection of a research area outside these areas may cause difficulty in achieving the degree.

2. Maintaining good standing throughout the doctoral program and making normal progress toward the degree.

3. Requesting that an individual member of the faculty serve as the dissertation director, working with the dissertation director toward timely completion of degree requirements, and complying with the dissertation director's instructions.

Calendar, Ph.D. Procedural

The stages of the Ph.D. degree are outlined below. The section following describes these stages in detail. Necessary forms and additional instructions and requirements may be found on the Graduate School website: <http://www.gradschool.wayne.edu/>

1. Plan of Work: Initiated by the student and completed with his/her advisor to plan the sequence of study. An approved Plan is a requirement for Ph.D. Candidacy.

2. Ph.D. Coursework: Ninety graduate credits beyond the baccalaureate degree are required. Completion of about fifty credits of coursework is a requirement for Ph.D. Candidacy.

3. Annual Review: The student's department prepares a review of the student's progress at the end of each academic year.

4. Qualifying Examination: The qualifying examination contains a written portion and may include an oral component. Successful completion of the qualifying examination is a requirement for Ph.D. Candidacy.

5. Dissertation Advisory Committee: The naming of a dissertation advisory committee is a requirement for Ph.D. Candidacy.

6. Candidacy: Ph.D. Candidacy begins the dissertation preparation phase of the degree.

7. Dissertation Registration: Four consecutive academic-year semesters of registration as a degree candidate are required during the preparation of the dissertation.

8. Oral Examination: An oral examination is required of all Ph.D. students. It may be addressed as part of the qualifying examination, a prospectus meeting, a lecture or seminar, or another format approved by the student's department.

9. Dissertation Prospectus: After attaining Candidacy, the student prepares a description of the proposed research and dissertation for approval by his/her advisory Committee.

10. Dissertation Preparation: The dissertation presents the original scholarship or research completed by the student.

11. Dissertation Public Lecture-Presentation Defense: The student presents and defends the dissertation in a public lecture.

12. Submission of approved dissertation: The student must submit the approved dissertation electronically. See <http://wayne.edu/gradschool/phd>.

Plan of Work, Doctoral

This planning document, which is developed by the student and the advisor, should include both course and non-course objectives. An interim Plan of Work, to be retained in the department, should be developed by the end of the student's first year and updated annually. The final Plan of Work requires the signatures of both the advisor and the departmental Graduate Director prior to submission to the Graduate School for approval. The final Plan of Work may be filed with the Graduate School at any time; however, it must be submitted before forty credits have been completed and before the qualifying examination is scheduled.

Coursework, Ph.D.

To ensure adequate preparation, the Graduate Council has adopted minimum coursework requirements for the University's highest degree. Many programs will exceed these minima.

A minimum of ninety graduate credits beyond the baccalaureate degree is required for completion of the Ph.D. program. A Ph.D. program will consist of:

- (1) at least twelve credits of coursework in the major (not including directed study or research credit);
- (2) sufficient additional coursework to total sixty credits (major and minor coursework, pre-dissertation research and directed study); and
- (3) thirty credits earned in four consecutive Candidate Status semesters after candidacy has been approved.

The Ph.D. program should provide for effective concentration in a major field with supporting courses in related fields. The decision concerning whether the student's Plan of Work will include a minor is made by the department.

The total Ph.D. program must include thirty credits, excluding Candidate Status semesters, in courses open only to graduate students (i.e., 7000 level or above).

Directed Study

Registration in directed study must have advance approval of the student's advisor and advance authorization of the student's department. A Graduate School Petition and Authorization for Directed Study must be signed by the student's advisor, instructor, and the Graduate Director of the department before registration. The Directed Study Petition must contain all relevant details, including an explicit course outline, a rationale for the course, and information about the major academic requirements the student must successfully fulfill.

Enrollment, Mandatory Ph.D. Pre-Candidacy

During the pre-candidacy stage, registration is required in all semesters in which the Ph.D. student uses University resources, including the semester(s) in which the Qualifying Examination is taken. The student must register for a minimum of one graduate credit.

Reviews, Annual Ph.D.

All Ph.D. students are required to receive an annual review of the student's progress toward completion of degree requirements. The student's progress in course work, scholarship, teaching, and all other academic or professional areas defined by the department will be summarized and communicated to the student in writing. The annual review must be signed by the student, advisor, and departmental Graduate Director. The annual review is filed in the student's department.

Individual Development Plans (I.D.P.'s)

To promote long-term career planning and development, all Ph.D. students are required to complete an Individual Development Plan (IDP) by the end of their first year in graduate school. These documents are designed to foster conversation between a student and their mentor(s) about career goals and the skills necessary to succeed in those positions after graduate school. The document is to be updated annually throughout the student's tenure in graduate school to promote follow through on the action plan and to revise the action plan in response to new opportunities and increased competency. This document is completed on-line. It is approved electronically by both the dissertation advisor and the Graduate Director.

Examination, Ph.D. Qualifying

The Qualifying Examination covers the student's primary areas of study and research, as well as such related matters as the qualifying examining committee may prescribe. The Qualifying Exam must contain a written component; an oral component (described later) is optional.

The Qualifying Examining Committee must consist minimally of three members, two of which must be from the major department, and at least two must hold Regular Graduate Faculty appointments. An external member may be added at the discretion of the department. In this latter instance, the department is encouraged to select a person from the student's minor/cognate area. The membership of this committee may not normally be changed until the Qualifying Examination(s) (written or written and oral, as required) have been passed.

If the written component of the Qualifying Examination is not completed successfully at the first administration, the examination may be repeated only once. A second examination may not be held until at least one semester has elapsed, but must be held within one calendar year following the first examination. The same examining committee must preside over both examinations. The second written examination will be considered final.

The student's examining committee will select one of its members to serve as the Graduate Examiner. The results of the oral qualifying examination are to be communicated to the Graduate School via the Report on Doctor of Philosophy Oral Examination form.

If the Graduate Examiner certifies that the applicant has not passed all parts of the oral examination, the committee may recommend that a second oral examination be held. If a second oral examination is recommended, the committee must specify any additional work the student must complete prior to that examination. A second examination may not be held until at least four months have elapsed, but must be held within one calendar year following the first examination. The second oral examination shall be considered final.

Dissertation Advisory Committee

The dissertation advisory committee shall consist minimally of four members. If there are co-chairs, the committee shall consist of five members. At least two committee members shall be from the student's home department/program, and at least two shall hold Regular Graduate Faculty appointments. The committee chair shall hold a Regular Graduate Faculty appointment in the home unit, and if there are co-chairs, at least the one from the home unit shall hold a Regular Graduate Faculty appointment. The committee shall have at least one external member who broadens the dissertation committee beyond the home program to represent a different perspective by virtue of his/her field, location or knowledge application; who does not hold any salaried or contractual appointment, tenure line or retreat rights in the home program; and, who is familiar with the standards for doctoral research. The expertise of the extra-departmental member must be appropriate to the student's dissertation work. The dissertation director and advisory committee should be identified as early as possible, and by the time course work is completed at the latest. The dissertation advisory committee membership must be submitted to the Graduate School as a condition for attaining candidacy. The committee membership may be changed up to the time the dissertation prospectus is submitted. After Graduate School approval of the dissertation prospectus, any changes in committee membership will require written justification.

Conflict of Interest: It is essential that the members of the committee have not only the requisite professional credentials, but that they are also free of conflicts of interest or commitment that could bias or have the appearance of biasing their judgment about the best interests of the student and the scholarly merit of the dissertation. The present policies and procedures provide a means of disclosing and managing perceived or real conflicts of interest or commitment

among dissertation committee members. Each committee member must complete and sign the disclosure form, which must be submitted prior to the approval of the Prospectus and Record of Approval form and again at the time of the Dissertation Public Lecture Presentation Defense form. Conflicts of interest or commitment include financial, personal and/or professional affiliations that could potentially or actually affect the member's objectivity about the dissertation or the student.

Candidacy for Ph.D. Degree

A Ph.D. applicant will be advanced to the rank of Ph.D. Candidate by the Graduate School upon the recommendation of the department and completion of the following requirements: 1) Approval of the Plan of Work by the Graduate School; 2) completion of didactic course work, or approximately fifty credits, as required by the Plan of Work; 3) satisfactory completion of the Qualifying Examination(s); 4) identification of the membership of the student's dissertation advisory committee. (The advisory Committee membership may be changed prior to submission of an approved prospectus to the Graduate School.) The department shall submit the Recommendation for Doctor of Philosophy Candidacy Status form to the Graduate School to recommend advancing the student to degree Candidacy.

Dissertation Registration

The Doctor of Philosophy degree requires that students register for Candidate Status during the preparation of the dissertation: Doctoral Dissertation Research and Direction I, II, III, and IV (courses numbered 9991, 9992, 9993, and 9994 offered under various subject area codes, respectively), in consecutive academic year semesters. Registration for these four Candidate Status courses equates to thirty credits. If a student has registered for all four Candidate Status courses but has not completed the dissertation requirements, the student may register in Candidate Maintenance status (9995) until the requirements are completed, the time limit for the degree is reached, or the students withdraws from the program. Registration in Candidate Maintenance Status is required in all semesters in which the student uses University resources, including the semester in which the student defends the dissertation. The Candidate Maintenance fee is equivalent to the Registration Fee plus the Omnibus Fee for one graduate credit and confers full-time registration status.

Dissertation Prospectus and Approval

Prior to initiating doctoral research, the Ph.D. Candidate must prepare a prospectus of the proposed dissertation research. In some departments, oral presentation of the prospectus constitutes the required Oral Examination. The student must submit the Doctoral Dissertation: Prospectus and Record of Approval form with the prospectus. The prospectus and form must be approved by the dissertation advisory committee and the departmental Graduate Director, before being forwarded to the Graduate School for approval.

Oral Examination

Successful completion of an Oral Examination is a requirement for the Ph.D. degree. The Oral Examination may be administered as part of the Qualifying Examination (see previous discussion of Qualifying Examination), or as part of the prospectus meeting, or a lecture, or in some other departmentally-approved format in which the student presents information orally and answers questions posed by the student's committee. The committee for the Oral Examination must be composed of minimally three members, two must be from the student's department; a member outside the department, is optional. The members of the Oral Examination committee may also serve as the student's dissertation advisory committee, but this is not required. At least two members must hold Regular Graduate Faculty appointment status. If the Oral Examination is part of the prospectus meeting, the results of the Exam are to be reported to the Graduate

School via the Doctoral Dissertation: Prospectus and Record of Approval form. The results of the Oral Examination administered in all other contexts should be reported to the Graduate School via the Report on Doctor of Philosophy Oral Examination form.

Dissertation Preparation

The dissertation should be selected and planned with care; it may be of a research, expository or critical nature. It must be an original work, in or related to the student's major field of specialization. Work submitted for credit in other courses cannot be used in fulfilling dissertation requirements. Neither the results of the research nor the publication of findings may be restricted by any non-University agency. The results of the research may be published prior to submission and acceptance of the dissertation, with the approval of the dissertation advisor.

Members of a doctoral dissertation advisory committee must read, approve and sign the dissertation. Such approval includes all academic and professional evaluations and judgments as to originality, adequacy, accuracy, significance, methodology, justification or conclusions and correctness of style. Approval shall not be recorded until the work and manuscripts are fully verified and accepted.

Format: Candidates preparing manuscripts are instructed to follow closely the Graduate School regulations governing the format of the dissertation. Format requirements and format templates are available on the Graduate School website. Before proceeding to the Defense stage, the student must submit the dissertation to the Graduate School for a format check. The dissertation may be submitted electronically to <http://dissertations.umi.com/wayne> or as hard copy. The dissertation format and appearance must be acceptable to the Graduate School before the Dissertation Public Lecture Presentation-Defense shall be authorized. The Graduate School Ph.D. Office staff is available to assist advisors and students who have format questions or problems.

Inclusion of Publications in the Dissertation: In such instances where doctoral students have published work in discipline-appropriate refereed journals, and when the doctoral committee approves, these published materials may be incorporated into the dissertation. For papers so included, the student must be the principal author and/or have made the major contribution to the published work. In cases of co-authored material, the text of the dissertation must make clear (e.g., in the summary and conclusion) to the reader the original contribution of the author. If published materials are included, references to them in the other dissertation sections may not need to be as detailed as is required in dissertations which do not incorporate published materials.

When a co-author is someone other than the candidate and the advisor, it is recommended that permission to include the publication in the dissertation be secured from the other author(s). Students are advised that incorporation of materials published elsewhere requires permission of the copyright holder.

Students must format a published article to conform to the body of the dissertation. As well, all remaining sections of the dissertation (e.g., abstract, introduction, conclusions) must conform to Graduate School format requirements.

Dissertation Public Lecture Presentation-Defense

Two weeks before the planned Defense, each dissertation advisory committee member must have certified in writing, via the Dissertation Public Lecture Presentation-Defense Final Report form, that the dissertation has been read and approved for the Defense. The Defense cannot be held without such certification.

Dissertation Readiness for the Defense: Dissertation committee members will sign Part 1 of the Defense form and thereby indicate

their assessment that the dissertation is ready for the Defense. Under no circumstances will a committee member sign Part 1 of the Defense form if s/he has not read the dissertation. A pre-Defense meeting of the student and whole committee is recommended, allowing committee members to indicate their concerns regarding the dissertation and the student to make needed revisions. Consequently, no requests for major revisions of the dissertation should arise at the Defense.

The Graduate School requires that all dissertations and theses must be submitted for a plagiarism check through Safe Assign in Blackboard (or similar tool) prior to the defense. The Graduate School further requires that the student's dissertation/thesis advisor or program Graduate Director certify that the dissertation/thesis has been checked through Safe Assign. The Defense Final Report form or a memo will be used to transmit the certification to the Graduate School.

Policy on Presence at the Defense: The Graduate School expectation is that the student and all members of the dissertation committee be physically present at the student's Final Defense of the dissertation. At the very least, the student and the dissertation committee chair(s) must be physically present. Committee members who cannot attend in person, synchronous audio-visual access, such as Skype, will be required. The Defense will be held during business hours, Eastern Standard Time. Electronic signatures on the Defense form are accepted, but each committee member will sign the title page of the dissertation.

Graduate Examiner: The Graduate Examiner is the presiding officer at the Defense and is responsible for its conduct. Representing the Graduate Council and the Graduate School, the Graduate Examiner serves as an advocate for the student. The dissertation advisor serves as the Graduate Examiner, but the student (or any committee member) may request that the Graduate School appoint a Graduate Examiner from outside the committee.

The Doctoral Dissertation Public Lecture Presentation-Defense has three phases, as follows:

Public Lecture Presentation-Defense: In the public lecture or presentation, the candidate is expected to share the results of his or her dissertation research with the audience and the dissertation committee. This lecture or presentation may vary in length depending on the circumstances and discipline. At the end of this public lecture or presentation, members of the audience, as well as the dissertation committee members, are encouraged to direct questions pertaining to the presentation or research to the candidate. The Graduate Examiner moderates the questioning.

Communicating Dissertation Revision Requirements: To communicate to the Graduate School that revisions to the dissertation were requested at the Defense, a box on the Defense form will be checked that indicates "Changes Required." The dissertation advisor will not sign the dissertation cover page until the student has made all required revisions. Submission of the cover page to the Graduate School will indicate that the student has made the revisions satisfactorily.

Dissertation Committee's Meeting with the Candidate: At the conclusion of the public presentation and defense, the dissertation committee members will meet privately with the candidate to pose further questions about the candidate's research or to address issues related to the dissertation manuscript. The Graduate Examiner presides at this meeting.

Evaluation of the Candidate's Performance: Upon the completion of the public presentation and defense and the private meeting, the dissertation committee members, in the absence of the candidate and the audience, discuss the candidate's performance and decide whether or not he/she has passed the defense. The Graduate Examiner chairs the discussion and communicates the result to the candi-

date, and subsequently, to the Graduate School via the Dissertation Public Lecture Presentation-Defense Final Report form.

If the candidate fails the Defense, the advisor and committee may recommend that the student be given the opportunity for a second defense. If a second defense is recommended, the advisor and committee will submit to the Graduate School, the Graduate Director of the program and the student a written description of the areas of weakness and what the student must do to correct the weaknesses. If the candidate will need to make extensive corrections to the manuscript (ones requiring more than ten days), he/she will not be passed. Candidates must wait at least four months before holding another defense. The second defense shall be considered final.

Ph.D. Completion Deadline: Each semester the Graduate School establishes a Ph.D. completion deadline calendar for students intending to graduate in that semester, by which time all work must be completed and all required documents submitted, if the Ph.D. degree is to be awarded that term. Any dissertation revisions stemming from the Defense must be finished by the completion deadline for the semester.

Dissertation (Approved) Submission of

The submission of the approved dissertation concludes work pursuant to the doctoral degree. In essence such manuscripts represent a tangible summation of the many hours spent in study and research to acquire a higher education. For this reason such scholarly documents must evidence only the highest standards of research and writing. They must show consistency in punctuation, style and format. It is official policy that acceptance of a dissertation, as well as certification of a candidate for a degree, shall not be granted unless a manuscript is technically correct in format and in a form suitable in all respects for publication.

The corrected dissertation must be submitted by the completion deadline of the graduation semester. Manuscripts must be submitted electronically to <http://dissertations.umi.com/wayne>. The signature page must also be submitted to the Graduate School.

Dissertation Publication Plan: To insure publication, doctoral candidates are assessed a fee and the University arranges to have the dissertation published. Filing a Doctoral Dissertation Publishing Agreement form is required.

Dissertation Copyrighting Charge: Copyright service, provided by Proquest, is available upon request. The student shall pay the amount necessary to cover the cost of copyrighting.

Students wishing to obtain bound dissertation copies for personal use must select a bindery and pay the binding charges for these.

Information regarding completion of additional forms is available from the Graduate School office and website. The Ph.D. degree will be certified only upon receipt of the approved dissertation and the reconciliation of the student's Plan of Work and transcripts.

Graduation

Each candidate for a degree or certificate must file a *Graduate Application for Degree* by the end of the fourth week of classes in the semester in which he/she expects to complete the requirements for the degree. Consult the Calendar, Academic 2016 - 2018, p. 5 of this bulletin. If an application for a degree was filed for a previous term in which the student did not graduate, a new application is necessary.

Commencement

Information concerning commencement announcements, caps and gowns, invitations, tickets, time and place, assembling and other relevant items will be mailed to the graduates by the Commencement Office prior to the event. Candidates for advanced degrees are requested and expected to attend the commencement at which the University confers upon them the honor of the degree earned.

Exceptions, Ph.D. Program

A student who wishes to request an exception to any of the Ph.D. program minimum requirements should file a written, detailed petition with his/her advisor. If the advisor approves the petition, he/she will forward it, along with his/her recommendation, to the Chairperson of the departmental Graduate Committee. If approved by the department, the petition will be forwarded to the Graduate School. All exceptions must ultimately be approved by the Graduate School. Appeals of decisions follow the same process; appeals of Graduate School decisions may be presented to the Provost.

Time Limitation, Ph.D.

Students have a seven-year time limit to complete all requirements for the Ph.D. degree. The seven-year period begins with the end of the semester during which the student was admitted to doctoral study and was completing work toward meeting the requirements for the degree. In order to request a time extension, a student may petition his/her advisor. If the advisor supports the request, it is forwarded to the chairperson of the departmental Graduate Committee, and if approved, it is reviewed by the Graduate School. The petition must include information concerning the reasons for the request, an explanation of how the student's circumstances have changed to enable him/her now to complete the dissertation, compelling evidence that the student's dissertation is in progress, a plan and timeline for completion of the dissertation and an explanation of how the student has remained current in his/her field. If students do not complete the program within ten years of their applicant date with approved time extensions, the qualifying examination(s) must be repeated. Students who have been granted time extensions must complete all program requirements within twelve years of the applicant date.

In the program leading to the doctor's degree, up to thirty-two semester credits of 'B' or better graduate credit earned prior to the student's admission as a doctoral applicant may be applied toward the degree without regard to lapse of time. Credit earned with 'B' minus or 'S' or 'P' (satisfactory or pass) grades are not acceptable for transfer.

Foreign Language Requirement, Ph.D.

The Ph.D. Foreign Language Requirement is a matter of departmental option. Students are advised to contact the department in which they intend to major in order to determine the nature of the Ph.D. foreign language requirement, if any, for that discipline.

Doctoral students should bear in mind that most departments reserve the right to require foreign language proficiency for any Ph.D. student pursuing research which would benefit from the use of foreign language materials, even though other students in the same Ph.D. program are not required to establish foreign language competence.

Residence Requirement, Ph.D.

The Ph.D. requirement of one year of residence is met by completion of at least six graduate credits in course work, exclusive of dissertation, in each of two successive semesters. The spring/summer semester may be excluded from the definition of successive semesters. Additional residence requirements may be imposed by the Ph.D.-granting departments. The student should contact the major department to determine what residence requirements must be satisfied.

In the experimental sciences for which it can be demonstrated that a student's research must be completed on campus, the residence requirement for the Ph.D. degree may be met by the dissertation director's written certification that the student has been in full-time residence for at least two successive semesters and one summer session. In this latter case, a count of course credits is not required

for the fulfillment of the residence requirement, but specific dates of residence must be furnished.

In addition, the Ph.D. residence requirements stipulate that the student must elect at least thirty credits in graduate work exclusive of dissertation direction at the University.

Application for Degree or Certificate

Each candidate for a degree or certificate must file an Application for Degree online at <http://www.pipeline.wayne.edu>, not later than the Friday of the fourth week of classes for the semester in which the student expects to complete the requirements for the degree or certificate; consult the Calendar, Academic 2016 - 2018, p. 5 of this bulletin or on the Registrar's website: <http://reg.wayne.edu/students/calendar.php>. If an application for a degree was filed for a previous graduation term in which the student did not graduate, a new application and fee is required. Applications for graduation require that a \$40.00 fee be paid in the online application process.

Educational Outreach

5057 Woodward Avenue, Suite 3101, Detroit MI 48202;

Telephone: (313) 577-4682

Associate Vice President for Educational Outreach

and International Programs: Ahmad Ezzeddine

Director, Business Affairs: Arthrine Turner

Program Manager: Rebecca Journigan

Associate Director, Executive and Professional Development:

Michael Kelly

Director, Extension Centers and Programs: Diane Wisniewski

Associate Director, Extension Centers and Programs

Michael Quattro

Program Coordinators: Cheryl White, Gail Stanford, Nevein Michail

Susan English

Instructional Services Supervisor: Margaret Matyniak

Email: educationaloutreach@wayne.edu

Website: <http://www.educationaloutreach.wayne.edu>

Educational Outreach is principally responsible for Wayne State University's off-campus offerings including online programs and courses. This division administers academic off-campus course offerings and programs for most Schools and Colleges of the University; the University Summer Session; and the partnership degree programs at University centers located on community college campuses. Additionally, the division oversees credit and non-credit executive education, certificate, professional development and continuing education programs for the University.

The Division operates several instructional centers in the Detroit metropolitan area as well as in other selected locations in Michigan, and delivers distance learning and online instructional programs. Through these outreach efforts, WSU is able to serve and meet the educational needs of a diverse student audience: working adults who are unable to pursue traditional on-campus programs of study; persons who desire courses of instruction at or near their place of employment; and others who are simply taking courses to enrich their educational background or improve their technical skills.

Educational Outreach also administers the University's Visitor Program. Under this program, adults can attend a wide range of selected University courses, both on and off campus, provided classroom space is available. No grade or academic credit may be earned, and students may not be registered for courses taken for credit simultaneously with courses taken under the Visitor Program.

Extension Centers

The Division of Educational Outreach operates several instructional centers in the Detroit metropolitan area as well as in other selected locations in Michigan. Through these outreach locations, the University is able to serve and meet the educational needs of a diverse student audience. The locations of the centers are listed below.

OAKLAND CENTER: 33737 W. Twelve Mile Road, Farmington Hills, MI 48331; Telephone: 248-553-3545; 313-577-3592; Fax: 248-553-7733; Email: oaklandcenter@wayne.edu;

SCHOOLCRAFT COLLEGE, 18600 Haggerty Road, Jeffress Center, Suite 320, Livonia, MI 48152; Telephone: 734-853-3450; Fax: 734-853-3446, Email: schoolcraft@wayne.edu

MACOMB EDUCATION CENTER: 16480 Hall Road, Clinton Township, MI 48038; Telephone: 586-226-4291; 313-577-9632; Fax: 586-226-8570; Email: macomb@wayne.edu;

UNIVERSITY CENTER AT MACOMB: 44575 Garfield Road, Clinton Township, MI 48038; Telephone: 586-263-6700; 313-577-6261; Fax: 586-263-6120; Email: Macomb@wayne.edu;

HARPER WOODS CENTER: Harper Woods Middle/High School, 20225 Beaconsfield Street., Harper Woods, MI 48225;

Telephone: 586-263-6700 (contact via University Center at Macomb); Email: macomb@wayne.edu

ADVANCED TECHNOLOGY EDUCATION CENTER: 14601 East 12 Mile Road, Warren, MI 48088, Telephone: 586-447-3905; Fax: 586-447-3907; Email: atec@wayne.edu.

Academic Regulations

Complete information regarding academic rules and regulations of the University is contained in this (General Information) section of the bulletin.

Credit Registration: Registration for off-campus academic courses is held during the regular Registration periods for each semester (see Calendar, Academic 2016 - 2018, p. 5). Instructions for each registration period are available on the WSU website and Academia. For specific registration information, telephone: 313-577-3541 or 313-577-4682.

Fees for credit classes are the regularly established fees of Wayne State University, which are published each semester in the University Schedule of Classes. All fees are subject to change at any time without notice by action of the Board of Governors of the University.

Admission Requirements

Most credit courses offered through Educational Outreach are open to all students who are qualified by virtue of meeting the prerequisites for individual courses or, in cases where there are no prerequisites, on the basis of their own assessment of their aptitudes. Those individuals who have been formally admitted to Wayne State University for a degree or certificate program, or post-baccalaureate study, and who are in good academic standing, will have course credits and grades earned through extension recorded on their transcripts in the same manner as credits earned on campus. Guest students should consult with their home institution when formulating their registration plans and submit an application for guest admission. Website: <http://admissions.wayne.edu/guest/requirements.php>

Advising, Non-matriculant

Persons who wish to enroll in credit courses offered through this division and who have NOT been formally admitted to the University are registered as non-matriculated students in the College of Liberal Arts and Sciences. Students are advised to consult the non-matriculant advisor as well as the specific degree program requirements cited in this bulletin, and are urged to process formal application and admission documents as soon as possible. Upon admission to a Wayne State school or college, credits earned in non-matriculant status may be applied toward degrees subject to the approval of the admitting school or college.

Academic Programs Offered through Educational Outreach

Educational Outreach offers entire curricula or selected courses applicable to many Wayne State University degrees and certificates at convenient times and places. The following complete degrees are offered at various extension centers. New programs are added each semester and a complete listing can be found on our website at <http://Educationaloutreach.wayne.edu>.

UNDERGRADUATE DEGREE AND CERTIFICATE PROGRAMS

- Bachelor of Arts with a major in Anthropology
- Bachelor of Arts in Business Administration with a major in Global Supply Chain Management
- Bachelor of Arts in Business Administration with a concentration in Accounting or Management
- Bachelor of Arts in Information Systems Technology
- Bachelor of Arts with a major in Communication Sciences and Disorders
- Post-bachelor's program in Communication Sciences and Disorders
- Bachelor of Arts with a major in History with optional minor in Political Science or Criminal Justice
- Bachelor of Arts with a major in Public Relations
- Bachelor of Arts/Science in Elementary Education with a major in Special Education with a concentration in Cognitive Impairment
- Bachelor of Science with a major in Computer Science
- Bachelor of Science in Construction Management
- Bachelor of Science in Criminal Justice
- Bachelor of Science with a major in Elementary Education (Integrated Science or Mathematics)
- Bachelor of Science in: (Engineering Technology degrees)
 - Electrical/Electronic Engineering Technology
 - Electromechanical Engineering Technology
 - Manufacturing/Industrial Engineering Technology
 - Mechanical Engineering Technology
 - Product Design Engineering Technology
- Bachelor of Science in Mechanical Engineering
- Bachelor of Social Work
- Bachelor of Science in Nutrition and Food Science
- Bachelor of Science in Nursing (BSN)

GRADUATE DEGREE AND CERTIFICATE PROGRAMS

- Master of Business Administration
- Education Specialist Certificate in Special Education with a concentration in Learning Disabilities or Autism Spectrum Disorder
- Endorsement in Bilingual/Bicultural Education with a concentration in English as a Second Language
- Master of Arts in Employment and Labor Relations
- Master of Education with a major in Special Education and concentrations in:
 - Cognitive Impairment
 - Learning Disabilities
 - Autism Spectrum Disorders
- Master of Social Work

Dual Enrollment Programs

Educational Outreach coordinates Dual Enrollment cohort programs for eligible high school students in interested school districts. Please refer to <http://wayne.edu/admissions/undergrad/become-a-student/dual/> for dual enrollment admission criteria. Dual enrollment cohort programs may be offered on site within the school district or at any of the Wayne State University campuses.

Online Programs

Program Coordinator: Stacy Jackson
Email: online@wayne.edu; Telephone: 248-489-1436

Website: <http://www.online.wayne.edu>

Online Programs supports the development and implementation of quality online programs and courses, and provides administrative support services, including the review, development, and implementation of policies and guidelines for the University's online credit-bearing programs and courses. The office works closely with the Office of Teaching and Learning, WSU schools, colleges, and faculty to ensure that students have access to a broad range of high quality online course offerings and flexible degree options, including complete online degree programs. In partnership with the Office of Teaching and Learning, Online Programs serves as a central coordinating unit for online learning, a resource for online faculty and course/program development initiatives, and provides a wide range of consulting support and production services for faculty and academic departments developing online courses and programs, as well as assistance to current and prospective online students by serving as a one-stop informational gateway to the University's online offerings, academic advising, technical support, and online student services.

Online Degree Programs

The following degrees are offered online by the Schools and Colleges within the University:

Bachelor's Degrees

- Bachelor of Social Work

Master's Degrees

- Master of Education in Learning Design and Technology
- Master of Library and Information Science
- Master of Arts in Sports Administration
- Master of Science in Criminal Justice

Certificates

- Teaching Certificate in Career and Technical Education
- Graduate Certificate in Communication and New Media
- Graduate Certificate in Public Library Services to Children and Young Adults
- Graduate Certificate in Information Management
- Post-Bachelor Certificate in Information Systems Management

Programs with Online Options

(All or most of the degree requirements in these programs can be completed online. Contact the Program for additional information)

Doctoral Degrees

- Doctor of Physical Therapy (Transitional Program)

Master's Degrees

- Master of Education in Career & Technical Education

Certificates

- Graduate Certificate in Online Teaching
- Graduate Certificate in College and University Teaching
- Graduate Certificate in Systems Engineering

Visitor Program (Non-Credit)

The Visitor Program allows any adult who is not currently enrolled in credit courses at Wayne State to attend a wide range of University courses in a noncredit status. Provided space is available and permission has been granted, adults may enroll as visitors in most of the courses listed in the Schedule of Classes.

It is not necessary to be formally admitted to the University to take advantage of the Visitor Program. Visitor status students do not submit written work, take examinations, or receive academic acknowledgment or transcripts.

Registration for both on-campus and off-campus classes takes place the first two weeks of classes and is processed by the Division of Educational Outreach, located on the main campus.

Tuition for courses enrolled under Visitor status is one-half of the undergraduate resident lower division credit hour rate for each credit hour plus a non-refundable Registration Fee equal to one-half of the registration fee and the full credit undergraduate Student Service Fee. Tuition must be paid in full at the time of registration. Payment is accepted by money order, check, Discover, Visa or MasterCard. Money orders or checks must be drawn from a United States bank and cannot be starter checks. Students may register in person or by calling 313- 577-4665.

Executive and Professional Development

Associate Director: Michael Kelly

Telephone: 313-577-4449

Website: <http://www.ExecEd.wayne.edu>

Executive and Professional Development (EPD) provides proven practical solutions to business challenges through executive education, business training and consulting. Offering a unique blend of expertise and flexible design, EPD moves beyond off-the-shelf, pre-packaged education, training and consulting 'services' by applying problem-solving strategies to assess and meet the needs of its clients. EPD is committed to providing customized, fully integrated, in-depth programs to address specific organizational needs and improve individual and organizational capabilities and performance. The EPD portfolio includes:

Business Training and Executive Education

EPD offers programs that respond to problems currently facing business, government and industry. Programs are offered in a variety of formats and deliver the strategies, tools, and knowledge needed to succeed in today's changing business environment. EPD mobilizes the resources of WSU to serve the specific and unique needs of the community by offering customized degree and non-degree programs, be they an onsite MBA program offered for a specific company, an Engineering Management Master program offered for a group of engineering executives, or a master of social work offered at one of the university's extension sites.

EPD provides a blended training approach by using a variety of alternative delivery methods including on-site facilitated sessions, video-conferencing, on-line training and computer-based programs.

Certificate Programs

EPD responds to industry's demand for a more comprehensive approach to continuing education by offering certificate programs that encompass several current management and business issues. These multiple-session programs offer participants the opportunity for higher mastery and competency in a particular subject area and can be customized to meet each organization's specific needs.

On-site Consulting Services

In conjunction with training, EPD's expert staff provides consulting services in a variety of areas including training and design development, leadership and organizational development, succession plan-

ning, business process improvement, strategic planning, and executive coaching.

Procurement Technical Assistance Center

The Procurement Technical Assistance Center (PTAC) works with qualified businesses in the Detroit area to prepare them to bid for government contracts. PTAC's goal is to provide small business owners with a competitive edge in selling to the public sector by educating them about opportunities, and offering marketing and technical assistance. Recently, PTAC services resulted in awarded contracts totaling more than \$5 million.

For further information on any Executive and Professional Development services or activities, call: 313-577-4449.

International Programs

4092 Faculty/Administration Building; Phone: 313-577-8968
Fax: 313-577-5666

*Associate Vice President for Educational Outreach
and International Programs:* Ahmad Ezzeddine

Associate Director: Jaclyn Assarian

Project Manager: Rebecca Journigan

Email: oip@wayne.edu

Website: <http://www.oip.wayne.edu>

The Office of International Programs (OIP) is responsible for coordinating the University's resources and expertise to support international education on and off campus, to expand the university's global presence, and to facilitate the engagement of students, faculty, and staff with its global agenda. It also connects the metropolitan Detroit community with other university constituencies, locally and abroad. OIP encompasses the followings programs and activities: the Office of International Students and Scholars; Study Abroad and Global Programs; and the English Language Institute.

International Students and Scholars, Office of (OISS)

416 Welcome Center; 313-577-3422; Fax: 313-577-2962

Director: Kelli Dixon

Email: oissmail@wayne.edu

Website: <http://www.oiss.wayne.edu>

The mission of OISS is to support and enhance the educational, cultural, and social experiences of the more than 2000 international students and scholars at Wayne State University. OISS is the University's main point of contact for issues related to international students and scholars' immigration regulation compliance.

OISS staff advise students and scholars on immigration regulations and issues of cross-cultural adjustment; provide educational, cultural and social programs and activities, including a comprehensive orientation program and written materials designed to help arriving students and scholars achieve their educational and personal goals; assist University departments in the hiring of foreign national employees, consult and interact with University units, governmental organizations and other agencies.

Academic Progress for International Students

Department of Homeland Security regulations require:

- 1) That F-1 and J-1 students maintain a full course of study and make normal academic progress toward program completion at the institution they have been authorized to attend.
- 2) Graduate students must successfully complete at least eight credits each semester (excluding continuing students who qualify for an annual vacation semester during Spring/Summer or have been granted an exception to full-time enrollment). Undergraduate students must successfully complete at least twelve credits each semester (excluding continuing students who qualify for an annual vacation semester during Spring/Summer or have been granted an exception for full-time enrollment).
- 3) Graduate Teaching Assistants and Graduate Research Assistants must successfully complete at least eight credits each semester (excluding students who qualify for a vacation semester during Spring/Summer or an approved annual vacation). If GTAs/GRAs need to take less than eight credits, they must complete the OISS Request for Exception to Full Time Enrollment form and obtain approval from OISS. Students should consult an OISS advisor for details on compliance with this and other requirements.

International Students and Scholars, New

New International Students and Scholars receive the OISS welcome booklet with their visa document (Form I-20 or DS 2019) before they leave their home country. The booklet provides information on a wide variety of important topics such as housing, health insurance, expenses, immigration status, local climate, and air transportation. New students and scholars from abroad must report to OISS as soon as they arrive and must participate in a comprehensive orientation program. This program is designed to meet immediate needs in terms of housing information and University registration procedures; introduce them to U.S. culture and the University's educational system; and provide information on banking, health insurance, safety, and immigration regulations. In addition, a number of social and recreational programs and activities are planned to assist students and scholars in making a smooth transition to their new environment

International Students, Non-Immigrant

Before registering for classes, all non-immigrant international students must report to OISS to complete check-in procedures and have immigration documents reviewed, purchase mandatory health insurance (see below), and obtain an orientation schedule. Transferring F-1 students from other U.S. institutions must have their previous school release their Student and Exchange Visitor Information System (SEVIS) record to Wayne State University and must complete transfer procedures as provided in the federal regulations within fifteen days of the first day of class. F-1 students must notify the OISS of any change in name, address, program (including changes in level and field of study), and full-time enrollment. OISS must provide this information to Immigration and Customs Enforcement (ICE) through the Student and Exchange Visitor Information System (SEVIS). J-1 exchange visitors, including students, may not make a change in level, field, or category without the advance approval of the Department of State, and may be precluded from change of visa status until a two-year home country residency requirement is met.

Canadian Students, Commuting

Canadian students (commuters) enrolled less than full time must obtain a part-time I-20 from OISS each semester they are enrolled and should consult with an OISS advisor to determine the impact of their status on future immigration benefits including the availability of practical training.

International Faculty and Research Scholars

The University provides foreign professors and research scholars with opportunities to engage in research, teaching, consulting, and lecturing with colleagues at Wayne State; to participate actively in cross-cultural activities; and to share their experience as well as increase their knowledge about the United States, Wayne State University, and the metropolitan Detroit community. OISS provides centralized support services necessary to enable and assure the employability of such non-U.S. citizens within government regulations. Offers of employment to foreign nationals must be authorized by OISS, and only this Office may sign immigration forms and petitions related to employment on behalf of the University. All foreign national employees must complete USCIS Form I-9, 'Employment Eligibility Verification' and present evidence of their identity and employment eligibility at OISS before commencing employment at Wayne State University.

Health Insurance: International Students and Scholars

416 Welcome Center; 313-577-3422; Fax: 577-2962
Health Insurance Advocate: 313-577-0724

International students and scholars, and their dependents holding F-1/F-2 status and J-1 exchange visitors and their dependents holding J-1/J-2 status are required to comply with the health insurance requirements of the University. Commuting Canadian students may waive the health insurance requirement by providing proof of OHIP coverage prior to each semester of enrollment. The mandatory international insurance program is designed to provide international students, exchange visitors, and their eligible dependents with continuous insurance protection and access to quality affordable health care services. The University is mandated by federal law to terminate from its program all exchange visitors and their dependents who do not meet minimum insurance requirements. For additional information or to purchase health insurance please access the OISS website at <http://www.oiss.wayne.edu> or contact the Health Insurance Advocate in OISS; telephone: 577-0724 or e-mail oiss-mail@wayne.edu

Cross-Cultural Activities

The OISS provides cross-cultural activities in order to provide exposure to American society, culture, and institutions. Activities include: International Education Week, new international student learning community, a free international coffee hour held in the Activity Room in the Towers Residential Hall every two weeks on Wednesdays from 11:30 a.m. to 1:30 p.m. Coffee hour provides opportunity for dialogue with and among international students and scholars, American students, and the WSU community. Other activities include monthly sessions on employment options, internships, cross cultural adjustment and more.

Study Abroad and Global Programs

906 W. Warren Avenue; 131 Manogian Hall; 313-577-3207
Director: Kelli Dixon
Email: studyabroad@wayne.edu
Website: <http://www.Studyabroad.wayne.edu>

Study Abroad and Global Programs coordinates international educational activities at Wayne State University. Key activities include: 1) the management of WSU faculty-led study abroad programs and exchange agreements; 2) the administration of the Hostelling International Travel Award for students to encourage international study, research and internship abroad initiatives; 3) the administration for the NSEP - David Boren Scholarship; 4) the administration of the U.S. Student Fulbright Program; 5) the coordination and support of internationally-themed events; and 6) the development and management of international outreach activities and off-campus programs including agreements between Wayne State University and universities outside the United States.

Study Abroad programs are offered in collaboration between academic departments and faculty of both U.S. and foreign institutions, in order to combine academic study with a cross-cultural learning experience in a foreign environment. A variety of program options have been developed to address the diverse needs of students. Programs vary in length, level, academic focus, teaching format, language requirements, cost, and degree of independence demanded of the participant.

The office provides a full range of support services to students on such issues as program selection, academic planning, registration, credit, financial aid, and cultural adjustment. In addition, program materials have been designed specifically to assist students in preparing for their study abroad experience. Books, brochures, catalogs on academic and travel/study programs in foreign countries are avail-

able at the Study Abroad Resource Center, including information on Wayne State's thirty-three study abroad programs and other programs sponsored by American and foreign institutions.

For a complete and current list of WSU Study Abroad programs, learning experiences, and services, please visit our the Study Abroad website at: studyabroad.wayne.edu.

Arabic Language and Culture at the Lebanese American University, Beirut

This program provides opportunities for WSU students to study Arabic language and culture abroad. During the summer, WSU students may take a variety of language and culture classes while living abroad in Lebanon. For information on these programs, contact the Study Abroad and Global Programs Office, 577-3207 or visit our website at <http://www.studyabroad.wayne.edu> for current program information.

Japan Center for Michigan Universities

The Japan Center for Michigan Universities (JCMU) is a consortium consisting of the fifteen State-supported Michigan public universities, the Michigan Japan Foundation, and Shiga Prefecture. JCMU offers semester- and year-long study opportunities in Hikone, Japan.

The Center's academic program is designed for students interested in acquiring knowledge about Japanese language and culture, including those not majoring in Japanese studies. It provides semi-intensive Japanese language courses and several core courses on Japanese culture to Michigan and other American university students. Academic credit may be granted by a student's home institution upon successful completion of JCMU courses; independent study is also available. The program also features home-stays in a Japanese community, field trips, and participation in cultural events. For information on this program, contact the Study Abroad and Global Programs Office, 577-3207 or visit our website at <http://www.studyabroad.wayne.edu> for current program information

Other International Opportunities: Numerous short-term special international study trips for credit are available to Wayne State students. Visit our website at <http://www.studyabroad.wayne.edu> for current program information.

International Students requiring information on study at Wayne State University should contact the Office of International Students and Scholars; see <http://www.oiss.wayne.edu>

Resource Center, Study Abroad

Books, brochures, catalogs and advising on travel/study programs in foreign countries are available at the Resource Center, including information on Wayne State sponsored study abroad programs and programs sponsored by U.S. and foreign institutions. Course credit is available on approval for many study abroad programs; credit approval usually must be obtained prior to entering a study abroad program.

Honors College: The Irvin D. Reid Honors College has Study Abroad experiences; for information, see the WSU Undergraduate Bulletin.

Fulbright Grants

and other grants for graduate study abroad

The U.S. Fulbright Student program is designed to give recent B.S. and B.A. graduates, masters and doctoral candidates, and young professionals and artists opportunities for personal growth and international experience. Each year the Fulbright Program allows Americans to study or conduct research in over 100 nations. Application deadline depends on the specific program but generally it must be submitted to the campus Fulbright advisor by September of the year prior to the foreign study experience. For more information and application forms, contact the Study Abroad and Global Programs Office,

906 W. Warren, 131 Manoogian Hall; 313-577-3207. The Fulbright Program website is: <http://us.fulbrightonline.org/home.htm>

Fulbright-Hays Doctoral Dissertation Research Abroad Program: Provides grants to colleges and universities to fund individual doctoral students to conduct research in other countries in modern foreign languages and area studies for periods of 6 to 12 months. Proposals focusing on Western Europe are not eligible. The Fulbright-Hays Doctoral Dissertation Research Abroad Program website is: <http://eca.state.gov/fulbright/fulbright-programs/program-summaries/fulbright-hays-program>

English Language Institute (ELI)

351 Manoogian Hall, (313) 577-2729

Director: Bruce Morgan

Website: <http://www.Eli.wayne.edu>

As the only intensive English language program in the metropolitan Detroit area, the English Language Institute (ELI) has specialized in teaching English communication, cultural orientation, and academic preparation skills to non-native speakers of English from all over the world for more than thirty-five years. The ELI is committed to assisting individuals at all levels of English proficiency to develop their communication skills in the shortest possible time by using the newest language-teaching methodology and the most up-to-date audio, video, and computer technology available. Small classes and highly trained instructors make it possible for students to improve their English rapidly and effectively.

Programs

Intensive Program: For students interested in improving their academic skills in a relatively short period of time, the ELI offers up to twenty-four hours per week of instruction at varying levels from beginning to advanced. While beginning levels focus on basic communicative skills, advanced classes emphasize mastery of the academic skills needed to succeed in the university such as research paper writing, essay test-taking, note-taking, and presenting information to an audience.

In addition to attending class, ELI students are encouraged to participate in weekly extracurricular activities in order to become integrated into the English-speaking community. Each semester the ELI offers field trips around the metro-Detroit area, conversation partner practice with native speakers, and practice TOEFL tests while at the same time urging students to take advantage of all university facilities and services.

Non-Intensive Program: Students who complete the requirements of the ELI also can enroll in ENG 0500 offered as Written Communication, offered to all non-native speakers of English who do not pass the WSU undergraduate writing requirement. This two-credit course meets once a week and satisfies University admission requirements for writing proficiency.

Other non-intensive classes provide instruction for those wishing to develop or improve their English proficiency at a slower pace than that of the intensive program. Specialized classes, including TOEFL (PBT, iBT, and TSE) preparation and American Pronunciation, are offered during the evening and are especially geared to professionals

Test of English as a Foreign Language (TOEFL) Testing and Reporting: To insure international students will be successful in the University, all must meet Wayne State's TOEFL admission requirements. The ELI administers the paper-based TOEFL fourteen times per year on the main campus and four times at Wayne State's satellite Oakland Center. Scores are then reported to the applicants as well as Undergraduate and Graduate Admissions.

Graduate Teaching Assistant (GTA) Training and Testing: All prospective GTAs whose native language is not English must pass the SPEAK® test, rated by ELI faculty, with a score of at least fifty (out of sixty) to be cleared for teaching. A score of forty-five allows a person

to teach while enrolling in ELI 0520, a course taught by two ELI faculty members. The final exam, also rated by ELI faculty as well as a faculty member from the academic department, is a teaching demonstration in the GTA's field of study. The SPEAK® test is offered at various times throughout the academic year. ELI 0520 is offered fall and winter semesters.

Members of the ELI faculty also participate in the final day of the Graduate School's GTA orientation each August by facilitating practice teaching sessions with international GTAs.

Scholarly Writing for Graduate Students: Non-native English speaking Ph.D. candidates who need to publish in scholarly journals and meet other professional obligations can take a course designed specifically to meet their needs. Introduction to Scholarly Writing for Non-native English Speakers (English 5850) is a course supported by the Graduate School and taught by an ELI faculty each semester.

English Language Institute Courses (ELI)

The following courses, numbered 0100-0999, are not offered for degree credit. For registration in any of these courses students should contact the English Language Institute at 351 Manoogian Hall, (313) 577-2729. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

0100 Level 1: Oral Integrated Cr. 2 or 4

Integrates listening and speaking, focusing on basic communication skills in real life situations with simple sentences. Vocabulary is covered extensively in context by labeling of common objects. Presentations are recorded. (T)

0110 Level 1: Written Integrated Cr. 2 or 4

Basic written communication skills. Students learn to understand modified texts for basic meaning and produce grammatically correct simple sentences, while building vocabulary knowledge and confidence. (T)

0120 Level 1: Intensive Reading and Vocabulary Cr. 2 or 4

For Skill Building I Written Integrated students. Students will develop very basic communication in English about themselves and their surroundings. The four skills, listening, speaking, reading, and writing, will be practiced with new vocabulary and basic grammar. (T)

0200 Level 2: Oral Integrated Cr. 2 or 4

Course presumes knowledge of basic vocabulary and integrates listening and speaking, focusing on basic interaction, reporting, simple note taking, oral summaries, and recorded speeches. Language is taught for real life situations. (T)

0210 Level 2: Written Integrated Cr. 2 or 4

Focus on comprehension of main ideas, details, and inferencing of simplified reading texts. Students learn to organize and write coherent paragraphs, including timed essays, with simple grammatically correct sentences. (T)

0215 Level 2: Intensive Reading and Vocabulary Cr. 1 or 2

Students gain information and general understanding of the written language and learn parts of words, such as prefixes, suffixes, and some common root words. Instruction will be given on building/using vocabulary in context. (T)

0220 Level 2: Communicative Grammar Cr. 1-2

Open to freshman and sophomore students. Integration of grammar into the four language skills: listening, speaking, reading, and writing. Grammatical structures will be practiced orally and in written form. (T)

0300 Level 3: Oral Integrated Cr. 2 or 4

Integration of listening and speaking in English; introduction of culturally appropriate oral interaction. Students listen to extended dialogues, newscasts, and short lectures in formal/informal real life and record presentations. (T)

0310 Level 3: Written Integrated Cr. 2 or 4

Students will discern main ideas and details, infer ideas, and understand vocabulary in context. Students will be able to produce longer, meaningful, and grammatically correct sentences using correct word forms in complex structures. (T)

0315 Level 3: Intensive Reading and Vocabulary Cr. 1 or 2

Students read texts from a variety of subject areas, including world issues and academic topics. Focus on developing reading comprehension, critical thinking skills, and vocabulary development. (T)

0320 Level 3: Extensive Reading Cr. 1 or 2

Integration of grammar into the four language skills: listening, speaking, reading, and writing. More complex grammatical structures will be practiced orally and in written form. (T)

0400 Level 4: Oral Integrated Cr. 2 or 4

Refining the ability to understand academic spoken language and develop critical thinking skills for responding to questions and giving recorded presentations. Students concentrate on lecture note taking. (T)

0410 Level 4: Written Integrated Cr. 2 or 4

Understanding words in context. Students guess and infer meaning and summarize academic and simple authentic readings. Rhetorical modes of writing are introduced. Students write one-page timed essays. (T)

0415 Level 4: Intensive Reading and Vocabulary Cr. 1 or 2

Students develop and improve essential reading skills, including scanning, skimming, and incorporating graphic organizers and expanding academic vocabulary. (T)

0420 Level 4: Extensive Reading Cr. 1 or 2

Students are introduced to the format and organization of the TOEFL test. Students practiced the paper-based and iBT formats of the TOEFL. (T)

0500 Level 5: Oral Integrated Cr. 2 or 4

Pragmatics and critical thinking skills in response to longer academically-themed lectures of authentic speech, focusing on details and organization. Recorded presentations are formal as well as informal. (T)

0510 Level 5: Written Integrated Cr. 2 or 4

How reading and writing are related. Students increase their reading speed and precision, and learn to summarize and paraphrase. Advanced grammar points will be covered for one-page multi-paragraph essays. (T)

0515 Level 5: Research & Writing Cr. 1 or 2

Students read a wide variety of selections from magazine articles to novels to increase their vocabulary through contextualization, and strengthen their reading comprehension by skimming and scanning. (T)

0520 English for Teaching Assistants. Cr. 2

Prereq: teaching assistant who has failed SPEAK test; written consent of director of ELI. Not offered for degree credit. Offered for P and NP grades only. American English language skills to improve teaching effectiveness of non-native speakers of English. Pronunciation, stress, intonation, speaking rate; oral presentation practice; cultural factors in U.S. university classroom. (T)

0530 TOEFL/Timed Essay Writing Preparation. Cr. 2

Class designed to enhance student's ability to understand and perform on the Test of English as a Foreign Language (TOEFL) for the paper-based and iBT(Internet)-based formats. (T)

0540 Level 5 Media & Culture. Cr. 1-2

Level 5 Media and Culture focuses on extensive reading of printed and online media as well as novels to explore American culture and current events. Integrated outcomes include written assignments, oral presentations and discussions. (T)

0600 Academic Preparation III: Oral-Integrated. Cr. 2 or 4

Increasing aural/oral fluency through participation in academic/content-based discussions and other forms of speech in different settings (formal/informal and academic). Presentations are recorded. (T)

0610 Academic Preparation III: Written-Integrated. Cr. 2 or 4

Development of critical thinking skills and advanced level grammar for writing competency in various rhetorical modes for multi-page essays. To increase comprehension, readings will be authentic/native-speaker materials. (T)

0615 Academic Preparation III: Reading and Vocabulary. Cr. 1 or 2

Students learn advanced academic words and gain in-depth understanding of meaning and uses of new vocabulary in authentic readings. (T)

0700 Written Communication. Cr. 1 or 2

Open only to University Bridge students. Through reading and writing of complex texts, students improve their understanding and use of American English grammar, and mechanics (punctuation and capitalization) for academic and professional settings. (T)

0705 American Pronunciation and Clear Communication. Cr. 1 or 2

Course addresses the communication needs of advanced-level, non-native English speakers who want to reduce the amount of pronunciation errors produced in their speech. (T)

0715 Research Paper. Cr. 1 or 2

Open only to University Bridge students. Step-by-step instruction in the process of writing an American-style research paper with academic sources and following a prescribed format, such as APA or MLA. (T)

0720 Advanced Integrated Skills. Cr. 1 or 2

Authentic undergraduate-level lectures presented by WSU faculty from various disciplines are used to simulate academic courses. Students use all skills. (T)

0725 Advanced TOEFL Preparation. Cr. 1 or 2

Students develop strong vocabulary and reading skills in English and prepare for the TOEFL. (T)

0730 TOEFL-iBT Preparation. Cr. 1 or 2

Students enhance their ability to understand and perform on the Test of English as a Foreign Language (TOEFL) for the paper-based and iBT(Internet)-based formats. (T)

0800 Writing Skills I. Cr. 3

This course integrates reading, writing, and grammar and focuses on comprehending main ideas and details, inferencing in simplified reading texts, and understanding vocabulary in context. Students will learn to organize and write paragraphs with simple grammatically correct sentences. (T)

0810 Oral Skills I. Cr. 3

This course integrates listening and speaking in English and introduces culturally appropriate interaction in speech. Students listen to dialogues, newscasts, and short lectures; give short presentations on a variety of topics; and receive individualized feedback on pronunciation. (T)

0820 Writing Skills II. Cr. 3

This course integrates reading, writing, and grammar and will emphasize how reading and writing are related. Rhetorical modes of essay writing will be introduced, authentic texts will be read, and more advanced grammar points will be covered. (T)

0830 Oral Skills II. Cr. 3

This course integrates listening and speaking in English and focuses on refining students' abilities to understand academic and informal spoken language by listening to academically-themed lectures and extended dialogues. They will develop critical thinking skills for responding to questions and giving presentations. (T)

0840 Writing Skills III. Cr. 4

Course integrates reading, writing and grammar; focus on reading authentic materials and writing essays. Students work to improve their understanding and use of American English, grammar, and mechanisms for academic settings. (T)

0850 Oral Skills III. Cr. 3

Course integrates listening and speaking in English and will help students increase their aural/oral fluency through participation in academic/content-based discussions and various other forms of speech in formal, informal and academic settings. (T)

0860 Communication and Culture. Cr. 4

This course will involve writing and oral presentations based on academic readings and cultural experiences. Additional instruction in grammar and sentence structure will be provided based on students' needs. (I)

Campus Life

Dean of Students Office

351 Student Center; 313-577-1010

The Dean of Students Office provides services and affords opportunities to enhance student life and campus activities. The Office coordinates major campus student activities and events, including new student convocation, homecoming, student organizations day, and the finals week late night breakfast. The office coordinates the campus calendar of student activities and for WSU's celebration of Black History Month. The office also coordinates leadership development programs; advises fraternities and sororities; and promotes student involvement in co-curricular life at Wayne State and Detroit including the Thursdays in the D series, the Discover Detroit series, and the Campus Activities Team program board. The University Student Conduct Officer is housed in the Dean of Students Office.

Student Organizations: There are over 390 recognized student organizations including such diverse categories as academic/professional, social action, political, sororities/fraternities, honoraries, ethnic and religious groups, as well as student governments. Student organizations use the Dean of Students Office to process their event planning and all students use the Dean of Students Office to learn about getting involved in campus life. The Office staff also assists students who want to organize new student groups. The staff also coordinates various campus publications including the on-line weekly newsletter Get Involved at Wayne.

The South End, the official student newspaper, is published every Wednesday during the academic year and online at <http://www.the-southend.wayne.edu>

The lower level: Student Activities programming takes place almost every evening in the "lower level" of the Student Center. This entertainment zone includes an expanded game and entertainment zone, the Underground Grill, the VIP Room, the U Club, programs for students, TVs and lounges.

Housing and Residential Life, Office of

598 Student Center; 313-577-2116

Website: <http://www.housing.wayne.edu>

Housing and Residential Life at Wayne State fosters student learning and success through engaging residents in an intentional living-learning community. Supported by safe, comfortable and convenient residence hall, apartment and dining environments, residents grow in self-awareness and cross-cultural understanding as they practice social and group development as members of a diverse group of Wayne State learners.

Facilities and programs administered by this Office are located just steps away from classrooms, libraries, the Student Center, and the Recreation and Fitness Center and combine the convenience and activity of the campus with the energy and pace of downtown urban living.

Ghafari Hall, Atchison Hall and the Towers Residential Suites all offer:

- Housing for freshmen, upperclassmen, and graduate students.
- Fully furnished rooms in a range of occupancies, all with private baths.
- Study rooms and social lounges on each floor.
- Wi-Fi throughout each building.
- Designated special interest floors.
- Live-in Community Directors and student Resident Assistants.
- Free cable.
- Fully equipped laundry facilities.
- Staffed 24-hour reception desk with OneCard access system.

Food court style eateries including a vegan, vegetarian and Kosher dining facility.

Academic and social programming.

Housing is also available in the University's campus apartments. The top four floors of DeRoy Apartments are furnished. Students must have at least a sophomore standing to live in these furnished spaces with newly renovated kitchens, living room and bedroom furniture and new carpet. The remaining floors in DeRoy, as well as Chatsworth and University Tower Apartments are unfurnished spaces. To be eligible to live in the unfurnished spaces students must be at least twenty-one or have junior standing. Preference is given to graduate/professional students.

Chatsworth, DeRoy and University Tower Apartments offer:

- Internet access with Wi-Fi in DeRoy and University Tower.
- Free cable.
- Fully equipped laundry facilities.
- Staffed 24-hour reception desk with OneCard access system.
- Refrigerator and Stove.
- Ability to purchase a meal plan.
- Activity rooms available for resident use.
- 24 hr on-call emergency maintenance.
- Live-in Community Directors and student Resident Assistants.
- Central air conditioning throughout DeRoy and University Tower.

For more information, current pricing, and application contact the Office of Housing and Residential Life at the Website: <http://www.housing.wayne.edu>

Police/Public Safety Services

The Wayne State University Police Department (313-577-2222) patrols and services the University and the city streets, businesses, and private residences within and between the various campus areas. The Department, to the extent that resources allow, also patrols and provides other police services to the neighborhoods and businesses in the area surrounding the University.

Police service is provided twenty-four hours a day, seven days a week. All officers have, at minimum, a bachelor's degree. They are commissioned as Detroit Police Officers, with full police authority on and off campus, after training at a State-certified Police Academy. Any matter requiring the services of a police officer can be reported at any hour of the day or night. The police headquarters is at 6050 Cass; (313-577-2222).

Blue Light System — Emergency Telephones (7-2222): The University has installed outdoor emergency telephones throughout the campus. These emergency telephones are identified by bright blue lights.

Emergencies (313-577-2222): All emergencies should be reported immediately, i.e.: all crimes, missing/stolen property, automobile accidents, suspicious persons, injured persons, vandalism, break-ins or burglaries.

Accidents (313-577-2222): Ambulatory patients will be transported, by officers, to either Detroit Receiving Hospital or the University Health Center. The Police Department does not provide ambulance service but utilizes the Detroit Fire Department Emergency Medical Service to handle other than minor injuries.

Fire or Other Extreme Hazards (313-577-2222): Emergencies such as fire, smoke, explosions, broken gas or water mains, severe electrical hazards, etc., should be reported.

Crime Prevention Section (313-577-6064): The Police Department's Crime Prevention Section provides a number of crime prevention services, including personal safety seminars, crime prevention programs, and services. All programs and services are free of charge (except the Rape Aggression Defense Training for which there is a fee of \$25.00) to any Wayne State department, student, staff, or faculty member. Examples of services provided include: Security Ser-

vices, Street Smarts seminars, Operation Identification, Alcohol Awareness, and Rape Aggression Defense Training. The Crime Prevention Section also publishes monthly 'Campus Watch' articles. E-mail inquiries may be made to: campuswatch@wayne.edu

Additional information is available on the department's website at: <http://www.police.wayne.edu>

Health Center, Primary Care

Helen DeRoy Apartment Building, Suite 115
5200 Anthony Wayne Drive; 313-577-5041

The Campus Health Center provides comprehensive health care services for students, including physical examinations, family planning, illness visits, and immunizations (including flu, meningitis, hepatitis B, etc.). Visits are by appointment, but walk-ins are accepted for students experiencing an illness. Counseling referral services are also available. All currently enrolled students receive one free office visit per semester. Additional visits are billed to student's health insurance with most health care plans accepted. Students without insurance have reduced fees based on a sliding scale and ability to pay for additional office visits per semester. Payment is accepted at the time of service by cash, OneCard, Visa, MasterCard, Discover, or American Express credit cards. To make an appointment, call (313) 577-5041.

Ombuds Office

790 Student Center Building; 313-577-3487
Email: ombudsoffice@wayne.edu
Website: <http://ombudsman.wayne.edu>

The Ombuds Office exists to support students in achieving their academic goals by providing them with the tools to access services and resolve issues that are hampering their academic progress. The Office advises students about University policies and procedures, helps them identify possible avenues and solutions, and directs them to relevant University services.

The Ombuds Office is objective, impartial, and does not advocate a particular point of view. It listens to student-related concerns and exercises independent judgment regarding any action it may take. The Office has no authority to change academic or administrative decisions, but it facilitates communication when suitable. Confidentiality is maintained as appropriate and feasible based on individual student needs and desires.

The Ombudsperson is the Chair of the Tuition and Fees Appeals Board (TFAB). The TFAB is charged by the President to be the final arbiter of appeals for tuition and related fees. Students who have exhausted the appeals process in the Office of the Registrar related to tuition and fees may appeal to the TFAB. Each appeal is reviewed as an individual case, and cancellation of tuition and/or fees is granted only when circumstances warrant. It cannot grant tuition adjustments for classes in which students received earned grades, nor can it grant course withdrawals without tuition cancellation. The TFAB will consider only those appeals that are filed within one calendar year following the last day of the academic term in which the challenged fees were assessed.

Student Senate

395 Student Center; 313-577-3416
Website: <http://www.studentsenate.wayne.edu>

The Student Senate is the recognized student government of Wayne State University. It consists of twenty-eight members, fourteen members at large elected in a University-wide election, and fourteen appointed members, one student representative appointed by the Office of Housing and Residential Life, and one representative appointed by the Associate Vice President for Educational Outreach to represent the extension centers. The Student Senate has an offi-

cial advisory responsibility in policy formation for the governing of student activities at Wayne State. The Student Senate is advised by the Dean of Students Office.

Athletics, Intramurals and Recreation

Matthaei Facility: 126 Matthaei Building; 313-577-4295

Intramural Sports: Mort Harris Recreation and Fitness Center;
313-577-6712

Intercollegiate Athletics: 101 Matthaei Building; 313-577-4280

Website: <http://wsuathletics.com>.

Wayne State University has a rich athletic tradition dating back to the fall of 1917 and recently celebrated ninety-eight years of singular outreach and academic success. The first Detroit Junior College athletic event (precursor of Wayne State University) was a basketball game against the Detroit College of Law on January 19, 1918. Since then WSU student-athletes have captured numerous honors, including national championships awarded by the NCAA and conference championships. In the past 10 years, 294 WSU student-athletes have been recognized as All-American, the most in any decade. In the ninety-eight year history, 568 students have been so recognized. Sixty-six percent (66%) of the 400 student-athletes currently involved in competitive athletics have a 3.00 or better grade point average. According to the latest federally mandated report, WSU student-athletes graduate at a thirty-nine percent (39%) higher rate than the comparable campus population. The athletic department provides competitive opportunities in the following sports: baseball, men's and women's basketball, men's and women's cross country, men's and women's fencing, football, men's and women's golf, softball, men's and women's swimming/diving, men's and women's tennis, volleyball, and women's indoor/outdoor track. Last season, 10 out of 18 programs competed in NCAA championships. In 2012, women's swimming and diving won the NCAA National Championship joining 10 other programs to be so honored. The past 14 years WSU Athletics has had its 14 highest ratings in the annual NACDA Cup and in 12 of the past 13 years finished in the top 12% of the 320 institutions in Division II. The NACDA ranks the top overall competitive intercollegiate athletic programs in the country.

The University competes in both the NCAA Division I (men's and women's fencing) and Division II levels with the other 14 University athletic programs competing in the Great Lakes Intercollegiate Athletic Conference (GLIAC). Members of the GLIAC are: Ashland University, Ferris State University, University of Findlay, Grand Valley State, Hillsdale College, Lake Erie College, Lake Superior State University, Michigan Technological University, Northern Michigan University, Northwood University, Ohio Dominican University, Saginaw Valley State University, Tiffin University and Walsh University. The fencing teams compete in the Midwest Fencing Conference with Ohio State and Northwestern among the schools.

The University offers a wide and varied program of recreational and intramural activities. The Matthaei Complex, and the surrounding athletic campus on forty-three acres of land, located on the west end of campus, offers a myriad of drop-in activity areas that include courts and fields for basketball, football, jogging, racquetball, soccer, squash, tennis, and volleyball, a weight training/exercise room, and swimming facilities. Use of these facilities is free with a current University ID or with a membership through the Mort Harris Recreation and Fitness Center. The recently built Multipurpose Indoor Facility features 35,000 square feet of usable space, four tennis courts and a sprint track. Open recreation hours and rental information for this facility are available on: <http://wsuathletics.com>.

Ticket and schedule Information is available at the Athletic Office, 101 Matthaei Building, 313-577-4280. For current information on WSU athletic teams (including ticket information), intramurals or recreation, visit the Website: (<http://wsuathletics.com>). All men's basketball and football games are broadcast on the Warrior Radio Network

at WDTK-AM 1400 and FM 92.7 and are also available for free on the internet. Students are admitted free to all University-controlled WSU athletic events with a One Card.

Sports Facilities

Matthaei Building

Matthaei is normally open from 7:00 a.m. to 9:30 p.m., Monday through Friday; and is closed to recreation on Saturday and Sunday, during the fall, winter and spring/summer semesters. During the spring/summer semester the Building is open from 7:30 a.m. to 7:30 p.m., Monday through Friday. Outdoor tennis courts and track are available during posted hours. A facility schedule is published monthly. Operational hours are subject to change, and not all areas of the complex will be available at all times, due to scheduled classes, intramural activities and varsity athletics. Locker and towel services are available for all affiliates daily with current OneCard at no charge. Locker rental plans both semester and yearly are also available. For charges and additional facility information, visit the Matthaei Shop in the Matthaei Building; or call 313-577-4260 or 577-4295.

Recreation and Fitness Center, Mort Harris

This center is a state-of-the-art facility located in the heart of the campus, next to the Student Center and the Purdy library on Gullen Mall. It offers programs and services to meet the recreational, fitness, wellness and competitive needs of the campus community. The 78,000 square-foot Mort Harris Recreation and Fitness Center also features a pro shop to purchase WSU gear, equipment check-out and towel rental, a family/disabled locker room, men's and women's locker rooms with individual private showers, and day-use or semester rental lockers. The Mort Harris Recreation and Fitness Center is open Monday through Friday from 5:30AM -11:00PM and on Saturday and Sunday from 10:00AM - 7:00PM. Among its features are:

Group Fitness Classes (non-credit)

These classes include a variety of programming, conducted by trained, certified and experienced instructors and is available to meet individual needs, including traditional high/low aerobics, hip-hop, step, yoga, spinning, and stretch and tone.

Open Recreation: The fitness areas, multi-purpose courts, walking track and climbing wall offer opportunities for unstructured play and participation. Basketball, volleyball, and a variety of equipment and areas for working out, stretching, or socializing are also available.

Intramural Sports Programs: Men's, Women's and Co-Rec intramural sports leagues are available for all currently WSU students as well as WSU faculty/staff members of the facility. One day tournaments and leagues are available in a variety of sports, including basketball, volleyball, cricket, dodgeball, flag football, ultimate Frisbee and more.

Club Sports: The Mort Harris RFC is also the home for all Club Sports. Students interested in starting up a particular club sports, are invited to consult our website, <http://www.rfc.wayne.edu>, to view the registration process and to become familiar with g.p.a., credit load, and insurance guidelines. All WSU Club Sports are fully funded by the participating students themselves.

Fitness and Wellness Programs: Health assessments, massage therapy and personal training programs for every level of fitness are available to all students and members.

Climbing Wall: The facility offers nine top rope anchors with dozens of routes. In addition, lead climbing, rappelling, and basic belay certifications are available. All necessary equipment may be rented; day and yearly passes are available.

Adventure Trips: The Mort Harris Recreation and Fitness Center offers a variety of outdoor excursions for novices to seasoned adventures. Trips include but are not limited to whitewater rafting, kayaking,

trial running, skydiving, skiing and snowboarding, fishing, camping, and mountain biking.

Team Building: The high ropes course is designed to foster interpersonal and intra-personal growth in a fun and challenging environment. Your Student Organization, Department, Corporation or group will climb up thirty feet and traverse through fifteen different elements that focus on teamwork and interdependency. Groups will learn to communicate effectively, listen to each member, recognize individual strengths and utilize collaborative efforts.

Website: <http://www.rfc.wayne.edu>

Student Center

The Student Center is a unifying force in the life of the university. The Student Center Administration's mission is to provide a facility which will meet the educational, social, recreational, dining, program, and meeting-room needs of students, faculty and administration, alumni, and guests. The department has three components - program, service, and facility - and operates in the tradition of college unions and the philosophical outlook of the Association of College Unions International. The Student Center provides a physical and intellectual environment in which students can develop individual, organizational, programming, and leadership skills, as well as experience personal growth.

The Student Center serves as the home away from home for thousands of students. It is the facility where friends meet to socialize between classes, where many catch up on class assignments, watch television, eat, or spend a leisure hour. The major components and services of the Student Center include:

Campus Information and Service Center

The Campus Information and Service Center (313-577-3568): The Campus Information and Service Center provides the following services for a fee: duplicating service, SMART and DDOT bus tickets, laminating service, fax service, and State Hall locker rentals. In addition, Student Center Graphics, University Lost and Found, and the campus bulletin board posting service are located in this office.

Student Center Graphics, (313-577-3730): This office provides design services and large format printing for the campus community and outside clients. SCG also provides items such as banners, posters, logo designs and consultations for a fee.

Grosberg Religious Center

Various religious denominations have offices on the sixth and seventh floors of the Student Center. Programs and personal and spiritual counseling are available from various denominations.

Reservations Office

Located in 135 Student Center, this office (313-577-4585) schedules rooms and audio-visual equipment available for meetings, seminars, conferences and special programs. Bake sale opportunities, literature table, and showcase information are also provided by this office.

Food Service Facilities

WSU has a variety of dining options. At the Student Center Building patrons will find the Panda Express, WingStop, Taco Bell, Starbucks, Bene Pizza and GrilleWorks and Mad Anthony's General Store for grab and go options. Other quick favorites include Starbucks cafes (one on Anthony Wayne Drive and one in the Bookstore), Subway (In Towers Residential Suites), Jimmy John's, Einstein Bros. Bagels, Dunkin Donuts, and Freshii. Additional options include Al-Basha, LaPita Fresh, Maccabees at Midtown (Maccabees Building at 5057 Woodward), Halftime Café (Mazurek Medical Education Commons), and the Delilah's Cafes in the Undergraduate Library and at the Oakland Center. Students can use their OneCard all of these vendors.

Students, faculty, staff or guests looking for delicious, healthy choices, can also go to one of Wayne State's two dining cafes. Resi-

dential and commuter students, as well as faculty/staff, may purchase a meal plan for a more convenient, discounted dining experience. Meal Plans feature meal swipes valid for Towers Cafe (in the Towers Residential Suites) offering all-you-care-to-eat breakfast, lunch and dinner. Towers Café features the Mongolian grill, home-style favorites, international entrées, made-to-order sandwich and salad bars, dessert station, freshly made soups and more. You can also use meal swipes at Gold 'n' Greens in Ghafari Hall, our all K kosher, pescetarian dining café. The dining cafes include entrées that are vegan, vegetarian and gluten-free. Weekly menus are posted at <http://housing.wayne.edu> and <http://dining.wayne.edu> and are available on WSU's mobile app. Patrons can use a meal plan, Warrior Dollars, pay with cash/credit or use their OneCard.

There are also restaurants located across the campus including a satellite cafeteria in Scott Hall where meal plans are accepted, mobile food vendors at various locations, and two POD Express locations which include snacks, beverages, and fresh salads and sandwiches in the Academic Administration Building, the Faculty Administration Building and an EBB Express at the Law School.

Retail and Commercial Service Facilities

In addition to the wide range of dining options, the University offers a number of convenient services to make life easier, including banking and financial services to service and specialty shops, including:

- Barnes & Nibble Convenience Store
- Campus Health Center
- Comerica Bank - ATM
- Chase – Full Service Branch and ATM's
- Detroit Yoga Lab
- FedEx Office
- Fifth Third Bank - ATM's
- Higher One - ATM's
- Little Asia Mart Grocery and Convenience Store
- Mad Anthony's General Store (in the Student Center)
- Michigan First Credit Union - Branch and ATM's
- Social Club Grooming Co.
- Sue's Convenience Store
- University Pharmacy
- WSU Bookstore
- Yoga Shelter - Midtown

For more information on the shops and services offered right on the WSU campus, visit <https://www.shops.wayne.edu>

Parking, Faculty, Staff, and Visitor

42 W. Warren, Suite 257, Welcome Center (8:30 a.m. - 5:00 p.m., Mon. - Fri.); 313-576-7275

<http://www.parking.wayne.edu>

The University maintains numerous parking facilities available to faculty, staff and visitors on a fee basis. The easiest way to approach parking, for faculty, staff and students, is to purchase a semester-long assigned parking pass. This allows unlimited entry and access to a designated structure or lot, which you'll choose based on availability and where you spend most of your time on-campus.

All new parking pass customers will pay a one-time fee for an RFID tag (currently \$25 at the time of issuance), which hangs from their rear-view mirror to allow for quick, hands-free entry and exit. The hang-tag is linked to a student, faculty or staff person's OneCard and all current/future parking assignments. If the hang-tag is lost, parking patrons can simply swipe their OneCard to enter their assigned structure or lot. Lost hang-tags should be immediately reported to the parking office to be deactivated, and a replacement tag will need to be issued to avoid ticketing or towing.

General parking is also available for guests and those without a parking assignment. This allows patrons to pay as they go, with access to any of the general parking areas. Students, faculty and staff can

deposit funds onto their OneCard for easy in-and-out access. Students only can take advantage of the discounted student OneCard parking rate (\$3.75 at time of publication and \$4.75 for premium parking areas). The general public may park in designated WSU lots and structures at the public rate, typically about \$7.00, using a credit/debit card for entrance and exit and cash at limited locations.

Visit parking.wayne.edu to see up-to-the-minute availability of open spots, or check on the go using the wayne.edu mobile app.

Student Academic Success Services

Counseling and Psychological Services (CAPS)

552 Student Center Building; 313-577-3398, Fax: 313-577-9628

Counseling and Psychological Services (CAPS) enhances students' development and academic success by promoting an open, problem-solving approach to personal challenges and working collaboratively on building appropriate skills, attitudes, and actions. Please refer to <http://caps.wayne.edu> for more information.

Service hours: Monday - Friday 8:30 am to 5:00 pm. Registered WSU students may drop-in or call for an evaluation with a CAPS counselor Monday through Friday from 9:00 am to 4:00 pm.

Eligibility: All currently enrolled students are eligible for counseling evaluation to assess whether their needs can be addressed effectively via short-term counseling at CAPS or require more specialized or longer-term counseling at another facility. Faculty, staff, alumni, children, or spouses are not eligible.

Crisis Services: In the case of a non-life-threatening crisis, students, faculty, or staff can contact CAPS and indicate that a student needs immediate assistance. If assistance is needed during evening or weekend hours, contact the Wayne State University Police Department at 313-577-2222 or call the Wayne County crisis hotline at 313-224-7000. In the event of a life-threatening emergency at any time, contact the Wayne State Police Department

Disability Services, Student (SDS)

1600 David Adamany Undergraduate Library; 313-577-1851;
313-577-3365 (TTD: phone number for hearing impaired)
Fax: 313-577-4898

Service hours are posted on our website at:

<http://studentdisability.wayne.edu/index.php>

Student Disability Services is the office at Wayne State University that determines eligibility and implements academic accommodations, services and support for students with disabilities pursuant to the Americans with Disabilities Act (ADA), the ADA Amendments Act of 2008, and Section 504 of the Vocational Rehabilitation Act of 1973. SDS is committed to teaching students to advocate for themselves in order to fulfill their academic goals. SDS also provides training and outreach throughout the university to ensure equal access to all university programs.

Disability Determination: In order to register for SDS services, students must self-identify by providing documentation of their disability. Documentation guidelines can be found on the SDS website at <http://studentdisability.wayne.edu/documentation.php>. Students will meet with disability specialists to discuss appropriate and reasonable accommodations. Once accommodations are determined, students are guided through the process of providing faculty with their accommodation letters and securing appropriate services. Students receiving accommodations are held to the same academic standards as all other WSU students and are responsible for requesting services and following procedures in a timely manner.

Academic Accommodations: Accommodations and services are individualized and based upon the student's documentation. It is for this reason that students should ensure that they have sufficient documentation that supports the need for appropriate and reasonable accommodations. Some of the accommodations and services provided by SDS might include alternative testing, interpreter and CART reporting services, alternative text format, note-taking assistance,

furniture requests, use of assistive technology, and use of SDS exam/study rooms. Students registered with SDS are also eligible for pre-priority registration for classes. Through the SDS liaison program with University departments and programs, SDS ensures that members of the University community understand the types of support offered to enhance collaboration in providing accommodations.

Assistive Technology: The SDS staff includes an assistive technician who secures alternative text formats for students and teaches students how to use the various assistive technologies. SDS exam/study rooms house CCTV magnification equipment, computers with software such as Zoomtext, JAWS, Kurzweil Educational Systems, Dragon Naturally Speaking and Inspiration. Students are also informed about free downloadable software programs for reading and recording.

Community Resources: SDS collaborates with various community agencies that assist students with disabilities at the university. Students are connected to agencies such as Michigan Rehabilitation Services, the Bureau of Services for Blind Persons, Learning Ally, and Disability Network/Michigan.

Testing, Evaluation, and Research Services

686 Student Center; 313-577-3400; Fax: 313-577-0617

E-mail: testing@wayne.edu

Website: <http://www.testing.wayne.edu/>

Testing

We provide:

- A secure, standardized, testing environment where students can demonstrate their academic skills for placement, course credit, or high stakes decisions.
- The opportunity for students to earn course credit in courses accepted by the transfer credit office through the College Level Examination Program (CLEP).
- Placement testing for students interested in meeting general education and other requirements targeted toward their personal skill level in Biology, Chemistry, Critical Thinking, English Composition and Mathematics.
- Outside exams: Graduate Record Exam (GRE), Testing for the Law School Admission Council (LSAC), Medical College Admission Test (MCAT), Miller Analogies Test (MAT), Test of English as a Foreign Language (TOEFL), Written and Oral exams for the American Council on the Teaching of Foreign Languages (ACTFL), and written exams for doctoral students in the College of Education.

Evaluation

We collect student opinions about faculty teaching through Student Evaluation of Teaching (SET). We share SET reports with students, administrators and faculty members toward the goal of improving quality of teaching at the University.

We survey students and faculty regarding the quality of their education through 1) the Cooperative Institutional Research Program (CIRP) Freshman Survey, 2) National Survey of Student Engagement (NSSE) and 3) Faculty Survey of Student Engagement (FSSE).

Research Services

We offer consulting on best practice in testing for faculty and academic staff. We offer machine scoring of exams, including tabulation of test scores and statistical output to help faculty improve their tests.

Career Services

1001 Faculty/Administration Building; 313-577-3390; Fax: 577-4995

Website: <http://www.careerservices.wayne.edu>

Career Services provides help to students and alumni in defining career and employment goals and assists them in their search for

employment opportunities. In addition to the following services, Career Services offers topical workshops, career events, and group and individual career/employment counseling. Career Services welcomes the opportunity to discuss customized services to meet individual needs.

Career Development

The main focus of this service is to help students explore career options, clarify their career goals, and link those goals to appropriate academic paths. Individual and group services are available.

Cooperative Education, Internships, and Summer Programs

Comprehensive paid professional, career- and non-career related work experiences are available, including a wide variety of part- and full-time experiential learning situations. Orientation workshops are offered on an ongoing basis.

On-campus Student Employment

Students may work on-campus up to twenty hours per week as a Student Assistant or College Work-Study student. Job openings may be viewed in-house or on line via our open posting system.

Professional Employment and On-campus Recruiting

Graduating students and alumni may increase professional full-time employment opportunities through on-campus interviews, resume referral, career fairs, in-house and on-line job postings, and a myriad of career-related support services.

Military and Veterans' Academic Excellence Benefits (OMVAE)

1600 Adamany Undergraduate Library;
313-577-9180; Fax: 313-577-5020
Website: <http://www.omvae.wayne.edu>

This office assists veterans, eligible dependents/survivors, reservists, National Guard and active-duty service members in obtaining educational benefits. Specifically, students are aided in applying for Federal benefits outlined under Title 38, and Title 10, U.S.C., including: the Montgomery G.I. Bill (chapter 30), the Reserve G.I. Bill (chapter 1606), Post 9/11 G.I. Bill (Chapter 33), Reserve Educational Assistance Program, REAP (chapter 1607), Vocational Rehabilitation (chapter 31), and the Survivors'/Dependents' Educational Assistance (chapter 35). All eligible students must officially request to use their educational benefits each semester.

Non-Degree Status: Students must be in a degree program to receive benefits. Those not currently admitted to a degree program and enrolled in classes must verify to the OMVAE via an academic advisor the reason for enrollment (i.e., completing foundation courses for a master's-level program).

Transfer Credits: Wayne State University will give four transfer credits for veterans, reservists, National Guard, and active-duty service members for service in the U.S. military. The University will require military discharge document DD-Form 214.

Wayne State University will accept up to twelve transfer credits from veterans upon receiving their Joint Service Transcript of military training. These credits are to be evaluated according to the 'Guide to the Evaluation of Educational Experiences in the Armed Services,' published by the American Council on Education.

This policy shall be in effect for all veterans, reservists, National Guard, and active-duty service members currently enrolled Fall 2005 and thereafter.

Late Tuition and Late Registration Fee Waiver: Late fees, Partial Payment fees and Late Registration fees can be waived for all students currently receiving VA Educational Benefits. Contact OMVAE for assistance.

Licensing/Certification Reimbursement: In most instances, students receiving VA educational benefits are eligible for reimburse-

ment for licensing test fees. Contact the OMVAE or visit <http://www.gibill.va.gov> for further information.

Tutorial Assistance is also available as part of all benefit packages as noted above. Eligible recipients may receive \$100.00 per month, up to twelve months to help defray tutoring costs. Contact the OMVAE for further details. No charge to benefit entitlement is incurred for the first six months received of Tutorial Assistance.

In-State Tuition Waiver: Individuals on active duty in the U.S. Military who are stationed in Michigan and their dependents are eligible for Michigan in-state tuition. Stationing orders and proof of relationship (for dependents) must be provided with the application.

Veterans and their dependents are eligible for Michigan in-state tuition. The term "veteran" means a citizen of the United States or a resident alien whose most recent separation from any branch of the armed forces of the United States was under conditions other than dishonorable after having served on active duty for 90 consecutive days or more by reason of disability incurred while serving on active duty.

Individuals who are members of the National Guard of any state, or who were separated from the National Guard of any state under conditions other than dishonorable, and their dependents are eligible for Michigan in-state tuition.

Without regard to the foregoing, any individual using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), Chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, and/or the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311 (b)(9) who lives in the State of Michigan while attending Wayne State University (regardless of his/her formal state of residence) is eligible for Michigan in-state tuition.

VA Work-study Program: The VA work-study allowance is available to all students eligible for VA Educational Benefits. Those eligible who are at least a three-quarter-time student in a college degree program, or a vocational or professional program, can 'earn while they learn.' Pay for VA Work-study is the equal to the Federal minimum wage or your state minimum wage, whichever is greater.

Services performed under a VA work-study program must be related to VA work. Examples of acceptable work are:

- Processing VA paperwork at any university or college having a VA Office (e.g., you may be enrolled at WSU but work at Oakland or Macomb Community College VA Offices)
- Outreach services under VA supervision;
- Work at VA medical facilities or National Cemetery System offices
- Work with the Veterans counselor at any of the MESC offices
- Work in the Education or Transition offices at local base
- Work at Department of Defense facilities related to education benefits under the GI Bill.

National Guard Students: Please note that Wayne State does not currently participate in the Guard's Tuition Grant Program. However, if your branch provides Tuition Assistance and/or Tuition Reimbursement the OMVAE will provide assistance as necessary with regard to grade and tuition certifications to your unit.

Reserve Officer Training Corps (ROTC): Wayne State University offers an Army ROTC program. Students interested in joining the Army ROTC program at Wayne State University should contact M.S.G. Nicholas Lachance 734-647-3034.

Recalled To Active Duty (Reservists / National Guard): Students serving in the Selected Reserves or National Guard who are called up to Active Duty during a semester may request full reimbursement of tuition and fees. Students must file an *Exception to Enrollment Policy* form and submit a copy of their orders to OMVAE. Students called up active near the end of a semester are encouraged to consider requesting Incomplete grades for coursework.

Early-Out Requests: Potential Students on Active Duty requesting a verification of enrollment to be sent to their Commands must be admitted to Wayne State University and have registered for classes. Please contact the Graduate Admissions Office and the Registration Office for assistance. Once these conditions are met, the VA Certifying Official can complete an enrollment verification for active duty members seeking an 'early out' from military service. Hard copy proof of student's admittance and registration for classes is NOT required for the VA Certifying Official to complete the enrollment verification.

Computing and Information Technology Division (C&IT)

Office: 5925 Woodward Ave.
Tel.: (313) 5774722; Fax: 9313) 577-5500
Vice President and Chief Information Officer:
Daren Hubbard
Website: <http://computing.wayne.edu>

Computing and Information Technology (C&IT) provides IT services and resources that support and enhance Wayne State University's teaching, learning, research, and administrative activities. C&IT's primary goal is to provide technology services that enable our students, faculty, and staff to be successful at WSU. C&IT employees strive to provide excellent customer service, respond to the changing needs of the University community, and make it easy and convenient for everyone to use technology at Wayne State. Functional C&IT organization charts are available on our website at <http://computing.wayne.edu/about/org-charts.php>.

AccessID (WSU)

Everyone at Wayne State receives a unique identification code (AccessID) consisting of two letters and four numbers, for example: xy1234. The AccessID and password are key to accessing many University online systems; the Access ID can be found on the One-Card; passwords are assigned with initial email communications in the admissions application process

For more information, visit: <http://computing.wayne.edu/accessid>, or call the Help Desk at (313) 577-HELP

Email and Communication Tools

Wayne Connect: The University's Wayne Connect system is a campus-wide method of communication. It is powered by Microsoft and features email, calendars, online storage, mobile apps, and more at <https://connect.wayne.edu>.

Broadcast Messaging (WSU Emergencies)

This University-wide service delivers emergency alerts and other significant messages to faculty, students, and staff. Students/staff can choose how they want to receive WSU announcements at <https://broadcast.wayne.edu>. Faculty also can use Broadcast Messaging to send announcements to their students.

Mobile Apps

Wayne State Mobile App offers students, faculty, staff, and alumni an easy way to access University information like email, calendar, parking availability, class schedules, campus maps, OneCard balances, and more. Apps are available for free download on Android and iOS devices at <http://m.wayne.edu>.

Blackboard Mobile Learn gives students access to their course information directly from their smartphones. Students can check grades and assignments, view documents, create discussion and blog posts, and much more. Apps are available for free download on Android and iOS devices at: <http://computing.wayne.edu/blackboard-mobile>.

ACADEMIC IT SERVICES

Blackboard (Courses on the Web)

Blackboard is WSU's course management and learning platform. Blackboard can be accessed at <https://blackboard.wayne.edu>.

The Blackboard system:

- delivers all or part of many regularly scheduled University courses;
- gives both students and faculty a secure location on the Web for course materials, e-Portfolios, and storing and managing files
- allows faculty to create tests, detect plagiarism, post scores (Grade Center), and host live web conferences

Computer Labs

The University libraries have both open and restricted-access computing areas, with more than 600 computers and a variety of applications. Additionally, many Schools, Colleges, and academic departments provide special-purpose computers and software for their students and faculty. For more information, visit <http://computing.wayne.edu/labs>.

Grid Computing

WSU researchers with projects requiring high performance computing can use Wayne State University's scalable, Grid-enabled computing system. For more information, visit <http://www.grid.wayne.edu>.

Technology Resource Center

Faculty and instructors can utilize the services in the convenient and friendly offices of WSU's Technology Resource Center (TRC) to design and develop instructional experiences for their classrooms and online teaching environments. For more information, visit <http://trc.wayne.edu>.

ADMINISTRATIVE IT SERVICES

Academica

Academica is the primary online means to securely register for classes, apply for financial aid, pay tuition, and more. To access, visit: <http://academica.wayne.edu>.

Internet Access

WSU's wireless networks offer high-speed Internet access within campus buildings including the residence halls. We recommend connecting to WSU-SECURE whenever possible. For more information, visit <http://computing.wayne.edu/wireless>.

Research Networks: Internet2 and MiLR

Wayne State's membership in the Internet2 advanced networking consortium offers researchers countless opportunities for participation and collaboration. The Internet2 Network addresses researchers' bandwidth-intensive requirements, such as: collaborative applications, distributed research experiments, and grid-based data analysis.

The Michigan LambdaRail (MiLR) is a very high-speed, special-purpose data network used in research and higher education. Created by Wayne State University, Michigan State University, and the University of Michigan, MiLR gives researchers access to ten Gbps Ethernet connections between the three universities, as well as national and international research and education networks.

WSU faculty, researchers, and graduate students can obtain more information about using Internet2 or MiLR by visiting:

<http://computing.wayne.edu/researchnetworks>

Software Purchases and Discounts

Purchase discounted software from the Software Clearinghouse at <https://computing.wayne.edu/helpdesk/freesoftware.php>, mobile phone discounts may be found at <http://computing.wayne.edu/mobilediscounts>, and see Wayne State's computer discounts at <http://computing.wayne.edu/discounts>. Before purchasing, see C&IT's recommended hardware specifications (<http://computing.wayne.edu/hardware>) and supported software (<http://computing.wayne.edu/software>).

Computer Repair Services

If a personally-owned Windows PC or Mac crashes frequently or is unusually slow owners may want to consult the competitive prices from C&IT Help Desk for diagnostic and repair services on main campus at 005 Student Center Building. For more information, visit: <http://computing.wayne.edu/helpdesk>.

Computer Security

Students can rely on C&IT to protect the confidentiality, integrity, and availability of information on WSU computer systems, but security is everyone's responsibility. Here are ways for improving computer security at Wayne State:

- Read the University's policy on the Acceptable Use of Information Technology Resources at <http://wayne.edu/policies/acceptable-use.php>.
- Download full-featured Symantec Endpoint Protection software for free and install it on all of the personally-owned computers you use to access WSU systems. Visit <http://clearinghouse.wayne.edu> for your free download.
- When working off campus, your connection to WSU's network is secure and encrypted when you use our VPN, the Virtual Private Network. For more information, visit <http://computing.wayne.edu/vpn>

Help Desk

The C&IT Help Desk is Wayne State's campus technology headquarters - a one-stop shop for all your tech support needs. Call, email, or live chat for one-on-one help with any of Wayne State's IT systems, like email, Blackboard, or Academica. Stop in for computer and mobile device diagnostic and repairs - anything from connecting a phone to Wi-Fi to fixing a broken computer. And shop for free and discounted software. The C&IT Help Desk's vision is to make sure your computing issue is fully resolved on first contact or routed to higher tiers of support with 100% accuracy.

The C&IT Help Desk is open for walk up appointments at 005 Student Center Building, Monday - Friday 8:30am - 5pm. It is open via phone at (313) 577-HELP or Live Chat at <http://computing.wayne.edu/helpdesk/chat.php> from Monday - Friday from 7:30 a.m. - 8:00 p.m. You can email any time to helpdesk@wayne.edu.

Qualtrics Online Survey Software

The Qualtrics Research Suite is a user-friendly, feature rich, web-based survey tool that allows users to build, distribute, and analyze online surveys, collaborate in real-time, and export data in multiple formats. All Wayne State students have access to a free account for this service. Visit: <http://computing.wayne.edu/qualtrics>

Libraries and Archives of the University

Office: 3100 David Adamany Undergraduate Library
Tel.: (313) 577-4023; Fax: (313) 577-5525
Dean of University Libraries: Sandra Yee
Website: <http://www.lib.wayne.edu/>

The University Libraries support the education, research and service missions of the University and its communities through comprehensive, high-quality resources, services and programs. The Libraries are leaders in providing accurate and timely information to Wayne State University as well as the metropolitan Detroit area and Michigan. Scholarly materials in the University Libraries offer total more than three million volumes, over 56,000 journal titles and a broad range of electronic resources, including and electronic journals and over 800,000 e-books, all available through the Libraries' website.

The Library System includes the David Adamany Undergraduate Library, the Arthur Neef Law Library, the Purdy/Kresge Library, the Vera P. Shiffman Medical Library and its Learning Resource Center at the Eugene Applebaum College of Pharmacy and Health Sciences, the Walter P. Reuther Library of Labor and Urban Affairs and University Archives and the Library Services Centers at the Oakland Center in Farmington Hills and Macomb Center in Clinton Township. The School of Library and Information Science and the Detroit Area Library Network (DALNET) are also under the Library System's charge.

The University Libraries offer in-person and online reference and research support, interlibrary loan, circulation and course reserve services, document delivery and library and information literacy programs. The latest information technologies provide state-of-the-art access to instructional and research materials. The libraries provide silent and collaborative study spaces, including a 24-hour facility, as well as classroom support to over 300 general purpose classrooms throughout campus.

Library Cards: see ID, Student (WSU OneCard), p. 32.

Undergraduate Library, David Adamany

Telephone: 313-577-8852
Website: <http://www.lib.wayne.edu/>

The David Adamany Undergraduate Library (UGL) is designed to enhance the learning experience of undergraduate students by helping them to master the research skills necessary for academic success. The UGL offers three floors of open, collaborative space for study as well as hundreds of computers for student use. The library features four instructional labs, collaborative study rooms, course reserves and the Student Technology Studio offers hands-on opportunities for learning to use multimedia and electronic information resources. The Extended Study Center provides 24-hour access to nearly 170 student computers and is the home of the Library Computing Help Desk, which serves the needs of students and staff in the libraries. The UGL also houses Student Academic Success Services, which includes the Academic Success Center, Student Disability Services and the University Advising Center, the Writing Center and the Irvin D. Reid Honors College.

Law Library, Arthur Neef

Telephone: 313-577-3925
Website: <http://www.lib.wayne.edu/lawlibrary>

Located at the north end of the University's main campus, Wayne State University's Arthur Neef Law Library offers researchers a comprehensive legal research center. Its collection of more than 620,000 print and microform equivalent volumes, plus an expansive collection

of e-books, databases and other digital resources makes it a leading legal research facility in the State of Michigan.

The Law Library is also a depository for U.S. government publications and for the records and briefs filed with the Michigan Supreme Court. Professional assistance with accessing these and all other Law Library resources is available on site and through the Ask-A-Librarian link on the library's website: <http://www.lib.wayne.edu/>

Purdy/Kresge Library

Telephone: 313-577-4142
Website: <http://www.lib.wayne.edu/>

The Purdy/Kresge Library supports the research and instructional needs of faculty, graduate students and upper-level undergraduates in these disciplines, as well as the information needs of the greater Detroit community. The library provides access to over sixty computers as well as ample study space in a traditional library atmosphere.

The Purdy/Kresge Library houses a book collection of over 1.5 million volumes, an extensive microform collection, a large document collection and a number of special collections including the Leonard Simons Collection of rare Michigan history texts, the Arthur L. Johnson Endowment collection, and the Ramsey Collection of Children's Literature. This library is also the home of the Technology Resource Center, a collaborative effort of the Libraries, the Office for Teaching and Learning, and Computing & Information Technology, that assists faculty and instructors in designing and developing instructional experiences for the classroom and online teaching environments.

Medical Library, Shiffman, and Learning Resources Centers

Telephone: 313-577-1088
Website: <http://www.lib.wayne.edu/shiffman>

The Shiffman Medical Library supports the research, education and clinical and public health care information needs for the University, major hospitals within the Detroit Medical Center and unaffiliated health care providers and trainees throughout Michigan. In addition to assisting WSU undergraduate students with research, learning and internship information needs in the health sciences, all WSU students are encouraged to use the library's consumer health information services. The library maintains access to all the major health sciences, bio-scientific and consumer health databases; a core collection of journals dating to the mid-19th century; and books in print and electronically reproduced. Health information learning programs and informatics workshops, listed on our Website, are open to all members of the University community. A Learning Resources Center focused on the daily information and computing needs of students of the Applebaum College is available Monday through Friday.

Library Resource Desks

The Library Resource Desks are located at the Oakland Center, the Macomb Education Center, the Advanced Technology Education Center and the Schoolcraft Center. Through the Resource Desks, users can access print course reserves, and pick up and drop off MeLcat requests, interlibrary loan and paged ("Get It!") requests.

Walter P. Reuther Library of Labor and Urban Affairs and University Archives

Walter P. Reuther Library; 313-577-4024
Website: <http://www.reuther.wayne.edu>

The archival collections held in the Walter P. Reuther Library cover a variety of topics, organizations, and individuals. In all, the Reuther Library has more than 95 million documents, 20,000 books, monographs, union publications and proceedings, 2 million photographic images; and 20,000 audio and moving image recordings. Due to

issues of format, size, and security, the collection stacks are not open to the public and researchers work with these materials in the Reuther reading room during established hours of business.

The Reuther Library has an international reputation as the largest labor archives in the world and additionally holds significant collections relating to social and urban affairs in the metro Detroit area. It collects and preserves records of the American labor movement, related social, economic, and political reform groups, and twentieth century urban America. The Reuther Library has since become the official depository for the inactive files of several labor unions and organizations, including the United Auto Workers, the American Federation of Teachers, the National Association of Letter Carriers, The Newspaper Guild, the United Farm Workers, the Service Employees International Union, the American Federation of State, County and Municipal Employees, the Air Line Pilots Association, the Association of Flight Attendants, the Industrial Workers of the World, the Society of Women Engineers, and many state and local organizations. Records have also been received from urban and civil rights groups as the Citizens Crusade Against Poverty, the Michigan Chapter of the American Civil Liberties Union, the Detroit Branch of the National Association for the Advancement of Colored People, the United Community Services of Detroit, United Way for Southeastern Michigan, and New Detroit, Inc. A unique portion of the holdings is a labor journal and newspaper collection, which has nearly 1,600 current and non-current titles dating from the late 1800s to the present. Many individuals who played leading roles in labor and urban affairs have also placed their papers in the Reuther Library.

The Reuther Library also houses the Wayne State University Archives which provides historical information about WSU and its predecessor institutions that date to 1868. In addition to collecting the University's historical records, the WSU Archives holds the papers of presidents and administrative leaders, the papers of selected faculty members, and the papers of student and professional organizations that document the development of the University and higher education in Michigan. The WSU Archives also collects all publications created by and pertaining to the University, including the student newspaper from 1917 to present, as well as departmental newsletters. Subjects in the collection range from student activities such as athletics and student organizations, to local subjects such as Central High School, the Detroit Medical Center, and the Detroit Board of Education.

Centers and Institutes

Automotive Research, Center for

2121 Engineering; 313-577-3887; Fax: 313-577-8789
Director: Naiem Henein, Ph.D.

Email: henein@eng.wayne.edu

Website: <http://www.eng.wayne.edu/page.php?id=751>

The Center for Automotive Research (CAR) was established in 1980 to advance, promote and support research and academic courses in areas of interest to the automotive industry. Faculty and graduate students from the College of Engineering and local industry participate in the research programs conducted at the Center.

Current research areas include the auto-ignition, combustion and emission characteristics of petroleum, alternate and renewable fuels in spark-ignition and compression-ignition engines, under different operating conditions. The research thrust areas are autoignition and combustion in engines, conventional, alternate and renewable fuels, cold startability at low ambient temperatures, sensors, diagnostics, electronic controls, engine dynamics, friction and wear, and simulations and mathematical modeling.

A unique research area at CAR is engine cold start at low ambient temperatures to reduce the number of cranking cycles and exhaust emissions in gasoline and diesel engines. In gasoline engines, the hydrocarbon emissions in the first few seconds of engine start, before the catalyst is warmed up, represent a challenging problem. At CAR, strategies have been developed for managing the fuel delivery, intake charge and spark timing to reduce hydrocarbon emissions by cutting the number of cranking cycles and by eliminating combustion instability. The factors that cause misfiring after acceleration have been identified in both gasoline and diesel engines. In diesel engines, innovative strategies for fuel injection have been developed to reduce the cranking period and combustion instability at low ambient temperatures, while injecting smaller amounts of fuel than has been conventionally applied. The low ambient temperature research is conducted in a cold room, electronically controlled to produce ambient temperatures between 25°C and -50°C.

In addition to the cold room facility, the research has been extended to gain a basic understanding of the spray behavior, autoignition and combustion processes at low ambient temperatures, using advanced laser based diagnostic techniques. The research is conducted on a unique optically accessible engine at low ambient temperatures. The engine has an extended piston with a transparent piston top for spray and combustion imaging. Furthermore, the engine has four transparent windows on the top of the cylinder for laser beam based combustion diagnostic investigations. In addition, spectroscopic techniques are used to determine the key radicals and combustion intermediates that lead to the auto-ignition of fuel-air mixtures, flame development, formation of nitrogen oxides, soot and other emissions.

The research in the Center combines theoretical and experimental investigations. Theoretical research deals with fundamental processes of thermodynamics, heat transfer, mass transfer, and combustion kinetics, applied to combustion engines. CFD and chemical kinetics codes are used to determine the flow in the combustion chamber, the development of the autoignition and combustion processes, the radicals concentrations and the formation of the different engine-out emission species. In addition to the cold room and optical engine test cells, experimental research is conducted under warmed up and loaded engine conditions in six dynamometer test cells equipped with electric dynamometers, flow-meters, pressure transducers, charge amplifiers, shaft encoders, gas analysis equipment, particulate mass and characterization equipment, gas chromatograph, FTIR spectrometer, mass spectrometer, fast response flame ionization detectors, fast-response NO detectors, and fast response CO and CO₂ detectors and high speed data acquisition systems.

Bioengineering Center

818 W. Hancock, 2208 Bioengineering Center;
313-577-0252; Fax: 313-577-8333

Director: King H. Yang
Email: king.yang@wayne.edu

The Bioengineering Center is an interdisciplinary research unit that coordinates and supports joint research activities between the College of Engineering and the School of Medicine. Although the Center is administered by the College of Engineering, the research faculty is drawn from such diverse departments as Anatomy, Physiology, Orthopedics, Neurological Surgery, Mechanical Engineering, Electrical and Computer Engineering, Chemical Engineering, and Physical Medicine and Rehabilitation. The research activities are located on campus as well as in various hospitals and clinics of the Detroit metropolitan area.

Current research projects include a continuing program on trauma biomechanics, the study of human response and tolerance to injury resulting from high speed vehicular accidents and contact sports. This area of research has recently been expanded to include an investigation of the effects of non-lethal munitions, blast-induced mild traumatic brain injuries, and landmine-induced spine and lower extremity injuries. The Center is equipped with a vast array of impact facilities, including three horizontal accelerator mechanisms used for simulating car and aircraft crashes, two linear impactors, three servo hydraulic Instron material testing systems, a high-rate Instron material testing system, and a 12-inch diameter shock tube. The Center is also equipped with a computer-controlled universal receiver (which can fire 9 mm, .357 Magnum, .44 Magnum, and 12 gauge ammunition) and an air cannon system (which can fire 37 mm sub-munitions through the use of compressed gases) to study the injurious effects of non-lethal munitions as well as behind body armor. In 2015, a split Hopkinson pressure bar system was added to measure high-rate properties of biological materials.

Up to 150 channels of data can be acquired simultaneously for digitization and data processing. Additionally, the Advanced Human Modeling Laboratory in the Center is equipped with an Opteron Cluster an Opteron Cluster #1: 15 nodes (30 CPU, 64 bits) + 1 master (Sun Fire V20z dual AMD Opterons 250 with 4G RAM) linked by a Myrinet network, running RH Linux + Rocks cluster software, an Opteron Cluster #2: 15 nodes (60 CPU, 64 bits) + 1 master, 3 TB raid, running RH Linux and Beowulf cluster software + PBS, a new Opteron Cluster #3 (ON ORDER): 16 nodes (120 CPU, 64 bits) + 1 master, 3TB raid 20GB infiniband interconnect, running RH Linux WS5.2 + Rocks cluster software, and 10 Intel dual Xeon (2GHz-3.2GHz), running Redhat Linux 7.2 to RHWS4. For high-speed graphics, the Center has 4 Intel P4 3.2GHz 1M L2 2G Ram with Nvidia Quadro FX3400 Graphics running RedHat WS4, 3 Intel Core 2 Duo 2GHz with Nvidia Graphics running Windows XP 64-bit and Redhat Linux WS5.1 (dual-boot), and legacy capability with HP j6000, j5600, c5600 (dual PA8500, HPUX11), two SGI Octane (dual R1000, IRIX6.5) graphic workstations. For data storage, the Center has Anacapa Opteron 250 2U raid (3.6TB raid mirrored) and 3 external raid boxes on SCSI160/320 (1.8-2.2TB) with an external 12 tapes system (2.4TB capacity).

The Center is also engaged in a study of low back pain, which is a common affliction among workers in industrialized countries, and whiplash associated neck pain. A full neurophysiology laboratory is available for the characterization of neural impulses and the histological evaluation of tissues associated with pain stimuli. Research also includes the characterization of biological materials using uni-axial and multi-axial testing protocols from quasi-static to high strain rates. This activity includes the assessment of orthopedic soft tissues, bone, brain, and individual axons. Other areas of research include human motion biomechanics and orthopedic biomechanics.

The research program in the Bioengineering Center has been strengthened through the creation of a broader graduate program in biomedical engineering. This program, offering both M.S. and Ph.D.

degrees, involves fifteen faculty members drawn from seven departments within both the College of Engineering and the School of Medicine. The areas of concentration have been expanded beyond the traditional transportation-related trauma to include age-related injury, engineering neurophysiology and biomaterials, including tissue engineering. Students who wish to major in biomedical engineering should apply for admission to the graduate program in Biomedical Engineering, housed in the College of Engineering. In addition, a number of traditional engineering departments allow their students to concentrate in biomedical engineering; consult the program descriptions in the College of Engineering section of this bulletin.

Cancer Institute, Barbara Ann Karmanos

4100 John R Street, 2nd Floor; 313-576-8670, 1-800-527-6277;
Fax: 313-576-8668

Director, President, and CEO: Gerold Bepler, M.D., Ph.D.
Email: bepler@med.wayne.edu
Website: <http://www.karmanos.org>

The Barbara Ann Karmanos Cancer Institute is one of forty-five National Cancer Institute-designated comprehensive cancer centers in the country and has been serving the Detroit area for more than sixty years. The Karmanos Cancer Institute operates the Karmanos Cancer Center, an independent cancer hospital, and manages the comprehensive cancer center core grant from the National Cancer Institute, in affiliation with Wayne State University. The faculty of the graduate program in cancer biology are drawn from a number of academic departments at Wayne State University and are Scientific Members of the Cancer Center. Students are trained in the biology of cancer at the molecular, cellular, and tissue levels, as well as in translational research and population studies of cancer. The focus of the training experience can be varied to suit individual student needs. It leads to the Doctor of Philosophy degree in Cancer Biology.

The Barbara Ann Karmanos Cancer Institute is a premier, nationally-recognized cancer research, treatment, education, and outreach center. It is also home to one of the eighteen national registries of the SEER (Surveillance, Epidemiology, End Result) programs. The current research programs are as follows: Molecular Imaging; Molecular Therapeutics; Population Sciences and Disparities; and Tumor Biology and Microenvironment

Cardiovascular Research Institute

1107 Elliman Building, 421 E. Canfield; 313-577-4630;
FAX: 313.577.8615

Director: Karin Przyklenk, Ph.D.
Website: <http://cvri.med.wayne.edu/index.php>

The Cardiovascular Research Institute (CVRI) was chartered in August 2009 with the mission of establishing a nationally and internationally recognized center of excellence for the study of cardiovascular pathophysiology and disease. The hallmarks of the CVRI are collaboration and innovation: the institute serves as a nexus for cardiovascular investigators from a broad range of disciplines and departments within Wayne State University's School of Medicine with interests and expertise encompassing the continuum from basic molecular and cellular biology to clinical application.

The CVRI and its member-faculty are dedicated to conducting state-of-the-art translational research that is at the forefront of cardiovascular science. Areas of research strength include: myocardial ischemia-reperfusion injury and cardioprotection; cerebral ischemia and stroke; heart failure; thrombosis, and platelet aggregation and coagulation. In addition, the CVRI is committed to providing a robust and productive multi-disciplinary training environment for the next generation of leaders in cardiovascular medicine.

Children and Families, Merrill-Palmer Skillman Institute for

71 East Ferry Ave.; 313-664-2500; Fax: 313-664-2555
Interim Director: Peter Lichtenberg, Ph.D.
Email: mpsi@wayne.edu
Website: <http://www.mpsi.wayne.edu/>

The Merrill-Palmer Skillman Institute is an interdisciplinary research institute focusing on urban children and families. It has a long and distinguished history as a research and educational institution, serving as a pioneer in the field of child development and early education. Since it became a part of Wayne State University in 1982, the Institute has encouraged collaborations among faculty from many departments within the University.

The Institute emphasizes research, research training and community engagement and service in the areas of children's health and development. Current research strengths range from pre-natal exposures and child development, infant mental health, cognitive development of high risk infants as well as adolescent health and development. The service programs of the Institute are an outgrowth of its research mission. MPSI operates one of the nation's oldest preschools. Community outreach and engagement through MPSI's Healthier Urban Families Program includes training of mental health workers who serve very young children in the care of public and non-profit agencies; consultation to education and child care organizations; workshops for teachers, parents and the public; and the annual Metropolitan Detroit Teen Conference.

Infant Mental Health: Dual-title degree programs in infant mental health are offered in conjunction with degrees sponsored by the Schools of Nursing, Education and Social Work. For curricula pertaining to these programs, please refer to the individual program and school/college sections in this bulletin.

Citizenship, Center for the Study of

3089 Faculty/Admin. Bldg.; 313-577-2593; Fax: 313-577-6987
Email: M.Kruman@wayne.edu
Website: <http://www.clas.wayne.edu/citizenship>
Twitter: @CitizenshipWSU

Director: Marc W. Kruman, Ph.D. The Center for the Study of Citizenship at Wayne State University promotes research and intellectual exchange about citizenship among a global community of scholars; students; political, community, and business leaders; and the general public. The Center fosters research in the emerging interdisciplinary field of citizenship studies locally, nationally, and internationally. In particular, the Center encourages analysis of the relationship between citizens and the political, social, economic, and cultural communities of which they are a part. Toward these ends, the Center hosts the leading international conference in citizenship studies; publishes a book series, *Citizenship Studies*, in collaboration with the Wayne State University Press; sponsors a discussion network with over 2000 subscribers from over 30 countries; hosts an annual civic festival in September; and sponsors public programs about citizenship.

Civil Rights, Damon J. Keith Center for

471 W. Palmer St.; 313-577-3620
Director: Peter J. Hammer, J.D., Ph.D.
Website: <http://www.keithcenter.wayne.edu/>

The Damon J. Keith Center for Civil Rights memorializes the work of the Honorable Damon J. Keith, Senior Judge for the United States Court of Appeals for the Sixth Circuit, a civil rights icon, and one of our country's leading jurists. The Keith Center is also a leading source for the legal history of the civil rights movement and the historic accomplishments of African American lawyers and judges. The

Keith Center is further dedicated to research and community outreach addressing modern challenges to civil rights and racial justice.

The Keith Center seeks to honor Judge Keith by developing programs and opportunities that build upon his contributions to promoting equality and justice under law. The Keith Center promotes civil rights educational opportunities and encourages research on racial justice issues, including housing segregation, inadequate and segregated education, and unequal economic opportunities, with a particular focus on southeastern Michigan. It also contributes to the development of the next generation of civil rights advocates by providing opportunities to work with leading civil rights organizations and providing scholarships to Wayne Law students interested in pursuing civil rights law. The Keith Center partners with the Wayne Law clinics to engage the community directly through education initiatives and direct services.

The Keith Center recognizes the ongoing need for institutions that instill the virtues of social conscience and sensitivity to the challenges that remain in the fight for legal and social equality. The Keith Center is a national and international resource for identifying and defining the struggles that have occurred and addressing those that remain.

Confucius Institute

5057 Woodward, Suite 11204; 313-577-0153; Fax: 313-577-6929
Director: John Brender, Ph.D.
Email: ci@wayne.edu
Website: <http://www.clas.wayne.edu/ci/>

The Confucius Institute was launched in January 2008 and established with the mission of offering Chinese language and culture in southeast Michigan and to establish educational ties with China. With support from Hanban: Chinese Language International, there are over 100 Confucius Institutes in the United States and over 425 institutes worldwide in over 100 countries. While some Confucius Institutes are dedicated to Chinese art, music, distance learning and other specialty areas, the Confucius Institute at Wayne State University provides programmatic support to K-12 teachers and schools, the Wayne State University community, and to various professional groups.

K-12 programs include K-12 outreach, after school programs, a three-week summer camp, an annual Chinese quiz bowl, Chinese language testing, a two-week summer program in China, and grants for local school districts to establish or improve upon their Chinese language programs. At the university level, the WSU-CI provides study-abroad opportunities in China, including year-long scholarships and a summer service learning program to rural areas. Additional campus programs include a Chinese language and culture learning-community, a weekly Confucius Cafe featuring lectures about China, and regularly-scheduled opportunities to practice Chinese with native speakers. At the professional level, the WSU-CI hosts an annual Chinese language and culture teaching conference, sponsors and produces TV documentaries, and offers forums on Chinese language and culture upon request. Since December 2012, the WSU-CI has produced short, weekly videos spotlighting Chinese idioms with corresponding supplementary videos to enhance Chinese language learning. The WSU-CI also works with its sister school, Huazhong University of Science and Technology and other Chinese universities, to promote exchange and joint degree programs.

Developmental Disabilities Institute

Leonard Simons Building, Suite 268, 4809 Woodward Avenue;
313-577-2654 or 1-888-978-4334; Fax: 313-577-3770
Director: Barbara LeRoy, Ph.D.; *Email:* B_Le_Roy@wayne.edu
Website: <http://www.ddi.wayne.edu/>

The Developmental Disabilities Institute is one of a national network of over sixty University Affiliated Programs, nationally and in U.S. territories. The Institute's mission is to contribute to the development of inclusive communities, which enhance the quality of life of people with disabilities and their families through a culturally-sensitive state-wide program of interdisciplinary education, community support and services, and research and dissemination of information.

Staff and faculty engage in technical assistance, training, and research programs throughout Michigan via collaborative efforts with schools, community agencies, community colleges, and other Universities. Over 10,000 individuals with disabilities benefit from these activities annually. The Institute offers a wide range of opportunities for students and faculty to engage in state-of-the-art community-based research, education, and technical assistance.

Students from a wide range of disciplines are provided opportunities for interdisciplinary leadership education and participation in research, training, and technical assistance projects. Students may earn credits for designation as Trainees of the University Affiliated Program. These activities allow students to develop leadership skills and to gain skills in working with an interdisciplinary team. Interdisciplinary Education Programs of the Institute are developed as cooperative efforts between the Institute and academic units throughout Wayne State University and in collaboration with other universities in Michigan. The Graduate Certificate Program in Disabilities offers leadership education opportunities related to community integration and support of persons with disabilities; see *Disabilities (Graduate Certificate)*, p. 577. A number of other programs have been developed with academic programs throughout the University.

The Institute develops activities and projects based on needs of persons with disabilities and the communities in which they live and work. The Community Advisory Council, composed of representatives of twenty-five key statewide organizations, meets bi-annually to provide information and assistance to Institute staff and faculty in establishing priorities and evaluating activities.

Environmental Health Sciences, Institute of

Integrative Biosciences Center, 6135 Woodward Ave.; 313-577-5631; Fax: 313-972-8025
Director: Melissa Runge-Morris, M.D.
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Website: <http://www.iehs.wayne.edu>

The Institute of Environmental Health Sciences (IEHS) is the originator of the Center for Urban Responses to Environmental Stressors (CURES). The CURES Center focuses on how the stresses of urban, industrialized life affect vulnerable populations. Two defining features of this urban environment are: 1) the exposure to stressors that are especially prevalent in the urban industrialized environment, including physico-chemical (e.g., air pollution, heavy metals, polychlorinated biphenyls, maternal alcohol exposure) and psychosocial (e.g., the stress experienced by first responders to emergencies) stressors; and 2) the experiences of people who are particularly vulnerable to the adverse effects of such exposures (e.g., children and adults of low socio-economic status, older adults, first responders, and refugees).

Detroit's leadership in the automobile manufacturing industry during the 1950s-60s brought prosperity to this region with an unprecedented level of private home ownership. The 1970s-90s introduced global competition to car manufacturing and eroded Detroit's dominance in the automotive industry. Today, with its reduced tax base and aging population, Detroit's infrastructural support is at an all-time

low. The population of the City of Detroit has declined by 64% from its zenith of 2 million in 1950 to an estimated 713,777 according to the 2010 census. As industry and residents leave Detroit, urban blight has caused large areas of the city to become areas of environmental concern. Today, Detroit is the "poster child" for urban rezoning, restructuring, and rebuilding (*Time Magazine*, Sept. 24, 2009; *The Wall Street Journal*, May 14, 2010; *The Washington Times*, March 9, 2010). The mayor is working with Detroit's communities and urban leaders to "right size" the city so that neighborhood resources and infrastructure can be realigned to match the current density and needs of the urban populace. This ambitious goal will require activity by many groups and stakeholders, and includes plans to relocate individuals, schools, and support facilities from abandoned "ghost town" neighborhoods to newer revitalized population centers. Urban gardens are planned, and thousands of dilapidated homes and businesses are slated for demolition in Detroit. However, the toxicological implications of urban restructuring have not been adequately addressed and need to be dealt with effectively to ensure a safe transition toward a modernized, clean, "right-sized" urban community.

CURES investigators are partnering with members of Detroit's urban community and with academic investigators in our region. We share an underlying concern that diseases that compromise the quality of life in the residents of an industrialized urban environment, such as Detroit, occur as a consequence of dynamic interactions among an individual's genetic and epigenetic make-up, nutritional status, and environmental stressors, which include chronic low-level toxicant exposures as well as psychosocial and physical stressors, that re-program key cellular gene expression and regulatory networks to favor pathogenesis. Major goals of the CURES Center are to:

- 1) identify the chief environmental health threats to metropolitan Detroit's urban communities and vulnerable populations;
- 2) develop well-integrated mechanistic, epidemiological, and community-based research programs focused on the impact of urban environmental exposure on human health;
- 3) characterize the molecular signatures of urban environmental toxicant exposure using cellular, animal, and human models; and
- 4) discover and validate novel biomarkers of environmental disease risk that can be applied to disease prevention and policy change initiatives

With its unique emphasis on applying transdisciplinary team science to achieve translational research gains in the field of urban environmental public health, the CURES Center stands at the leading edge of the next wave of paradigm-shifting advances in this field. The next generation of "environmental health scientists" will most certainly be team scientists who above all are supremely facile with applying transdisciplinary approaches to tackle tough environmental health issues. Understanding exposure to environmental stressors requires an integrated appreciation of environmental contaminants in our physical environment, their bioavailability, the means of personal exposure, and interactions of contaminants with emotional stress and gene expression networks that influence health outcomes in the individual. The new leaders in this field will bring a transdisciplinary team approach to the research table, offering much needed diversity of expertise in civil engineering, industrial hygiene, urban planning, community engagement, toxicant chemistry and bioavailability, mechanistic science, exposure science and bio-monitoring, medicine, population science, psychiatry, social work, geopolitics, computer modeling, genetics/epigenetics, bioinformatics and yes, teamwork. The CURES Center is optimally positioned on "the ground floor" of innovative team science opportunities that have the greatest promise to realize the early detection, prevention and eventual eradication of urban environmental disease in our lifetime.

Gerontology, Institute of

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Director: Peter Lichtenberg, Ph.D., A.B.P.P.
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Website: <http://www.iog.wayne.edu>

The Institute of Gerontology was created in 1965 by the Wayne State University Board of Governors in response to a mandate by the State of Michigan. Its mission is to: 1) sustain a premiere program of behavioral and social research with a focus on aging and health among diverse social groups in varying social settings; 2) collaborate with faculty across Wayne State University, the State of Michigan, and globally to stimulate research and teaching on gerontology issues; 3) prepare tomorrow's leaders in aging research through mentorship in its rigorous and nationally recognized pre- and post-doctoral training programs; 4) prepare practitioners, connect seniors and their families to current knowledge, and improve the lives of citizens through the Institute's colloquia series, continuing education, and community outreach education programs; and 5) build research, education, and outreach programs in aging that will stand the test of time by strengthening support of the Institute of Gerontology through community partnerships.

The Institute of Gerontology strives to contribute relevant research and education devoted to enhancing the quality of life of older people, especially those who reside in metropolitan Detroit and the State of Michigan. The interdisciplinary team of faculty partner with academic colleagues, trainees, community organizations, and citizens to better understand aging and health. It works to promote the integration of gerontology into the broader research, teaching, and service activities of Wayne State University, and employs analytical and conceptual advances in the understanding of aging and related processes, with specific attention focused on health and health disparities in our urban environment.

Human Growth and Development, C.S. Mott Center for

275 E. Hancock; 313-577-1337; Fax: 313-577-8554
Interim Director: Jay M. Berman, M.D.
Co-Director: Stephen A. Krawetz, Ph.D.

The Mott Center was established in 1973 for the purpose of conducting basic and applied research in the areas of biomedical reproductive sciences. Its mission is to advance research and research training in women's and children's health, focusing on reproductive biology, toxicology and perinatal medicine towards personalized reproductive medicine using a systems approach. The Center's objectives are to conduct basic and clinical research and research training in: 1) developmental biology, developmental disorders, preterm birth, preeclampsia, perinatal and neonatal physiology; 2) reproductive toxicology, teratology and the effects of drugs and environmental pollutants on pre- and postnatal life; 3) the etiology, mechanism and treatment of human genetic diseases; 4) developing new technologies in fertility/infertility and contraception; 5) changes and problems associated with reproductive and related mechanisms across the life cycle, as well as management and treatment relevant to these changes; and 6) undergraduate and postgraduate education in human growth and development.

The Center is strategically situated in a recently renovated state-of-the-art free standing physical plant that houses primarily faculty and staff from the Department of Obstetrics and Gynecology, School of Medicine. It is utilized to support the basic research activities of this department, as well as work in conjunction with departments across the University, including Physiology, Molecular Medicine and Genetics, Pediatrics, Computer Sciences, Psychiatry, the Merrill Palmer Skillman Institute as well as others. Obstetrics and Gynecology faculty at the Mott Center also work in close association with basic sci-

ence and clinical departments within the School of Medicine and with Hutzel Women's Hospital and other clinical facilities in the Detroit Medical Center and the Henry Ford Health System. In addition, the Mott Center provides laboratory facilities to support the basic research activities of the Perinatology Research Branch (PRB) of the National Institute of Child Health and Human Development, National Institutes of Health, and houses the Wayne State University Applied Genomics Technology Center along with substantial epigenomics and bioinformatics capacity. In addition the Mott Center houses the new Clinical Research Center that serves the needs of the University's translational research program.

As the basic research hub of the Department of Obstetrics and Gynecology, the Mott Center also supports the graduate teaching activities of this department. The graduate program offers interdisciplinary doctoral-degree training in the reproductive sciences with the Ph.D. degree earned through the Department of Physiology. This is an integrated Ph.D. program incorporating the teaching, research and physical resources of two departments - Obstetrics and Gynecology and Physiology - at the Wayne State University School of Medicine. The program's integration into the Department of Obstetrics and Gynecology allows students the unique opportunity to obtain a Ph.D. in a clinical environment. Reproductive scientists and physiologists from both departments guide graduate students through their course work and research training. The curriculum focuses on education and research training in reproduction and development using a systems biology approach including genomics, proteomics, molecular biology and bioinformatics. Dissertation research is typically performed in the basic science laboratories at the Mott Center under the mentorship of Obstetrics and Gynecology faculty.

Humanities Center

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Director: Walter F. Edwards, Ph.D.
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Website: <http://www.research2.wayne.edu/hum/>

The mission of the Humanities Center is to nurture interdisciplinary, transdisciplinary and intradisciplinary work in the humanities and the arts through competitions, conferences, discussion groups and other programs for Wayne State's humanities and arts faculty and students, and for visiting scholars and artists. The Center promotes excellence in research and creative endeavors through rigorous peer review of proposals submitted to it for funding. By sponsoring programs that involve community participants, the Center supports the University's urban mission. Through its various programs, the Center brings humanists of diverse talents and interests together for conversation and collaboration, and fosters innovation and creativity across the humanistic disciplines.

The Humanities Center provides funding support to both faculty members and students. Two of the Center's most prominent faculty programs are the Marilyn Williamson Endowed Distinguished Faculty Fellowship (MWEDF) and an annual themed Faculty Fellowship Competition. The Center awards either one or two Williamson fellowships a year, each worth \$20,000, depending on the funds available in the budget. Other faculty award programs include an annual themed the Faculty Fellowship Competition with between eight and ten recipients awarded up to \$6,000 each. Prominent student programs are the Doctoral Dissertation Fellowship and the Graduate Travel program. The Doctoral Dissertation Fellow will receive \$15,000 plus health care coverage if it is requested. Up to three smaller awards of \$500 may be made at the discretion of the Center to applicants for the award. The Graduate Travel program encourages graduate students in the humanities and the arts to present their research or artistic work at national conferences and exhibitions by offering up to \$300 in travel assistance to applicants. Please check the Humanities Center Web site for additional programs that provide funding opportunities for faculty.

Intellectual Property Law Institute (I.P.L.I.)

This Institute was created in 1987 as a cooperative effort of the law faculties of Wayne State University, the University of Detroit Mercy and the University of Windsor in Ontario. The Institute offers an exceptional, rich curriculum for law students with courses and seminars in patent, copyright, trademark, computer and related technology, communications and media law and entertainment law. Law students who enroll in I.P.L.I. courses pay tuition to their home institution; Wayne State students receive transfer credit for I.P.L.I. courses taken at the other law schools. In addition to these courses, Law School students have the opportunity to take courses at another Detroit law school and at a law school across the border in Canada through the Intellectual Property Law Institute (I.P.L.I.).

Judaic Studies, Cohn-Haddow Center for

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Director: Howard Lupovitch, Ph.D.

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Website: <http://www.judaicstudies.wayne.edu/>

Established in 1988 as a cooperative venture between Wayne State University and the Jewish Foundation of Metropolitan Detroit/United Jewish Foundation, the Cohn-Haddow Center embodies the fruitful relationship that has long linked the University to the metropolitan Jewish community. As such, it is a model for universities and Jewish communities in a dynamic urban setting. The Cohn-Haddow Center serves as a resource to the University and to the larger community in Jewish studies and related areas. It sponsors a broad array of programs and activities related to several of the University's wide-ranging missions. From biannual international conferences to smaller symposia, incidental lectures, and broadly-defined cultural events, the Cohn-Haddow Center has introduced the University and community to some of the world's most distinguished academics and eminent writers, poets, artists and musicians.

Labor Studies Center

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Fax: 313-577-7726; Email: laborschool@wayne.edu

Director: Gayle Hamilton

Website: <http://clas.wayne.edu/labor/About-the-Labor-Studies-Center>

The Labor Studies Center is a comprehensive labor education center committed to strengthening the capacity of organized labor to represent the needs and interests of workers, while at the same time strengthening the University's interdisciplinary research and teaching on labor and labor relations issues. The Center's primary areas of research and practice include: training and technical assistance to unions on labor relations and workplace issues; an undergraduate labor studies major and internship program; interventions to increase the organizational effectiveness of unions; the development and diffusion of constructive labor-management relations practices, particularly in the public sector; the formation and institutionalization of labor-community coalitions; and the impact of lean production systems on workers and labor relations practice in the North American auto industry.

Latino/a and Latin American Studies, Center for

3324 Faculty/Admin. Bldg.; 313-577-4378; Fax: 313-993-4073;

Director: Jorge L. Chinae, Ph.D., Email: aa1941@wayne.edu.

Website: <http://www.clas.wayne.edu/clas/>

The Center for Latino/a and Latin American Studies is a multi-service unit engaged in teaching, research, and service. The Center plays an important role in the urban mission of Wayne State University and involves four components:

1. The Center hosts two learning communities: the CBS Scholars Program and the College-to-Career Program. The first one recruits students into the University, facilitates their transition between high school and college, and promotes increased retention. The second program supports students through completion of their degrees and beyond, especially in the areas of career development and graduate school preparedness. It also offers courses and related educational activities for students interested in Latino and Latin American Studies.
2. It promotes research on issues relevant to the Latino/a community, especially in the urban and workplace environment; and Latin American cultural studies and current issues.
3. It creates and fosters the interaction and exchange of personnel and resources between the University and the Latino/a community; and it serves as a source of expertise on Latino issues to the larger metropolitan community.
4. As an advocate for the awareness and advancement of Latino/a issues within the University, the Center contributes to the University's continuing efforts to create a richer multicultural campus environment.

Learning and Performance Improvement, Institute for

399 Education Bldg.; 313-577-5139; Fax: 313-577-1693

Director: Ingrid Guerra-López, Ph.D.

Email: iguerra@wayne.edu

Website: <http://www.ilpi.wayne.edu/>

The mission of the Institute for Learning and Performance Improvement (ILPI) is to improve community, organizational, and individual performance in the workplace. To this end, one of ILPI's aims is to bridge research and practice through the application of systematic and scientific processes for measurably improving performance. Therefore, ILPI offers rigorous performance improvement methodologies that are based on empirical evidence, and have the scalability and flexibility to fit a variety of contexts and situations in private and public sectors. ILPI personnel are internationally recognized experts in their fields with both theoretical and applied experience in a variety of areas including: needs assessment; performance, program, and impact evaluation; performance measurement and management systems, including dashboard design; instructional and performance design; change creation and change management; training and development, including interactive technologies; leadership coaching; and customer and employee surveys. The benefits targeted by ILPI are measured through several important indicators, including:

ORGANIZATIONAL BENEFITS

- Increased personnel competence, productivity, efficiency, and profitability
- Reduced costs and improved image in the community and customer satisfaction

COMMUNITY BENEFITS

- Improved quality of life, self-sufficiency and resident satisfaction
- Business and job creation
- Educational attainment and health promotion

Manufacturing Information Systems Center

328.02 Prentis Bldg., 5201 Cass Ave.; 313-577-4545;

Fax: 313-577-5486

Email: aragowsky@aol.com

Director: Arik Ragowsky, Ph.D.

Website: <http://business.wayne.edu/article.php?id=105>

The Manufacturing Information Systems Center was chartered in 2000. Its mission is to enhance and extend the Mike Ilitch School of Business' involvement with Enterprise Resource Planning (ERP) systems research, and place it at the front of information systems and ERP research. The Center conducts interdisciplinary research on the use and value of ERP systems to the manufacturing industry and on methods of using information systems for management and competitive purposes. In addition, the center conducts research about the following topics:

The gap between IT and the organizational managers and users, and the way to bridge this gap

Outsourcing versus insourcing of IT activities

Different trends in the IT industry like cloud computing

Another goal of the Center is to link research to real life and to address the business community's needs. For this purpose, the Center's research staff collaborates with the business community and provides the respective participants with the research findings in order to help them to efficiently plan and use their ERP and other information systems for better operation, management, and competition. For this purpose, a new initiative with colleagues from Oakland University and Drexel University (Philadelphia) has been undertaken: an annual CIO (Chief Information Officer) Roundtable discussion. In consultation with some of the CIOs, the faculty members determine which topics will be covered at the next Roundtable. The faculty members undertake research on these topics, present opening comments on the topics, and then moderate the discussion while refraining from offering their own opinions. The purpose of the Roundtable is to let the CIOs discuss significant topics among themselves and to learn from each other. These discussions inform the faculty members' course content and research efforts, enhancing student learning and leading to scholarly presentations/publications of both basic and applied research. To date, the Center has held eight Roundtable discussions; the participants have been very pleased and encouraged us to continue these meetings. As ERP systems have grown beyond the manufacturing sector, the Center has involved organizations from other industries, such as finance, green energy, and government. We published seven papers in different academic journals based on these Roundtable discussions, with additional papers in process.

The Center involves students in its activities. The Center organizes projects for students in real-life organizations where the students can practice the theory they learned in class. For instance, the Center worked with the Lear Corporation, conducting projects with fourteen of Lear's plants. Students gained significant knowledge and experience, the participant plants learned how to better use information systems in general and ERP in particular, and the Center faculty members prepared academic papers based on these case studies.

These types of activities expand the visibility of the University and the Mike Ilitch School of Business in the business community, while benefiting businesses, students and faculty research activities.

Mathematics, Center for Excellence and Equity in

1309 Faculty Administration Building; 313-577-2558;

Fax: 313-577-7596;

Email: ceem@wayne.edu

Director: Steven Kahn, Ph.D.

Website: <http://clas.wayne.edu/ceem/>

The Center for Excellence and Equity in Mathematics, in the College of Liberal Arts and Sciences, is a research and educational center with a two-fold mission: to find ways to significantly improve the quality of K-12 and introductory college-level mathematics instruction across the United States; and, by using mathematics as a tool, to provide students from inner cities and underrepresented minority groups with the kinds of educational and lifetime opportunities that should be available to all students.

The Center currently operates five core programs: the WSU Math Corps, an outreach program serving Detroit middle and high school students; the WSU Middle and High School Math Network, which provides day to day instructional and/or operational resources to Detroit are a middle and high school math departments; the Math Corps Learning Community at WSU, a University support and retention program for Math Corps "kids" now attending WSU; and the Emerging Scholars Program (ESP), a WSU honors-level calculus and pre-calculus program; and the Rising Scholars Program (RSP), serving WSU students at the developmental level.

Molecular Medicine and Genetics, Center for

3127 Scott Hall; 540 E. Canfield; 313-577-5323; Fax: 313-577-5218

Email: l.grossman@wayne.edu

Director: Lawrence I. Grossman, Ph.D.

Website: <http://genetics.wayne.edu>

The Center for Molecular Medicine and Genetics conducts and fosters interdisciplinary health-related research and research training in three focal areas of molecular biology:

- 1) Structure and function of macromolecules: chemical synthesis and analytical characterization of nucleic acids and protein products with scientific and commercial potential; and genetically-engineered products with new or improved functions.
- 2) Structure and function of human, viral, mitochondrial and other genomes; DNA sequences of genes and their regulatory regions; genetic and physical maps of simple and complex genomes, with emphasis on those important in human health and disease.
- 3) Development and characterization of animal models of human disease: use of transgenic and knockout technologies in vertebrate and invertebrate model organisms to elucidate the etiology and pathophysiology of major diseases.

The Center offers the MS and Ph.D. in Molecular Genetics and Genomics and the MS in Genetic Counseling.

The research and research training activities promoted by the Center involve its own research faculty and faculty from at least twelve departments throughout the University. The Center is supported by the University's Research Excellence and Economic Development Fund.

Palliative-Care Excellence, Center to Advance (CAPEWAYNE)

4201 St. Antoine, Suite 5C-UHC; 313-576-3997; Fax: 313-745-4710
Website: <http://www.capewayne.med.wayne.edu>

Director: Michael Stellini, M.D., M.S., F.A.C.P., F.A.A.H.P.M.
Email: mstellini@med.wayne.edu

Associate Director for Research: Margaret Campbell, Ph.D., R.N.
(313) 577-5726; FAAN; Email: m.campbell@wayne.edu

Associate Director for Humanities: Richard Raspa, Ph.D.
(313) 577-6208; Email: aa2267@wayne.edu

CAPEWAYNE is an inter-disciplinary academic center bringing together scholars, educators, researchers and clinicians dedicated to improving the quality of end-of-life care. The main focus areas of this center are education, research and clinical practice, all of which permeated by the field of humanities.

Education: The Center offers an end-of-life curriculum for students, trainees and clinicians across disciplines and levels of training. A major undertaking of the Center is to offer a highly regarded regional conference on Palliative Care annually.

Research: The Center gathers researchers who have a shared interest in the conduct of collaborative, interdisciplinary interdepartmental research.

Clinical Practice: The Center provides resources to clinicians across disciplines and settings that practice palliative care, through a paradigm of sharing and ensuring optimization of clinical care in our community.

Peace and Conflict Studies, Center for

Director: Frederic S. Pearson
2320 Faculty/Administration Building
Phone: 313-577-3453; Fax: 313-577-8269
Website: <http://www.clas.wayne.edu/pcs/>

On November 20, 1965 the Center for Teaching about War and Peace opened its doors under the leadership of Director Russell Broadhead and a committee of distinguished faculty members. The mission then was to provide interdisciplinary, University wide, academic programs in the field of domestic and international conflict and peace issues. In 1987 the WSU Board of Governors, building upon this rich heritage, created The Center for Peace and Conflict Studies.

The mission of the Center for Peace and Conflict Studies is to develop and implement projects, programs, curricula, research, and publications in areas of scholarship related to international and domestic peace, war, social justice, arms control, globalization, multi-cultural awareness and constructive conflict resolution. The Center addresses this mission in three ways. CPCS supports undergraduate and graduate student excellence through its academic programs. CPCS staff and students engage in scholarly research initiatives on aspects of domestic and international conflict management. CPCS provides community outreach programs that emphasize: conflict resolution, development of inter-cultural understanding, and enhance local knowledge of global affairs.

School Health, Center for

125 Matthaei Building, 5101 Lodge Service Dr.;
Phone: 313-577-0014; Fax 313-577-5002
Director: Nate McCaughtry, Ph.D.
Website: <http://coe.wayne.edu/centerforschoolhealth>

Founded in 2010, the Center for School Health aims to address social, economic, academic and health disparities by improving healthy eating and physical activity opportunities and education in community and educational institutions. The center conducts two types of activities: 1) research on healthy school transformation inter-

ventions and 2) providing support services for health promotion and reform initiatives in a range of diverse community and education institutions.

The primary activities conducted in the Center for School Health involve research on healthy school transformation interventions. In these projects, research faculty in the Center design innovative solutions to improving youth and family physical activity and healthy eating in community and education venues, acquire external funding to execute interventions and research, implement health school transformations, and conduct research on process and impact. Several large-scale, long-term, externally-funded healthy school transformation programs include: Building Healthy Communities, the Detroit Healthy Youth Initiative, and the Volunteers, Administrators and Coaches program.

Secondary activities conducted in the Center for School Health include providing support services to community and educational institutions to initiate, support, develop and execute environmental health reforms and individual and population health promotion. Support services provided include: grant writing, professional development, technical assistance, program implementation, curriculum development, evaluation, reporting and marketing, and grant administration.

In 2013, Center for School Health faculty, staff, and graduate students acquired \$2.8 million to support healthy school transformation projects; published twenty-eight journal articles, books and chapters; and presented forty-three research and keynote lectures. Their healthy school transformation work involved eighty-four educational institutions, 720 educators and site staff, and 36,000 children and their families.

The Center for School Health supports the educational mission of Wayne State University by serving as an incubator for undergraduate and graduate research opportunities, field placements, service learning, and internship sites.

Center for School Health faculty include: Nate McCaughtry (Director), Jeffrey Martin, Mariane Fahlmann, Bo Shen, Cheryl Somers, Anne Murphy, Noel Kulik, Erin Centeio, Suzanna Dillon, Laurel Whalen, and Ronald Simpkins.

Social Work Research, Center for

5447 Woodward; 313-577-4439;
Fax 313-577-8770
Director: Joanne Sobeck, Ph.D.
Email: ab1350@wayne.edu
Website: <http://www.research.socialwork.wayne.edu>

Chartered in 2008, the goals of the Center for Social Work Practice and Policy Research are to: 1) conduct research that advances social work practice and policy in settings that range from urban neighborhoods to international contexts; 2) develop relationships with the purpose of identifying and expanding research opportunities and promoting Center sustainability; and 3) foster a commitment to the dissemination of findings that inform social work practice and expand the body of social work knowledge.

The Center fosters a culture for research within the School of Social Work by creating an infrastructure of resources for faculty scholarship and research including pre- and post-award grant support. In addition, the Center facilitates opportunities for faculty and staff engagement with community partners. The Center strongly believes in using interactive processes where researchers, practitioners and policy makers can find new ways to work together, generate innovative ideas, share knowledge and solve problems. Through our Strategic Partners Project and other Center activities, the School of Social Work continues to demonstrate its commitment to the Detroit area, researching and developing real solutions for real world problems. To this end our faculty and staff are engaged in evaluation research,

grant writing, instrument development and other research-related service projects with community agencies.

Translating research and disseminating social work knowledge among practitioners is critical. The Center implements a variety of strategies to synthesize recent research findings into serviceable formats for practitioners including an enhanced web page, policy and practice briefs, and researcher-practitioner dialogue meetings. Learning communities are also provided for students interested in applying research methods to social work contexts.

Urban Studies, Center for

5700 Cass Avenue, Room 2207 Academic/Administration Building;
Tel.: 313-577-2208; Fax: 313-577-1274

Director: Lyke Thompson, Ph.D.; Email: ad5122@wayne.edu

Managing Director: Charo Hulleza, M.P.A.

Email: c.hulleza@wayne.edu

Email: CUSinfo@wayne.edu

Website: <http://www.cus.wayne.edu>

The Center for Urban Studies improves understanding of and provides innovative responses to urban challenges and opportunities. The Center conducts and disseminates research, develops policies and programs, and provides training, capacity-building, and technical assistance. The Center participates in defining and influencing local, regional, State, and urban policy. The Center's current initiatives have a real, substantial and lasting impact on Detroit's challenges across a number of areas ranging from crime reduction to healthy homes. Committed to serving Detroit and its metropolitan area, the Center exemplifies Wayne State's urban research and service mission. The Center employs a highly trained multi-disciplinary team consisting of social science Ph.D. and master's-level researchers, as well as WSU graduate and undergraduate students. The Center is organized into eight specialized programs:

Healthy Homes: The Center's Healthy Homes unit has focused on researching and facilitating collaborative solutions to addressing housing-based hazards to health. The Center is conducting national and local studies on housing risks and their amelioration. Families have been assisted through educational presentations and programs, and home assessments.

Early Childhood and Disabilities: The Center provides a variety of education program evaluations for the State of Michigan and local school districts throughout Michigan, particularly in special education. Many of these evaluation studies collect information from program participants using different techniques including surveys and focus groups.

Urban Safety: The Urban Safety unit employs the latest techniques to evaluate crime prevention projects including, but not limited to, showing hot spots of urban crime, determining safe routes for children to walk to school, and prisoner re-entry initiatives. Community partners include community development organizations, local police departments, and municipalities. The Center maintains numerous databases that include, but are not limited to, crime statistics, transportation, housing, Census data, and health.

Governor's and Mayor's AmeriCorps Urban Safety: The Center is operating the Governor's and Mayor's AmeriCorps Midtown Urban Safety program to improve resident public safety capacity in seven areas of Detroit. AmeriCorps members work with local non-profits, police departments, schools and residents to improve resident public safety by recruiting residents to establish block clubs, and using mobile mapping to tackle area problems. Members are also facilitating safety workshops, conducting home assessments, and boarding up dangerous buildings/cleaning up public private areas to promote neighborhood stabilization and safe routes to school.

Urban Health: The Urban Health unit partners with local agencies to conduct research and program evaluation on specific urban health issues. The unit specializes in projects geared to address obesity

and emergency preparedness, and to assist people diagnosed with HIV and victims of trauma. However, unit researchers can also assist organizations with health research/evaluation on other urban health topics.

Survey Research: The Survey Research unit engages in a variety of data collection techniques, including computer assisted telephone interviews, computer assisted self-administered interviews, community-based in-person interviews, focus groups, mail surveys, and web-based surveys. The unit has the capability to implement any and all phases of a project, from design and implementation to production of computerized data files and data analysis.

Evaluation Research: The Center provides program evaluation service to a range of organizations in the Detroit area and statewide. The support is structured to provide both process and outcome evaluation, as well as to provide training and capacity building on evaluation implementation.

Faculty Support: The Center regularly provides support for Wayne State faculty and administrative projects that include the Center as a project partner. The type of support varies by project, and ranges from project evaluation design to performing the lead role in grant submission (filling out all forms, developing overall budget, active development of grant narrative, etc.).

Vision, Ligon Research Center of the School of Medicine

Ligon Research Center of Vision, 4717 St. Antoine; 313-577-9136

Director: Gary Abrams, M.D.

Scientific Director: Zhuo-Hua Pan, Ph.D.

Email: lignoncenter@med.wayne.edu

Website: <http://www.kresgeeye.org/research/ligon-research-center-of-vision/>

The Ligon Research Center of Vision was chartered in 1999. The Center was founded by a gift from philanthropist Robert Ligon, with the mission to restore vision to the blind. The Center is a collaborative effort between the departments of Ophthalmology and Anatomy & Cell Biology at Wayne State University, conducting interdisciplinary research on molecular biology, immunocytochemistry, electrophysiology, gene therapy, and animal behavior. In particular, the Center invented a novel strategy for vision restoration, the optogenetic gene therapy.

The severe loss of photoreceptive cells in inherited or acquired retinal degenerative diseases, such as retinitis pigmentosa or age-related macular degeneration, can result in partial or complete blindness. The optogenetic gene therapy strategy for restoring vision relays upon expressing a light sensitive protein, called channelrhodopsin-2 (ChR2) from green algae, to convert light-insensitive inner retinal neurons into photosensitive cells, thus restoring light sensitivity to retinas lacking photoreceptors. Using recombinant adeno-associated virus (rAAV) vectors to deliver ChR2, previous work in the Department of Anatomy/Cell Biology and the Ligon Center of Kresge Eye Institute has demonstrated the feasibility of restoring light sensitivity to the retinas of photoreceptor-deficient animal models. The technologies developed at Wayne State University have been licensed to a biotech company, RetroSense therapeutics. In August, 2015, RetroSense's first optogenetic gene therapy drug application received clearance from the US Food and Drug Administration (FDA) for clinical trial.

To achieve better outcomes for the restored vision in patients, current research in the Center focuses on the further development of the optogenetic technologies. The studies include improving the properties of optogenetic light sensors, developing virus-mediated targeting to specific inner retinal cell type(s), improving rAAV-mediated delivery and transduction efficiency in retinal neurons using non-human primate models.

Workplace Issues, Douglas A. Fraser Center for

Walter P. Reuther Library, 5401 Cass Ave., 313-577-5382;

Fax: 313-577-5359

Director: Marick F. Masters, Ph.D.

Email: marickm@wayne.edu

Website: <http://www.clas.wayne.edu/fraser/>

The Douglas A. Fraser Center for Workplace Issues is a core part of Labor@Wayne. It was chartered by the University Board of Governors in 1998 to honor Douglas Fraser, former president of the United Automobile Workers (UAW). The Center has been endowed by major gifts from the UAW, General Motors Corporation, Chrysler Corporation, and Ford Motor Company, and generous gifts from many other organizations and individuals, including the United Steelworkers of American. The mission of the Fraser Center is to generate knowledge and information about best practices in the workplace through effective union representation. The Center is guided by the external and internal advisory Boards of Labor@Wayne. It supports research through the Fraser Fellows, Fraser Scholars, Fraser Paper Series, and Fraser Workshop activities. It sponsors the annual Labor Leaders on Labor Forum which honors nationally prominent leaders for their contributions to working people and families. The Fraser Center also convenes numerous conferences and events to bring academics, labor leaders, business leaders, and policymakers together to discuss important workplace and public policy topics. It focuses on manufacturing, healthcare, and the public sector. The Fraser Center supports various topical White Papers on key issues such as employee engagement through labor-management joint initiatives

Mike Ilitch
School of Business

Dean Robert Forsythe

Foreword to the Mike Ilitch School of Business

The Mike Ilitch School of Business is a professional school concerned with the theory and practice of business administration. The primary objectives of the School are to provide a contemporary education of high quality for business administration students, to develop new knowledge through research and to encourage application of its findings. To this end, in addition to their instructional services, the faculty has been a continuing source of notable scholarly publications and it is a special strength of the School that this research faculty teaches both undergraduate as well as graduate courses.

This School has a tradition of instructional programs exemplifying high standards for both faculty and students as is acknowledged by the accreditation of the AACSB International (the Association to Advance Collegiate Schools of Business) for both the baccalaureate and master's degree programs. The School provides relevant, comprehensive business education through programs that serve recent high school graduates as well as more mature student populations. The student body is racially and ethnically diverse, commuting, and often working and raising families. To meet the needs of these students, the School schedules classes on campus, at the University Oakland Center and online.

The Mike Ilitch School of Business also recognizes its obligation to community service. As part of an urban university, the School makes a special commitment to foster basic and applied research that will benefit business enterprises. Equally important is the dedication to excellence in the instructional programs that create and support the business leadership that is critical to the continuing revitalization of southeastern Michigan.

Accreditation

Mike Ilitch School of Business programs are accredited as follows:

School: Accreditation Council of AACSB International: The Association to Advance Collegiate Schools of Business. (AACSB)

Undergraduate Program

The undergraduate program begins with students acquiring an educational foundation in several introductory business courses and in the basic sciences and the humanities. During the third and fourth years, students follow a program designed to provide professional education in the major. Students may select majors in accounting, finance, global supply chain management, management, information systems management, and marketing. Degrees of Bachelor of Science in Business Administration or Bachelor of Arts in Business Administration are awarded; post-bachelor certificates in accounting and information systems management are also offered. For additional undergraduate information, consult the Wayne State University Undergraduate Bulletin.

Programs, Graduate

*MASTER OF BUSINESS ADMINISTRATION and JOINT
JURIS DOCTOR / MASTER OF BUSINESS ADMINISTRATION*

MASTER OF SCIENCE IN ACCOUNTING

MASTER OF SCIENCE IN TAXATION

GRADUATE CERTIFICATE IN BUSINESS

DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION

72 School of Business Administration

The program leading to the Master of Business Administration degree educates graduate students for professional careers in business administration. The program requires a minimum of thirty-six graduate credits beyond the pre-professional foundation requirements. Graduate courses are offered at both on- and off-campus locations during the late afternoon and evening, and online. It is possible for students to complete their M.B.A. online, onsite, or through a combination of online and onsite courses.

The program leading to the Master of Science in Accounting is designed to prepare individuals for careers in accounting in public accounting firms, private industries, financial institutions, and government and nonprofit organizations. The program requires a minimum of thirty credits beyond the foundation requirements. Courses are offered in the late afternoon and evening.

The program leading to the Master of Science in Taxation (M.S.T.) degree prepares students for entry into professional tax practice in both the public and private sectors. Through the interdisciplinary nature of the program, the M.S.T. candidate learns the accounting, legal, and public policy aspects of taxation. The program requires a minimum of thirty credits beyond the foundation requirements. Courses are offered in the late afternoon and evening.

The program leading to the Graduate Certificate in Business is designed to equip non-business degree holders with relevant business knowledge pertaining to the daily operations of business in corporate, non-profit and entrepreneurial settings. The program requires a minimum of thirteen credits. Courses are offered in the late afternoon and evening or online.

The Doctor of Philosophy in Business Administration prepares persons interested in careers in research and university teaching. The core goals for Ph.D. students are the creation of new knowledge through research and excellence in teaching. This program offers concentrations in finance, management, and marketing. For more detailed information about the Ph.D. program see Business Administration (Ph.D. Program), p. 82 as well as the School's website at <http://www.ilitchbusiness.wayne.edu>

Mission Statement

Our mission is to prepare our students for challenging and rewarding careers, advance the boundaries of scholarly and practitioner knowledge, and enhance the economic vitality of the city of Detroit, the state of Michigan and beyond through our programs, research and community engagement.

Administration and Faculty of the Mike Ilitch School of Business

Administration

Dean: Robert Forsythe

Associate Deans: Margaret Smoller and Toni M. Somers

Assistant Dean of Student Services: Linda S. Zaddach

Chairperson, Department of Accounting: Myles Stern

Chairperson, Department of Finance: Sudip Datta

Chairperson, Department of Management

and Information Systems: Christine Jackson

*Chairperson, Department of Marketing and Global Supply Chain
Management:* John C. Taylor

Director, Career Planning and Placement: Carlos Pierre

Director, Graduate Programs Office: Kiantee N. Rupert-Jones

Director, IT Department: Richard Lerman

Director, Marketing Communications: Steven Townsend

Director, Ph.D. Programs: Attila Yaprak

Professors

B. Anthony Billings, Abhijit Biswas (Kmart Chair), Mai Iskandar Datta, Sudip Datta (T. Norris Hitchman Endowed Chair), Robert Forsythe, Christine Jackson, Celia R. Livermore-Romm, James E. Martin, Marick Masters, Fred Morgan, Irvin D. Reid, Alan Reinstein (Husband Professor), Toni M. Somers, William H. Volz, Attila Yaprak

Associate Professors

Timothy W. Butler, Sujay Dutta, John Heinrichs, Scott D. Julian, Ranjan D'Mello, Cheol Lee, Jaegul Lee, Santanu Mitra, Mbodja Mougoue, Thomas J. Naughton, Arik Ragowsky, Margaret A. Smoller, Albert D. Spalding, Jr., Myles S. Stern, Jeffrey J. Stoltman, John Taylor, Amanuel Tekleab, John D. Wagster, David L. Williams

Assistant Professors

Hugo DeCampos, Tingting Yan.

Senior Lecturers

Deborah Jones, Ariel S. Levi, Sherilynn J. Perelli, Antonie Walsh

Lecturers

Mark Savitskie, Gary Shields, Lori Sisk, Agnes Shepard, Daniel Weimer, Daniel Yeakel

Faculty Emeriti

Gerald Alvin, Mark Bayless, Richard Beltramini, Robert C. Bushnell, Hugh M. Cannon, Frank Carmone, Bruce E. DeSpelder, Victor C. Doherty, Donald E. Gorton, James Hamilton, Edwin F. Harris, George Jackson, J. Patrick Kelly, Catherine Kirchmeyer, K.S. Krishnan, James T. Low, John G. Maurer, Richard N. Osborn, Barbara Price, Kelly Price, Edward A. Riordan, Jone M. Rymer, Milton H. Spencer, Louis L. Stern, Fred P. Unruh, Harish Verma, Frank L. Voorheis, James F. Wallis

Directory of the Mike Ilitch School of Business

Website: <http://www.ilitchbusiness.wayne.edu>

Telephone area code: 313

DEAN: 226 Prentis Building; 577-4501;
Email: BusinessDean@wayne.edu

ASSOCIATE DEAN:
226 Prentis Building; 577-4501;
Email: BusinessUgradADean@wayne.edu;

ASSISTANT DEAN OF STUDENT SERVICES:
200 Prentis Building; 577-4510;
Email: BusinessAstDean@wayne.edu

ADMINISTRATIVE SERVICES:
105M Prentis Building; 577-4502;
Email: BusinessAdminSvc@wayne.edu

DIRECTOR, CAREER PLANNING AND PLACEMENT:
240 Rands House; 577-4781;
Email: Bizcareers@wayne.edu

DIRECTOR, COMPUTING SERVICES:
6.3 Prentis Building; 577-1624;
Email: BusinessCIT@wayne.edu

DIRECTOR, INSTITUTE FOR ORGANIZATIONAL AND INDUSTRIAL COMPETITIVENESS (IOIC):
217 Prentis; 577-4484;
Email: BusinessIOIC@wayne.edu

DIRECTOR, MANUFACTURING INFORMATION SYSTEMS CENTER (MISC):

300 Prentis Building; 577-7837;
Email: BusinessMISC@wayne.edu

DIRECTOR, MARKETING AND COMMUNICATIONS:
226 Prentis Building; 577-0202;
Email: smtownsend@wayne.edu

OFFICE OF GRADUATE PROGRAMS:
103 Prentis Building; 577-4511
email: gradbusiness@wayne.edu

OFFICE OF UNDERGRADUATE STUDENT SERVICES:
200 Prentis Building; 577-4505;
Email: businessinfo@wayne.edu

STUDENT SENATE OFFICE:
116 Rands House; 577-4783;
Email: sbastudentsenate@wayne.edu

DIRECTOR, Mike Ilitch School of Business DEVELOPMENT:
226 Prentis Building; 577-9212;
Email: BusinessDev@wayne.edu

DEPARTMENT OF ACCOUNTING:
100 Rands House; 577-9908;
Email: m.stern@wayne.edu

DEPARTMENT OF FINANCE:
300 Prentis Building; 577-4525;
Email: Bizoffice@wayne.edu

DEPARTMENT OF MANAGEMENT AND INFORMATION SYSTEMS:
300 Prentis Building; 577-4525;
Email: Bizoffice@wayne.edu

DEPARTMENT OF MARKETING AND SUPPLY CHAIN MANAGEMENT:
300 Prentis Building; 577-4525;
Email: Bizoffice@wayne.edu

UNDERGRADUATE PROGRAM INFORMATION: 577-4505

GRADUATE PROGRAM INFORMATION: 577-4510

Business Administration (M.B.A. Program)

Admission (M.B.A.)

Admission to any graduate program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to the M.B.A. program must comply with the following:

Admission to the Master of Business Administration program is limited to holders of baccalaureate degrees from regionally accredited institutions who demonstrate high promise of success in graduate business study. Several measures of probable success may be included in the evaluation of an applicant; criteria which may be considered are:

1. Performance on the Graduate Management Admission Test (GMAT); see below.
2. Undergraduate grade point averages and the trend of grades earned during undergraduate education.
3. Other indicators of promise of success in the graduate study of business, such as relevant employment and leadership experience.

Appeals to an admission denial may be made in writing to the Director of Graduate Programs, Mike Ilitch School of Business. Guidelines for formal appeals are available in the Mike Ilitch School of Business's Graduate Programs Office, room 103 Prentis Building.

Graduate Management Admission Test (GMAT)

The GMAT must be taken prior to admission to graduate study. This test is a three-hour aptitude test designed to measure certain mental abilities and skills important in the study of management. The GMAT includes verbal, quantitative analytical writing and integrated reasoning sections administered by a computer. The Educational Outreach Office offers a preparation course for the GMAT (1-313-577-4449).

The GMAT is offered on a continuous basis by appointment at computer-based testing centers throughout North America and at selected international sites. Candidates can schedule a testing appointment by calling 1-800-717-GMAT (4628). A list of test centers is provided in the GMAT Bulletin and on GMAT's web site, <http://www.mba.com> or <http://www.gmac.com>.

Most prospective graduate business students will take the GMAT or GRE for admissions, although the School of Business does offer GMAT/GRE waivers to highly qualified applicants. This is generally defined as those applicants who meet one of the following criteria:

1. Acceptable score on the Graduate Record Examinations (GRE), Law School Admission Test (LSAT) or Medical College Admission Test (MCAT) entrance exam.
2. GPA of 3.0 or higher from an AACSB-accredited business program (or GPA of 3.2 or higher from a regionally-accredited university in any major) OR at least three years of relevant professional experience that shows increased responsibility over that period.

Please contact the Graduate Programs Office for more information on GMAT waivers or equivalency requirements

Application: A completed *Application for Graduate Admission*, the application fee, and an official transcript from *each* college or university attended are required before a student can be considered for admission to graduate status. Students must apply online by the appropriate application deadline at the website: <http://www.gradadmissions.wayne.edu>

Degree Requirements (M.B.A.)

Candidates for the Master of Business Administration degree must complete thirty-six credits in final-program course work with a minimum grade point average of 3.0. Additional foundation course work may be required prior to beginning the thirty-six final-program credits.

Degrees are granted upon the recommendation of the faculty of the Mike Ilitch School of Business. All course work must be completed in accordance with the regulations of the Graduate School and the Mike Ilitch School of Business governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the Mike Ilitch School of Business, p. 83, respectively.

Business Administration and Law (M.B.A./J.D. Joint Degree Program)

Joint degree programs are those in which credit for some courses may be applied to both degrees. The Joint M.B.A./J.D. Program leads to the receipt of both the Master of Business Administration (M.B.A.) degree from the Mike Ilitch School of Business and the Juris Doctor (J.D.) degree from the Law School (see Law (J.D. Program), p. 276). The joint program allows students to fulfill the requirements of both programs concurrently. Students will need to complete all the requirements for both degrees, but Law School courses may count for up to nine elective credits toward the M.B.A. degree.

Applicants to this program must apply to both the Law School J.D. program and the Mike Ilitch School of Business M.B.A. program. Admission to the Concurrent M.B.A./J.D. Program requires separate approval by both the Law School and the Mike Ilitch School of Business. Students must: meet all admission requirements of both programs; be admitted to both programs; and obtain the separate approval of both units to participate in the concurrent degree program.

Students seeking admission into the Joint M.B.A./J.D. program may use their Law School Admission Test (LSAT) score for M.B.A. admission consideration, as long as the student makes it clear at the time of application that they would like to pursue this option. Otherwise, the student must take the Graduate Management Admission Test (GMAT) and submit that score for M.B.A. admission consideration. If the student is a current J.D. student within their first year of law school, the student may apply for the Joint M.B.A./J.D. program using the University Graduate Change of Status form and submitting all required application documents.

The first year of study is spent in the Law School; after completion of the first year, students may elect one Business School course per semester, with a maximum of four M.B.A. graduate courses applicable toward the J.D. degree. Students are eligible to apply a maximum of nine J.D. credits as M.B.A. elective credit, provided the following conditions are met:

- 1) The law school courses to be applied to the M.B.A. must be taken at the Wayne State University Law School, as part of the J.D. program;
- 2) A grade of 'B' (3.0) or higher must have been awarded for the courses; Passed/Not Passed credit is acceptable only for LEX 8631 and LEX 8633;
- 3) The courses must be relevant to the student's Plan of Work as approved by the Graduate Committee;
- 4) The courses may not be more than five years old at the time of graduation;
- 5) The Law courses which will be considered for dual applicability are:

LEX 6200 – Contracts A: Cr. 3

LEX 6201 – Contracts B: Cr. 3

LEX 7009 – Advanced Bankruptcy: Cr. 3

LEX 7014 – Advanced Corporate Tax Problems: Cr. 4
 LEX 7026 – Antitrust: Cr. 2-4
 LEX 7045 – Banking Law: Cr. 2
 LEX 7060 – Business Planning: Cr. 4
 LEX 7061 – Business Planning: Transactional Approach: Cr. 4-8
 LEX 7128 – Consumer Law: Cr. 3
 LEX 7141 – Corporate Finance: Cr. 3
 LEX 7156 – Corporations: Cr. 4
 LEX 7221 – Employment Law: Cr. 3
 LEX 7353 – Health Care Organizations and Finance: Cr. 3
 LEX 7404 – International Business Transactions: Cr. 3
 LEX 7407 – International Intellectual Property Cr. 3
 LEX 7603 – Mergers: Cr. 2-3
 LEX 7828 – Ecommerce: Cr. 3
 LEX 7831 – Trademarks and Unfair Competition: Cr. 3
 LEX 8631 – Business and Community Law Clinic: Cr. 4
 LEX 8633 – Advanced Business and Community Law Clinic: Cr. 4

6) If a Joint M.B.A./J.D. student would like to apply a J.D. course to the M.B.A. that is not listed above, the student must petition in writing to the Graduate Committee for dual application of credit;

Distribution Requirements, Course, (M.B.A.)

The master's degree program provides a fundamental background in business administration as well as opportunities for advanced specialization in particular areas. The program beyond the common body of knowledge is broad in nature and is directed at general competence for overall business management. There are three phases of course work required: foundation, core, and electives and/or concentrations. Depending on the student's academic background, there may be no foundation courses or as many as seven foundation courses required. All students must complete six core courses. Students must also choose six elective courses which can be used as part of a general curriculum. Students in the Traditional M.B.A. program may select electives that apply toward the completion of one or more of the concentrations as listed below.

Foundation Requirements (M.B.A.)

The following foundation courses are open only to students who have been formally admitted to a graduate program at Wayne State University — undergraduate, post-baccalaureate, and non-matriculated students are not eligible. (Analogous courses offered at the undergraduate level may be taken to satisfy Foundation Requirements prior to graduate admission. However, once a student has been formally admitted to the M.B.A. program, NO graduate credit shall be allowed for subsequent registrations in undergraduate courses analogous to the Graduate Foundation Requirements without approval of the Graduate Committee or its designee. Information regarding such courses is available in the Graduate Programs Office, 103 Prentiss Building.) A cumulative grade point average of 3.00 ('B') is required for foundation requirements and no individual grade below 2.0 ('C') is acceptable. **All foundation requirements must be completed before a student begins core and elective courses.**

BA 6000 – Intro. to Accounting and Financial Reporting: Cr. 2
 BA 6005 – Basics of Financial Management: Cr. 2
 BA 6010 – Basics of Business Economics: Cr. 2
 BA 6015 – Marketing Foundations: Cr. 2
 BA 6020 – Contemporary Principles of Management: Cr. 2
 BA 6025 – Basics of Production/Operations Management: Cr. 2
 BA 6090 – Quantitative Analysis: Theory and Application: Cr. 2

In general, a baccalaureate degree in Business Administration from a regionally accredited institution fulfills most foundation requirements. However, each applicant's background will be individually examined to determine if any foundation course work is needed. If courses proposed to satisfy the foundation requirements of the M.B.A. program are over six years old, the Graduate Committee may require the applicant to demonstrate proficiency in the subject matter either by

interview with a faculty member, by taking an equivalent course, or by taking an equivalent course by examination.

Foundation Waivers: While all of the above foundation courses are required, students who have had equivalent course work in their undergraduate programs (except for BA 6005, see below) with a cumulative g.p.a. of 3.00 ('B') or higher may be granted waivers of certain foundation courses at the time of their admission to the graduate program.

BA 6005 Foundation Waiver Criteria:

- 1) Students who have earned a grade of 3.00 ('B') or higher in an undergraduate course that is compatible with BA 6005 and the prior course was taken within the last three years from an AACSB accredited college or university. These students must also have quantitative GMAT/GRE scores higher than the 50th percentile.
- 2) Students who are Finance or Accounting majors from an AACSB accredited US or Canadian university, have obtained a g.p.a of 3.00 or higher in the major, and have graduated in the last two years.
- 3) Students who are not Finance or Accounting major but have completed FIN 3290 or an equivalent course from an AACSB accredited US or Canadian university within the last 12 months and passed the course with a grade of 3.33 ('B+') or higher.
- 4) Students who do not meet any of these conditions may take and pass a waiver exam administered by the Department of Finance; however, they are strongly encouraged to take BA 6005. BA 6005 (Basics of Financial Management) is a prerequisite for BA 7020.

Business Information Systems and Mathematics Proficiency: In addition to these courses, one college-level mathematics course and one course in business information systems are required.

Writing Proficiency: Each student admitted to the graduate business program is required to demonstrate competency in analytical writing. A score of at least 3.5 on the GMAT writing assessment will demonstrate this competency. A student who scores below 3.5 on the GMAT writing assessment must complete with a grade of 'C' or better ENG 3050 or a writing course approved by the Mike Ilitch School of Business Graduate Programs Office. The cumulative g.p.a. of all waived courses (for example, introduction to accounting or finance) and courses taken to demonstrate competency, such as ENG 3050, must be 'B' (3.0) or higher.

Core Requirements (M.B.A.)

The following six core courses are required of all students:

BA 7000 – Managerial Accounting: Cr. 3
 BA 7020 – Corporate Financial Management: Cr. 3
 BA 7040 – Managing Organizational Behavior: Cr. 3
 BA 7050 – Marketing Strategy: Cr. 3
 BA 7070 – Social Perspectives on the Business Enterprise: Cr. 3
 BA 7080 – Strategic Management: Cr. 3

BA 7080, Strategic Management is the capstone course and is to be taken in the final twelve credits of the graduate program and only after the completion of the other five core courses. For those students with an undergraduate major in accounting, management or marketing, a more advanced course in a subject area (approved as part of the student's Plan of Work) must replace the pertinent core course noted above.

Concentration Requirements (M.B.A.)

The purpose of the concentration is to provide depth in a specialization that will contribute to the student's attainment of his or her professional objectives. The Mike Ilitch School of Business currently offers twelve areas of concentration. Students must take three elective courses from a pre-specified list of courses to obtain a concentration. The following are the areas of concentrations and the list of courses that must be completed to fulfill the concentration requirement.

Accounting Systems

Complete any three of the following courses:

- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7130 – Intermediate, Managerial Accounting: Cr. 3
- ACC 7145 – Accounting Systems: Design and Controls: Cr. 3
- ACC 7148 – ERP Systems: Concepts and Practice: Cr. 3

Auditing

Complete any three of the following courses:

- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7050 – Intermediate Financial Accounting II: Cr. 3
- ACC 7180 – Auditing: Cr. 3
- ACC 7190 – Advanced Auditing: Cr. 3

Corporate Governance

Complete the following:

- ACC 7310 – Bus. and Professional Ethics for Managers and Accountants: Cr. 3
- BLW 7220 – Law of Corporate Management and Finance: Cr. 3
- MGT 7620 – Complex Organizations: Cr. 3

Finance:

Complete:

- FIN 7230 – Investment Policies: Cr. 3

- and at least two of the following courses:

- FIN 7000 – Applied Financial Analysis: Cr. 3
- FIN 7229 – Corporate Valuation: Cr. 3
- FIN 7220 – Advance Managerial Finance: Cr. 3
- FIN 7290 – Topics in Finance: Cr. 3
- FIN 7330 – Fixed Income Securities: Cr. 3
- FIN 7340 – Futures and Options: Cr. 3
- FIN 7090 – Money and Capital Markets: Cr. 3
- FIN 7870 – International Finance: Cr. 3

Financial Accounting

Complete:

- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7050 – Intermediate Financial Accounting II: Cr. 3

- and at least one of the following courses:

- ACC 7115 – Financial Statement Analysis: Cr. 3
- ACC 7122 – Advanced Accounting I: Cr. 3
- ACC 7125 – Advanced Accounting II: Cr. 3
- ACC 7145 – Accounting Systems: Design and Controls: Cr. 3
- ACC 7155 – Forensic Accounting: Cr. 3
- ACC 7180 – Auditing: Cr. 3
- ACC 7188 – Governmental and Not-for-Profit Accounting: Cr. 3
- ACC 7190 – Advanced Auditing: Cr. 3
- ACC 7192 – Accounting Theory: Cr. 3

Global Supply Chain

Complete:

- GSC 7620 – Global Supply Chain Management: Cr. 3
- GSC 7650 – Strategic Procurement: Cr. 3

- and one of following courses:

- ACC 7148 – ERP Systems and Business Integration: Cr. 3
- GSC 7010 – Desktop Decision Tools: Cr. 3
- GSC 7260 – Theory of Constraints: Cr. 3
- GSC 7670 – Special Topics in Supply Chain Management: Cr. 3
- GSC 7991 – Principles of Quality Management: Cr. 3
- ISM 7510 – Database Management: Cr. 3
- MKT 7450 – Business Research and Methodology: Cr. 3
- MKT 7460 – International Business: Cr. 3
- MKT 7500 – International Marketing Strategy: Cr. 3
- MKT 7700 – Management of Retail Enterprises: Cr. 3
- MKT 7950

or

- MGT 7950 – Business and Sustainability: Cr. 3

Human Resources Management

Complete:

- MGT 7640 – Human Resource Management: Cr. 3
- MGT 7750 – Labor Relations and Collective Bargaining: Cr. 3

-and one of the following courses (ELR are Employment and Labor Relations courses):

- ELR 7010 – Healthcare, Retirement, and Employee Benefit Plans: Cr. 3
- ELR 7450 – Employment Relations Law in North America: Cr. 3
- MGT 7650 – Strategic Human Resource Management: Cr. 3
- MGT 7790 – Compensation Administration: Cr. 3

Information Systems Management

Complete at least three of the following courses:

- ISM 7505 – Information Analytics: Cr. 3
- ISM 7510 – Database Management: Cr. 3
- ISM 7530 – Societal and Ethical Issues in the Information Age: Cr. 3
- ISM 7560 – Survey of E-Commerce: Cr. 3
- ISM 7570 – Data Mining: Cr. 3
- ISM 7575 – Corporate Computer Networks and IT Security: Cr. 3
- ISM 7994 – Digital Content Development: Cr. 3
- ISM 7996 – Principles for Customer Relationship Management (CRM): Cr. 3

Internal Audit

Complete:

- ACC 7165 – Internal Audit I: Cr. 3
- ACC 7168 – Internal Audit II, Cr. 3

- and at least two of the following courses:

- ACC 7100 – Financial Accounting for Managers: Cr. 3
- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7050 – Intermediate Financial Accounting II: Cr. 3
- ACC 7145 – Accounting Systems: Design and Controls: Cr. 3
- ACC 7155 – Forensic Accounting: Cr. 3
- ACC 7180 – Auditing: Cr. 3
- ACC 7190 – Advanced Auditing: Cr. 3
- ACC 7310 – Bus. and Professional Ethics for Managers and Accountants: Cr. 3
- ACC 7990 – Internship in Accounting or Tax Practice: Cr. 3

International Business

Complete:

- MKT 7460 – International Business: Cr. 3
- MKT 7500 – International Marketing Strategy: Cr. 3

- and one of the following courses:

- BA 7560 – Global Perspectives in Management: Cr. 3
- GSC 7620 – Global Supply Chain Management: Cr. 3
- FIN 7870 – International Finance: Cr. 3
- MKT 7600 – The Northern American Economy: Cr. 3
- MKT 7950 – Business and Sustainability: Cr. 3

Management

Complete at least three of the following courses:

- MGT 7620 – Complex Organizations: Cr. 3
- MGT 7630 – Organizational Change and Development: Cr. 3
- MGT 7640 – Management of Human Resources: Cr. 3
- MGT 7660 – Entrepreneurial Management: Cr. 3
- MGT 7815 – Strategic Leadership: Cr. 3
- MGT 7816 – Leading in Organizations: Cr. 3
- MGT 7850 – Management through Constructive Persuasion: Cr. 3
- MGT 7900
- Or
- ISM 7900 – Project Management Cr. 3
- MGT 7950 – Business and Sustainability: Cr. 3
- MGT 8000 – Seminar in Management: Cr. 3

Marketing

Complete:

- MKT 7450 – Business Research and Methodology: Cr. 3
- MKT 7470 – Consumer and Industrial Buying Power: Cr. 3

- and one of the following courses:

- GSC 7650 – Strategic Procurement: Cr. 3
- ISM 7996 – Principles for Customer Relationship Management (CRM): Cr. 3
- MKT 7150 – Global Automotive Marketing Strategy Cr. 3
- MKT 7430 – Advertising Management: Cr. 3
- MKT 7460 – International Business: Cr. 3
- MKT 7500 – International Marketing Strategy: Cr. 3
- MKT 7700 – Management of Retail Enterprises: Cr. 3
- MKT 7950 – Business and Sustainability: Cr. 3

Taxation

Complete any three of the following courses:

- ACC 7120 – Intro. to Taxation: Individuals: Cr. 3
- ACC 7300 – Accounting and Tax Research and Professional Communications: Cr. 3
- ACC 7320 – Intro. to Taxation: Business Entities: Cr. 3
- ACC 7325 – Advanced Tax Research and IRS Procedures: Cr. 3
- ACC 7335 – Taxation of Corporations and Shareholders II: Cr. 3
- ACC 7340 – Taxation of Pass-through Entities: Cr. 3
- ACC 7400 – Tax of International Bus. and Multinational Trans: Cr. 3
- ACC 7410 – Tax Accounting Methods and Deferred Income Taxes: Cr. 3
- ACC 7420 – Taxation by State and Local Jurisdictions: Cr. 3
- ACC 7440 – Financial and Estate Planning: Cr. 3
- ACC 7450 – Taxes and Business Strategy: Cr. 3

Elective Requirements (M.B.A.)

All elective courses must be at the 7000 level or higher and must be offered by the Mike Ilitch School of Business. The written approval of the Dean or his/her designee is required to take any course as an M.B.A. elective outside the Mike Ilitch School of Business. (Only students holding a bachelor's degree in business administration are eligible to take elective courses outside the Mike Ilitch School of Business.) Students may select any combination of elective courses from the following set of courses.

Accounting

- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7050 – Intermediate Financial Accounting II: Cr. 3
- ACC 7100 – Financial Accounting for Managers: Cr. 3
- ACC 7115 – Financial Statement Analysis: Cr. 3
- ACC 7120 – Tax Problems in Business Affairs: Cr. 3
- ACC 7122 – Advanced Accounting: Cr. 3
- ACC 7130 – Intermediate. Managerial Accounting: Cr. 3
- ACC 7145 – Accounting Systems: Design and Controls: Cr. 3
- ACC 7148 – ERP Systems and Business Integration: Cr.3
- ACC 7155 – Forensic Accounting: Cr. 3
- ACC 7165 – Internal Audit I: Cr. 3
- ACC 7168 – Internal Audit II: Cr. 3
- ACC 7170 – International Accounting: Cr. 3
- ACC 7180 – Auditing: Cr. 3
- ACC 7188 – Governmental and Not-For-Profit Accounting: Cr. 3
- ACC 7190 – Advanced Auditing: Cr. 3
- ACC 7192 – Accounting Theory: Cr. 3
- ACC 7300 – Accounting and Tax Research and Prof. Communications: Cr. 3
- ACC 7310 – Professional Ethics for Managers and Accountants: Cr. 3
- ACC 7320 – Advanced Tax Problems: Cr. 3
- ACC 7335 – Taxation of Corporations and Shareholders II: Cr.3
- ACC 7340 – Taxation of Pass-through Entities: Cr. 3
- ACC 7400 – Taxation of Intern'l Business and Multinational Transactions: Cr. 3
- ACC 7410 – Tax Accounting Methods. and Deferred Income Taxes: Cr. 3
- ACC 7420 – Taxation by State and Local Jurisdictions: Cr. 3
- ACC 7440 – Financial and Estate Planning: Cr. 3

- ACC 7450 – Taxes and Business Strategy: Cr. 3
- ACC 7998 – Seminar in Tax and Accounting Policy: Cr. 3

Business Administration

- BA 7560 – Global Perspectives in Management: Cr. 3

Business Law

- BLW 7210 – Business Law for Entrepreneurs: Cr. 3
- BLW 7220 – Law of Corporate Management and Finance: Cr. 3

Finance

- FIN 7000 – Applied Financial Analysis: Cr. 3
- FIN 7090 – Money and Capital Markets: Cr. 3
- FIN 7220 – Advanced Managerial Finance: Cr. 3
- FIN 7229 – Corporate Valuation: Cr. 3
- FIN 7230 – Investment Policies: Cr. 3
- FIN 7280 – Entrepreneurial Finance and Venture Capital: Cr. 3
- FIN 7290 – Topics in Finance: Cr. 3
- FIN 7330 – Fixed Income Securities: Cr. 3
- FIN 7340 – Futures and Options: Cr. 3
- FIN 7870 – International Finance: Cr. 3

Global Supply Chain Management

- GSC 7010 – Desktop Decision Tools: Cr. 3
- GSC 7260 – Theory of Constraints: Cr. 3
- GSC 7620 – Global Supply Chain Management: Cr. 3
- GSC 7670 – Special Topics in Supply Chain Management: Cr. 3
- GSC 7650 – Strategic Procurement: Cr. 3
- GSC 7991 – Principles of Quality Management: Cr. 3

Information Systems Management

- ISM 7505 – Information Analytics: Cr. 3
- ISM 7510 – Data Base Management: Cr. 3
- ISM 7520 – Information Systems Design: Cr. 3
- ISM 7530 – Societal and Ethical Issues in the Information Age: Cr. 3
- ISM 7560 – Survey of E-Commerce: Cr. 3
- ISM 7570 – Data Mining: Cr. 3
- ISM 7575 – Corporate Computer Networks and IT Security: Cr.3
- ISM 9000 – Project Management: Cr. 3
- ISM 7994 – Digital Content Development: Cr. 3
- ISM 7996 – Principles for Customer Relationship Management (CRM): Cr. 3
- ISM 8000 – Seminar in ISM: Cr. 3

Management

- MGT 7611 – Managing 21st Century Workers, Careers, and Lifestyles: Cr. 3
- MGT 7620 – Complex Organizations: Cr. 3
- MGT 7630 – Organizational Change and Development: Cr. 3
- MGT 7640 – Management of Human Resources: Cr. 3
- MGT 7650 – Strategic Human Resource Management: Cr. 3
- MGT 7660 – Entrepreneurial Management: Cr. 3
- MGT 7700 – Leadership and Management of Innovation and Technology: Cr. 3
- MGT 7750 – Labor Relations and Collective Bargaining: Cr. 3
- MGT 7770 – Union Contract Administration: Cr. 3
- MGT 7780 – Concepts and Processes of Dispute Resolution I: Cr. 3
- MGT 7790 – Compensation Administration: Cr. 3
- MGT 7810 – International Industrial Relations and Human Resources: Cr. 3
- MGT 7815 – Strategic Leadership: Cr. 3
- MGT 7816 – Leading in Organizations: Cr. 3
- MGT 7850 – Management through Constructive Persuasion: Cr. 3
- MGT 7900
- Or
- ISM 7900 – Project Management Cr. 3
- MGT 7950
- Or
- MKT 7950 – Business and Sustainability: Cr. 3
- MGT 8000 – Seminar in Management: Cr. 3

Marketing

MKT 7150 – Global Automotive Marketing Strategy: Cr. 3
MKT 7430 – Advertising Management: Cr. 3
MKT 7450 – Business Research and Methodology: Cr. 3
MKT 7460 – International Business: Cr. 3
MKT 7470 – Consumer and Industrial Buying Behavior: Cr. 3
MKT 7500 – International Marketing Strategy: Cr. 3
MKT 7700 – Management of Retail Enterprises: Cr. 3
MKT 7870 – Seminar in Marketing: Cr. 3
MKT 7890 – Internship: Marketing: Cr. 3
MGT 7950
Or
MKT 7950 – Business and Sustainability: Cr. 3
MKT 7995 – Directed Study: Marketing: Cr. 1-3

Examination Requirements (M.B.A. / C.P.A.)

M.B.A. students who hold a baccalaureate degree in a field other than accounting and who wish to qualify to sit for the C.P.A. examination in the State of Michigan should contact their advisor in the Graduate Programs Office (313-577-4511) as early as possible. While no formal M.B.A. curriculum is offered to meet the educational requirements of the Michigan State Board of Accountancy, an individualized Plan of Work can be developed. Generally, such a Plan of Work includes more than the minimum number of courses required for the M.B.A.

Business, Graduate Certificate in

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants must have earned a minimum g.p.a. of 3.0 in their undergraduate/graduate program. Applicants who already have a business or related degree are not eligible.

Curriculum Requirements: The Graduate Certificate in Business is designed to provide non-business undergraduates fundamental knowledge in the basic functional areas of business administration: Accounting, Finance, Management and Marketing. The Certificate program requires successful completion of thirteen credits consisting of six courses: four functional basic required courses (eight credits); a foundation elective course (two credits); and a functional elective course (three credits). Courses are to be chosen from the following.

Functional Basics (four required):

BA 6000 – Introduction to Accounting and Financial Reporting: Cr. 2
BA 6005 – Basics of Financial Management: Cr. 2
BA 6015 – Marketing Foundations: Cr. 2
BA 6020 – Contemporary Principles of Management: Cr. 2

Foundation Electives (one required):

BA 6010 – Basics of Business Economics: Cr. 2
BA 6025 – Basics of Production/Operations Management: Cr. 2
BA 6090 – Quantitative Analysis: Theory and Application: Cr. 2

Functional Electives (one required):

BA 7000 – Managerial Accounting: Cr. 3
BA 7020 – Corporate Financial Management: Cr. 3
BA 7040 – Managing Organizational Behavior: Cr. 3
BA 7050 – Marketing Strategy: Cr. 3
BA 7070 – Social Perspectives on the Business Enterprise: Cr.

Information Systems Management (Post-Bachelor's Certificate Program)

The Post-Baccalaureate Certificate in Information Systems Management develops information systems competencies in managing and applying computer technology to analyze, design and implement

ways to increase organizational effectiveness, efficiency and competitiveness to support managerial decision making.

The certificate provides more than a basic knowledge of information systems. Students completing the program achieve competency in information systems terminology, concepts and principles; information systems analysis/design through application and knowledge of current hardware and software; and planning and carrying out system development and management of information systems

Admission Requirements

A bachelor's degree is required for the Post-Baccalaureate Certificate in Information Systems and Management. Any baccalaureate degree from an accredited institution, regardless of major, is acceptable. Because these courses are not technical, this program is available to students with a variety of undergraduate backgrounds.

Students who have received their undergraduate degree from Wayne State University should process a change in their status at the University Registrar's Office to "Post-Baccalaureate". Students who have received an undergraduate degree from another institution must complete the Application of Undergraduate Admission form and request that official transcripts be sent directly to the Office of Undergraduate Admissions.

CERTIFICATE REQUIREMENTS

A minimum of twenty-four credits are required for the certificate: five required courses (fifteen semester credits) and three elective courses (nine semester credits).

Students must complete all courses with a minimum grade 'C' or better, and maintain at least a cumulative 2.5 Grade Point Average (g.p.a.) in order to earn the Post-Baccalaureate Certificate in ISM. All Courses are three credits and all courses are offered online and NO class time is required.

Scheduling: Students may commence the Post-Bachelor's ISM program in any term and should assume at least one year for completion if enrolled on a full-time basis; two years maybe required for part-time registration.

Core Courses (fifteen credits)

ISM 3630 – Business Information Systems: Cr. 3
ISM 5820 – Systems Analysis and Design: Cr. 3
ISM 5860 – Data Communications and Networks: Cr. 3
ISM 5992 – Database systems: Cr. 3
ISM 5994 – Software Tools for Business Applications: Cr. 3

Elective Courses (nine credits)

ISM 4574 – Intro. to Corporate Computer Networks and IT Security: Cr. 3
ISM 5530 – Ethics in Information Technology: Cr. 3
ISM 5560 – Survey of E-commerce: Cr. 3
ISM 5570 – Data Mining: Cr. 3
ISM 6997 – Information Systems Policy and Management: Cr. 3
Total Program Requirements: 24 Credits

Accounting (Post-Bachelor's Certificate)

The post-baccalaureate certificate program in accounting is designed to enable students who already hold a bachelor's degree in business administration or accounting to obtain the required educational background to be licensed as a Certified Public Accountant in Michigan.

Admission: Students must have a bachelor's degree from an accredited institution, with a grade point average of at least 2.0.

Students who have received their undergraduate degree from Wayne State University should process a change in their status at the Registrar's Office to 'Post-Baccalaureate.' Students who have received an undergraduate degree in these areas from another institution must complete the Application for Undergraduate Admission form and request that official transcripts be sent directly to the Office of Admissions.

CERTIFICATE REQUIREMENTS

Candidates for this certificate must successfully complete a minimum of twenty-four credits in course work at Wayne State University following completion of the bachelor's degree, with a cumulative grade point average of not less than 2.0. Of these twenty-four credits, students must complete a minimum of six credits from courses offered by the Department of Accounting. Additionally, a minimum of twelve credits must be from courses offered within the School (Accounting, Finance, Information Systems, Marketing, and Management). Students, who have not completed ACC 3010 and ACC 3020 (or equivalent courses), must complete ACC 3010 and ACC 3020 in addition to the minimum twenty-four credits required for the Certificate.

Each student's *Plan of Work* will be individually designed. Students intending to use this certificate to meet the requirements for licensure as a Certified Public Accountant in Michigan will work with their advisor to ensure that the courses chosen meet the requirements of the licensing body.

Accounting (M.S.A. Program)

Admission (M.S.A.)

Admission to any graduate program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to the M.S.A. program must comply with the following:

Admission to the Master of Science in Accounting (M.S.A.) program is limited to students who demonstrate high promise of success and hold a baccalaureate degree in business administration, a discipline area of business administration, or accounting from regionally accredited institutions. Several measures of probable success that may be considered in the evaluation of an applicant include but are not limited to:

1. Performance on the Graduate Management Admission Test (GMAT); see Graduate Management Admission Test (GMAT), p. 74.
2. Undergraduate grade point averages and the trend of grades earned during undergraduate education.
3. Other relevant factors such as employment and leadership experience.

The M.S. in Accounting Committee is authorized to review the credentials of each applicant. Final approval of the applicant's admission to graduate study in accounting is authorized by the Dean of the Mike Ilitch School of Business or the Dean's designee, upon recommendation of the M.S.A. Committee. Appeals to an admission denial must be made in writing to the Director of Graduate Programs, Mike Ilitch School of Business. A copy of the guidelines for formal appeals is available in the School's Graduate Programs Office, 103 Prentiss.

Before an applicant can be considered for admission, the following material must be timely submitted:

1. an online W.S.U. *Application for Graduate Admission*: <http://www.gradadmissions.wayne.edu>
2. an official transcript from each college or university previously attended by the applicant;
3. an official notification of the applicant's score on the GMAT and, if required, the TOEFL. (For information regarding the GMAT, see Graduate Management Admission Test (GMAT), p. 74.)

Degree Requirements (M.S.A.)

The M.S.A. degree program requires completion of thirty credits in final-program course work with a grade point average of not less than 3.0. Additional foundation coursework may also be required prior to starting the thirty credits of final-program coursework. Degrees are granted upon recommendation of the faculty of the Mike Ilitch School of Business. Consideration is given to both scholastic achievement and the extent to which the candidate has met the standards and requirements of the School. All course work must be completed in accordance with the regulations of the Graduate School and the Mike Ilitch School of Business governing graduate scholarship and degrees; see the sections beginning under Admission, Graduate School, p. 17 and Academic Regulations for the Mike Ilitch School of Business, p. 83, respectively. University policies on transfer of credits from other institutions will apply.

Distribution Requirements, Course (M.S.A.)

The M.S.A. program consists of four course categories, as follows:

Foundation Courses are required pre-professional courses but ones for which credit is not applicable to the M.S.A. degree. Appli-

cants who have already earned a degree in business administration or accounting may usually be able to waive most, if not all, of the foundation course requirements.

Core Courses are seven courses providing in-depth coverage of the body of knowledge associated with studies in accounting. Applicants who have already earned a degree in accounting may be able to waive many of the core courses and substitute accounting electives in their place.

Elective Courses are two additional courses surrounding coverage of the body of knowledge associated with studies in accounting.

Capstone Course: When nearing the conclusion of the M.S. in Accounting program, the degree candidate will take ACC 7998, Seminar in Tax and Accounting Policy.

Foundation Requirements (M.S.A.)

The M.S.A. is an advanced degree. Before progressing to the core courses of the program, the student should possess a solid foundation in accounting as comprised by the following set of three courses:

- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7050 – Intermediate Financial Accounting II: Cr. 3
- BA 7000 – Managerial Accounting: Cr. 3

However, if the applicant's business administration or accounting degree is from a college or university located outside of the United States, some or all of the foundation requirements may not be waived because U.S. generally accepted accounting principles (US GAAP) may not have been studied.

The graduate-level foundation courses (BA 7000, ACC 7040 and 7050) cited above are open only to students who have been formally admitted to a graduate program at Wayne State University. Analogous courses offered at the undergraduate level (as determined by the admission evaluation process) may be taken to satisfy foundation requirements prior to graduate admission. However, once a student has been formally admitted to the M.S.A. program, NO graduate credit will be allowed for subsequent registration in undergraduate courses.

A cumulative grade point average of 3.0 ('B') is required in foundation requirements courses. No individual grade below 'C' (2.0) is acceptable. Students may begin taking Core courses during the semester in which they elect Foundation Requirements, subject to the prerequisite and corequisite requirements of the Core courses.

Core Requirements (M.S.A.)

(Twenty-one Credits)

The following seven courses are required of all students and are prerequisite or corequisite to subsequent/concurrent elective courses. ACC 7300 must be completed within the first nine credits of the program.

CORE REQUIREMENTS

- ACC 7115 – Financial Statement Analysis: Cr. 3
- ACC 7120 – Intro. to Taxation: Individuals: Cr. 3
- ACC 7130 – Intermediate Managerial Accounting: Cr. 3
- ACC 7145 – Accounting Systems: Design and Controls: Cr. 3
- ACC 7180 – Auditing: Cr. 3
- ACC 7300 – Acct. and Tax Research and Professional Communications: Cr. 3
- ACC 7310 – Bus. and Prof. Ethics for Managers and Accountants: Cr. 3

For students who have completed undergraduate or graduate courses equivalent to Core courses within the preceding three years with a grade point average of 3.0 or above, one or more advanced courses in accounting may be substituted for Core courses, at the discretion of the M.S.A. committee

Elective Requirements (M.S.A.)

(Six Credits)

A minimum of two electives chosen from accounting courses offered at the 7000 level are required of all M.S.A. students. A student may begin to take electives once he/she has completed the foundation requirements.

ACCOUNTING ELECTIVES

- ACC 7122 – Advanced Accounting I: Cr. 3
- ACC 7125 – Advanced Accounting II: Cr. 3
- ACC 7148 – ERP Systems and Business Integration: Cr. 3
- ACC 7155 – Forensic Accounting: Cr. 3
- ACC 7165 – Internal Audit I: Cr. 3
- ACC 7168 – Internal Audit II: Cr. 3
- ACC 7170 – International Accounting: Cr. 3
- ACC 7188 – Governmental and Not-for-Profit Accounting: Cr. 3
- ACC 7190 – Advanced Auditing: Cr. 3
- ACC 7192 – Accounting Theory: Cr. 3
- ACC 7320 – Intro. to Taxation: Business Entities: Cr. 3
- ACC 7325 – Advanced Tax Research and IRS Procedures: Cr. 3
- ACC 7335 – Taxation of Corporations and Shareholders II: Cr. 3
- ACC 7340 – Taxation of Pass-through Entities: Cr. 3
- ACC 7400 – Tax of International Bus. and Multinational Trans.: Cr. 3
- ACC 7410 – Tax Accounting Methods and Deferred Income Taxes: Cr. 3
- ACC 7420 – Taxation by State and Local Jurisdictions: Cr. 3
- ACC 7430 – Taxation of Exempt Organizations: Cr. 3
- ACC 7440 – Financial and Estate Planning: Cr. 3
- ACC 7450 – Taxes and Business Strategy: Cr. 3
- ACC 7990 – Internship in Accounting or Tax Practice: Cr. 3
- ACC 7995 – Directed Study in Accounting: Cr. 1-5
- BLW 7210 – Business Law for Entrepreneurs: Cr. 3
- BLW 7220 – Law of Corporate Management and Finance: Cr. 3

Business Electives (zero to nine credits): Students may choose electives from graduate business courses (offered at the 7000 level) based on their professional interests, with prior approval from the M.S. in Accounting Committee.

Capstone Requirement (M.S.A.)

ACC 7998, Seminar in Tax and Accounting Policy, is the capstone course for all M.S.A. degree candidates; it must be elected as part of the final nine credits in the student's program. ACC 7998 provides the opportunity to combine concepts developed by students in their professional and educational experience with economic, social, industrial, administrative, and legislative policy considerations.

Taxation (M.S.T. Program)

Admission (M.S.T.)

Admission to any graduate program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to the M.S.T. program must comply with the following:

Admission to the Master of Science in Taxation (M.S.T.) program is limited to students who demonstrate high promise of success and hold a baccalaureate degree in business administration, a discipline area of business administration, or accounting from regionally accredited institutions. Several measures of probable success that may be considered in the evaluation of an applicant include but are not limited to:

1. Performance on the Graduate Management Admission Test (GMAT); see Graduate Management Admission Test (GMAT), p. 74.
2. Undergraduate grade point averages and the trend of grades earned during undergraduate education.
3. Other relevant factors such as employment and leadership experience.

The M.S.T. Committee is authorized to review the credentials of each applicant. Final approval of the applicant's admission to graduate study in taxation is authorized by the Dean of the Mike Ilitch School of Business or the Dean's designee, upon recommendation of the M.S.T. Committee. Appeals to an admission denial must be made in writing to the Director of the Graduate Programs, Mike Ilitch School of Business. A copy of the Guidelines for formal appeals is available in the School's Graduate Programs Office.

Before an applicant can be considered for admission, the following material must be timely submitted:

1. An online W.S.U. *Application for Graduate Admission*: <http://www.gradadmissions.wayne.edu>
2. an official transcript from each college or university previously attended by the applicant;
3. an official notification of the applicant's score on the GMAT and, if required, the TOEFL. (For information regarding the GMAT, see Graduate Management Admission Test (GMAT), p. 74.)

Degree Requirements (M.S.T.)

The M.S.T. degree program requires completion of thirty credits in final-program course work with a grade point average of not less than 3.0. Additional foundation coursework may also be required prior to starting the thirty credits of final-program coursework. Degrees are granted upon recommendation of the faculty of the Mike Ilitch School of Business. Consideration is given to both scholastic achievement and the extent to which the candidate has met the standards and requirements of the School. All course work must be completed in accordance with the regulations of the Graduate School and the Mike Ilitch School of Business governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the Mike Ilitch School of Business, p. 83, respectively. University policies on transfer of credits from other institutions will apply.

Distribution Requirements, Course (M.S.T.)

The M.S.T. program consists of four course categories, as follows:

Foundation Courses are required pre-professional courses but ones for which credit is not applicable to the M.S.T. degree. Appli-

cants who have already earned a degree in business administration or accounting may usually be able to waive most, if not all, of the foundation courses.

Core Courses are six courses providing in-depth coverage of the body of knowledge associated with studies in taxation and tax policy.

Electives comprise three additional courses providing additional coverage of the body of knowledge associated with studies in taxation and tax policy.

Capstone Course: When nearing the conclusion of the M.S. in Taxation program, the degree candidate will take ACC 7998, Seminar in Tax and Accounting Policy.

Foundation Requirements (M.S.T.)

The M.S. in Taxation is an advanced degree. Before progressing to the core courses of the program, the student should possess a solid foundation in accounting as comprised by the following set of three courses:

- ACC 7040 – Intermediate Financial Accounting I: Cr. 3
- ACC 7050 – Intermediate Financial Accounting II: Cr. 3
- ACC 7120 – Introduction to Taxation: Individuals: Cr. 3

However, if the applicant's business administration or accounting degree is from a college or university located outside of the United States, some or all of the foundation requirements may not be able to be waived as U.S. generally accepted accounting principles (US GAAP) may not have been studied.

The graduate-level foundation courses (ACC 7040, 7050 and 7120) cited above are open only to students who have been formally admitted to a graduate program at Wayne State University. Analogous courses offered at the undergraduate level (as determined by the admission evaluation process) may be taken to satisfy foundation requirements prior to graduate admission. However, once a student has been formally admitted to the M.S.T. program, NO graduate credit will be allowed for subsequent registration in undergraduate courses.

A cumulative grade point average of 3.0 ('B') is required in foundation requirements courses. No individual grade below 'C' (2.0) is acceptable. Students may begin taking Core courses during the semester in which they elect Foundation Requirements, subject to the prerequisite and corequisite requirements of the Core courses

Core Requirements (M.S.T.)

(Eighteen Credits)

The following six courses are required of all students and are prerequisite or corequisite to subsequent/concurrent elective courses. ACC 7300 must be completed within the first nine credits of the program.

CORE REQUIREMENTS

- ACC 7300 – Acct. and Tax Research and Professional Communications: Cr. 3
- ACC 7310 – Business and Prof. Ethics for Managers and Accountants: Cr. 3
- ACC 7320 – Intro. to Taxation: Business Entities: Cr. 3
- ACC 7325 – Advanced Tax Research and IRS Procedures: Cr. 3
- ACC 7335 – Taxation of Corporations and Shareholders II: Cr. 3
- ACC 7340 – Tax of Pass-through Entities: Cr. 3

For students who have completed undergraduate, graduate or law courses equivalent to Core courses, within the preceding three years with a grade point average of 3.0 or above, one or more advanced courses in taxation may be substituted for Core courses, at the discretion of the M.S.T. Committee.

Elective Requirements (M.S.T.)

(Nine Credits)

At least two electives are required of all M.S.T. students. A student may begin to take electives if he/she has completed the foundation requirements. Advanced graduate courses in taxation offered by the Accounting Department may be elected without approval of the student's advisor. Electives outside of the field of taxation, as offered by the Accounting Department, require approval of the advisor; electives from outside the Accounting Department or the Mike Ilitch School of Business must also be approved by the M.S. in Taxation Committee.

A student may elect Law School courses with the approval of his/her advisor and the Director of Graduate Studies of the Law School. Students should be aware that registration for Law School courses takes place earlier than for the Mike Ilitch School of Business and the rest of the University, and that the Law School calendar and the regular University calendar also differ. Students should consult the Law School regarding courses, schedules, and calendar; see Calendar, Law School: 2016 - 2018, p. 274.

Capstone Requirement (M.S.T.)

ACC 7998, Seminar in Tax and Accounting Policy, is the capstone course for all M.S.T. degree candidates; it must be elected as part of the final nine credits in the student's program, and only after completion of at least four Core courses. ACC 7998 provides the opportunity to combine concepts developed by students in their professional and educational experience with economic, social, industrial, administrative, and legislative policy considerations.

Business Administration (Ph.D. Program)

Admission (Ph.D.), p. 82

Business Administration Courses (BA), p. 91

Degree Requirements (Ph.D.), p. 82

The Doctor of Philosophy in Business prepares persons interested in careers in research and university teaching. The core goals for the program are the creation of new knowledge through research and excellence in teaching. The Ph.D. program offers specialized tracks in finance, management, and marketing. Detailed information about the Mike Ilitch School of Business Ph.D. may be found at: <http://www.business.wayne.edu>.

Admission (Ph.D.)

Admission to any graduate program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to the Ph.D. program must comply with the following:

- 1) hold a bachelor's degree with a grade point average of at least 3.0, or 3.5 upper division (junior or senior), or a graduate degree g.p.a. of 3.5.;
- 2) score at least a 600 on the Graduate Management Admissions Test. (Attainment of satisfactory GMAT score and GPA does not guarantee admission.);
- 3) provide at least three letters of recommendation from officials or faculty at the institution(s) most recently attended, or by a recent employer of the applicant;
- 4) submit a brief essay (not to exceed four pages) by the applicant on his or her career objectives.
- 5) Applicants from other countries must demonstrate English proficiency by obtaining at least a 550/213/79 on the Test of English as a Foreign Language.

Degree Requirements (Ph.D.)

Ph.D. students in Business Administration must successfully complete at least ninety credits of graduate study, consisting of at least sixty credits of course work and thirty credits in dissertation research. The program must include at least thirty credits (excluding dissertation direction) in courses numbered 7000 or above, or as approved by the student's advisor and the Ph.D. program director. All course work must be completed in accordance with the regulations of the Graduate School and the Mike Ilitch School of Business governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the Mike Ilitch School of Business, p. 83, respectively.

All Business School Ph.D. students must complete:

BA 8777 – Professional Development Seminar: Ph.D.: Cr. 1-3

BA 8900 – Development of Effective Research Programs in Business: Cr. 3

All Finance Track students must complete:

BA 8120 – Theory of Finance: Cr. 3

BA 8121 – Seminar in Corporate Finance: Cr. 3

BA 8122 – Empirical Methods in Finance: Cr. 3

BA 8123 – Seminar in Corporate Governance: Cr. 3

BA 8124 – Seminar in Asset Pricing: Cr. 3

All Management Track students must complete:

BA 8220 – Seminar in Organizational Behavior: Cr. 3

BA 8221 – Seminar in Strategic Management: Cr. 3

BA 8420 – Seminar in Organizational Theory: Cr. 3

All Marketing Track students must complete:

- BA 8050 – Seminar in Marketing Theory: Cr. 3
- BA 8054 – Seminar in Marketing Strategy: Cr. 3
- BA 8056 – Special Topics Seminar in Marketing: Cr. 3
- BA 8058 – Advanced Topics in Consumer Behavior: Cr. 3

Upon completion of fifty credits of the course work, students must take written and oral qualifying examinations. The qualifying examinations require of students critical analysis of the state of research and knowledge in their substantive areas. In addition, they must demonstrate the reflective presentation of innovations in perspectives, theory, knowledge, and research design, methods and strategies that will advance practice and create new knowledge in their chosen areas.

Students advance to Ph.D. Candidacy after successful completion of both written and oral qualifying exams. Ph.D. Candidacy begins the dissertation preparation phase of the degree. Four consecutive academic-year semesters of registration as a degree candidate are required during the preparation of the dissertation. The thirty-credit dissertation registration requirement is fulfilled by registering for courses BA 9991, 9992, 9993, 9994 (Doctoral Research and Direction I, II, III, IV, respectively), in consecutive academic year semesters.

Students should consult Graduate School regulations governing doctoral study, see Doctor of Philosophy Degrees (Ph.D.), p. 38. All course work must be completed in accordance with the regulations of the Graduate School and the Mike Ilitch School of Business governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the Mike Ilitch School of Business, p. 83, respectively.

Academic Regulations for the Mike Ilitch School of Business

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the Mike Ilitch School of Business. Graduate students are advised that, in addition to the policies, procedures, and rules specified by the Mike Ilitch School of Business, other regulations and requirements of Wayne State University's Graduate School may apply. See sections Records and Registration, p. 29 and Theses, Master's, p. 37 of this bulletin.

Standing, Academic

Students who have been admitted to the Graduate Program on a 'qualified' or conditional basis are expected to remove that status by the completion of the first twelve credits in course work with a minimum 3.0 grade point average. Failure to do so will result in dismissal from the program.

Students admitted to regular status or those who have attained regular status following a 'qualified' admission, will be given an academic warning at any time their graduate grade point average falls below 3.0. After an academic warning, students will be permitted nine credits to restore their cumulative grade point average to a 3.0 level. Failure to do so within this credit limit will result in dismissal from the program. The second (or subsequent) time(s) a student is placed on probation, he or she is subject to immediate dismissal from the Mike Ilitch School of Business.

Advisors

No credit will be allowed for concentration courses taken below the 7000 level or courses taken outside of the Mike Ilitch School of Business without prior written approval of the Graduate Director.

Students may not modify core course requirements without approval of the Graduate Director.

The Graduate Director retains final authority for the approval of all concentration courses.

For advising, students should contact the Graduate Programs Office at 313-577-4511.

AGRADE – Accelerated Graduate Enrollment

The Mike Ilitch School of Business has established an accelerated combined undergraduate and graduate program ('AGRADE') whereby qualified students in the Mike Ilitch School of Business may enroll simultaneously in undergraduate and graduate courses of the School. A maximum of twelve credits may be applied towards both undergraduate and graduate degrees in a student's major field if the major department is an AGRADE participant. Those who elect the 'AGRADE' program may expect to complete the Bachelor's and Master's degrees in five years of full-time study.

Courses Approved for AGRADE:

Take no more than four courses or 12 credits from any one of the following program areas.

FINANCE

- FIN 7000 – Applied Financial Analysis: Cr. 3
- FIN 7220 – Advance Managerial Finance: Cr. 3
- FIN 7230 – Investment Policies: Cr. 3
- FIN 7280 – Entrepreneurial Finance and Venture Capital: Cr. 3

FIN 7290 – Topics in Finance: Cr. 3
FIN 7870 – International Finance: Cr. 3

GLOBAL SUPPLY CHAIN MANAGEMENT

GSC 7620 – Global Supply Chain Management: Cr. 3
GSC 7650 – Strategic Procurement: Cr. 3
GSC 7670 – Special Topics in Supply Chain Management: Cr. 3
GSC 7991 – Principles of Quality Management: Cr. 3
GSC 7992 – Methods of Quality Management: Cr. 3

INFORMATION SYSTEMS MANAGEMENT

ISM 7510 – Database Management: Cr. 3
ISM 7520 – Information Systems Design: Cr. 3
ISM 7530 – Societal and Ethical Issues in the Information Age: Cr. 3
ISM 7560 – Survey of E-Commerce: Cr. 3
ISM 7570 – Data Mining: Cr. 3
ISM 7575 – Corporate Computer Networks and IT Security: Cr. 3
ISM 7900 – Project Management: Cr. 3
ISM 7994 – Digital Content Creation: Cr. 3

MANAGEMENT

MGT 7640 – Management of Human Resources: Cr. 3
MGT 7650 – Strategic Human Resource Management: Cr. 3
MGT 7660 – Entrepreneurial Management: Cr. 3
MGT 7750 – Labor Relations and Collective Bargaining: Cr. 3
MGT 7900 – Project Management: Cr. 3
MGT 8000 – Seminar in Management: Cr. 3

MARKETING

MKT 7150 – Global Automotive Marketing Strategy: Cr. 3
MKT 7430 – Advertising Management: Cr. 3
MKT 7450 – Business Research and Methodology: Cr. 3
MKT 7470 – Consumer and Industrial Buying Behavior: Cr. 3
MKT 7500 – International Marketing Strategy: Cr. 3
MKT 7700 – Management of Retail Enterprises: Cr. 3

Eligibility: 'AGRADE' applicants must have an overall g.p.a. of 3.5 through their junior year. Applicants are also expected to have performed at a superior level in their major, as determined by the major department and reflected in a g.p.a. in the major of at least 3.6 at the time of application.

Application: A student seeking 'AGRADE' status should present to the Mike Ilitch School of Business Graduate Programs Office all of the materials which that department requires for normal graduate admission, EXCEPT for the GMAT or Graduate Record Examination (GRE). Specific graduate admission requirements can be found in this bulletin or obtained from the Graduate Programs Office of the Mike Ilitch School of Business at (313) 577-4511.

The earliest date by which a student may apply for the 'AGRADE' program is during the semester in which he/she completes ninety credits toward the undergraduate degree.

AGRADE Credits: Students may elect a minimum of three and a maximum of twelve 'AGRADE' credits. These will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, 'AGRADE' credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program.

For more details about the 'AGRADE' program, contact the Undergraduate Student Services office in Room 200 of the Prentis Building or by calling (313) 577-4505, or contact the Graduate Programs Office at (313) 577-4511 or email gradbusiness@wayne.edu

Application for Degree

Prior to the semester in which a student intends to graduate, an online degree application must be filed with the University Records

Office, 5057 Woodward. Applications and instructions are available on the University website (<http://www.wayne.edu>).

Attendance Policy

Regular attendance is a necessary condition for success in university study. Course content includes classroom lecture and discussion, certain aspects of which may not be covered in examinations, quizzes, term papers, or homework assignments. Each Instructor will announce his or her attendance standards at the beginning of the term.

All candidates for degrees are expected to be present at commencement.

Conduct

Each student is subject to the Student Due Process statute governing student activities and student behavior. Furthermore, it is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity includes the requirement that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. For example, a student should not falsely claim the work of another as one's own, or misrepresent him/herself so that the measures of one's academic performance do not reflect his/her own work or personal knowledge. Assignments submitted for any class are expected to be original, *not* resubmissions of work submitted in a previous or concurrent class.

If there are reasonable grounds to believe that a student has disregarded the regulations or student responsibilities, he or she may be disciplined. Such discipline may include suspension or dismissal, but no dismissal will be directed without reasonable opportunity for an appropriate hearing, as provided in the Student Due Process statute.

See University Code of Conduct online at <http://doso.wayne.edu/assets/codeofconduct.pdf> or the Mike Ilitch School of Business Code of Ethics at <https://business.wayne.edu/resources/sba-code-of-ethics.pdf>

Course Level Requirement

M.B.A., M.S.A. and M.S.T. students are required to take all core and concentration/elective course work in classes reserved exclusively for graduate students. At Wayne State University, these classes are numbered at the 7000 level or above. **A graduate student must obtain the specific written approval of the Graduate Officer prior to registering for a course that is not reserved exclusively for graduate students. Credit will not be applicable to the degree if prior approval has not been obtained.**

Course Sequencing

The M.B.A., M.S.A. and M.S.T. curricula have been designed to provide logical sequencing of subject matter. This means that students must observe all course prerequisites and limitations, and must complete *all* required foundation courses prior to beginning any core or concentration/elective courses.

The Strategic Management course (BA 7080) is an integrative capstone course that may *only* be taken in the last twelve credits, and *only* after completion of the other five core courses in the M.B.A. curriculum.

Similarly, the Seminar in Tax and Accounting Policy (ACC 7998) must be elected as part of the final nine credits in the M.S.A. and M.S.T. student's program.

Students who do not adhere to these regulations will be administratively withdrawn from the out-of-sequence course(s) and may not be allowed to register for further course work.

Exception: A student taking his/her last foundation course(s) may simultaneously enroll for one or more core courses, if the relevant foundation course or prerequisite courses for the core course(s) has been satisfactorily completed.

Course Repetition Policy

M.B.A., M.S.A. and M.S.T. students may not routinely repeat courses taken as part of their degree program requirements. While the repetition of certain required courses may be necessary if failing or unsatisfactory grades are earned, this should not be done without first consulting the Graduate Programs Office at 313-577-4511.

Upon petition by the student, the Graduate Committee may authorize the repetition of *two* graduate courses during a student's M.B.A., M.S.A. or M.S.T. program, whereby the grade earned in the initial course attempt is deleted from the grade point total and grade point average calculations.

Directed Study

A student can apply up to three credits of directed study course work to a Mike Ilitch School of Business degree. Credit allowances (1-3) are predicated on the amount of time and effort to be spent in the study. Prior to enrollment, students must have completed all core courses in their respective graduate program (other than the capstone course) with a passing grade. If enrolled in the Master of Science in Accounting or the Master of Science in Taxation programs, students must have completed at least twelve credits of graduate accounting courses or obtained the approval of the Chairperson of the Department of Accounting.

Enrollment Eligibility

Graduate-level courses offered by the Mike Ilitch School of Business are open only to students who have been formally admitted to a Wayne State University graduate program or admitted as a graduate guest student. Students having undergraduate, post-bachelor, or any non-matriculated status are *not* eligible to take graduate courses. Graduate business courses include all courses numbered 6000-6100 and 7000 and above. All electives must be taken in accordance with an approved *Plan of Work*.

Grade Appeal Procedure

Students disputing a final grade should first contact the instructor of the course informally. Should the dispute remain unresolved, the student may initiate a formal appeal. A copy of the Mike Ilitch School of Business's grade appeal procedure is available in the Graduate Programs Office, 103 Prentis Building, and on the School's website (<http://www.business.wayne.edu>).

Non-grade-related grievances should be brought directly to the appropriate departmental chairperson or to the Graduate Programs Office. Additionally, the University Ombudsperson (see Ombuds Office, p. 52) is available to all students for assistance in the resolution of University-related problems.

Internships

Graduate Students can earn up to three credits in internships (ACC 7990, FIN 7890, GSC 7890, ISM 7890, MGT 7895, or MKT 7890) offered as S or U grades only, which can be applied toward their elective courses. In order to satisfy requirements for these courses, the student is expected to perform assigned tasks and responsibilities in a professional manner under the supervision of an employer for a minimum of 160 hours during the semester, and abide by the rules and regulations established by the employer and expected of all employees. The student commitment is for the entire semester even if the 160 hours have been completed prior to the end of the semester. Further, to be eligible, students must have completed all core

courses in the respective graduate program (other than the capstone course) with a passing grade. If enrolled in the Master of Science in Accounting or the Master of Science in Taxation programs, students must complete at least twelve credits of graduate accounting courses or obtain the approval of the Chair of the Department of Accounting in order to enroll in an internship.

'Incomplete' Marks

The mark of 'I' which is not converted to a letter grade within one year from the time it was received will be changed to an 'F' (failure).

Maximum Credit Load

A student employed full-time will normally not register for more than six to nine graduate credits. Graduate assistants are required to register for at least eight credits each semester.

Online Courses

The Mike Ilitch School of Business offers online sections of some courses available to Traditional M.B.A. students. Students who enroll in online sections of any M.B.A. course should anticipate that, at the discretion of the instructor, they may be required to attend an in-class session for the final examination in the course.

Passed-Not Passed Registration

Graduate students may *not* take graduate program requirements on a *passed-not passed* basis.

Plan of Work

All course work must be in accordance with an approved Plan of Work on file in the Graduate Programs Office, 103 Prentis Building. No credit will be granted for graduate courses in business administration taken at Wayne State University prior to admission to the graduate program in the Mike Ilitch School of Business. **Only the Graduate Committee is authorized to approve changes affecting a student's foundation requirements or core courses.**

Time Limitation for Program Completion

Students have a six-year time limit to complete all 7000-level requirements. The six-year period begins at the start of the semester during which the student takes his/her first 7000-level courses. Students who expect to exceed the time limitation must file a written request for an extension with the Graduate Programs Office. The School reserves the right to revalidate credits which are over-age. In revalidation cases, the Graduate Committee will set a terminal date for completion of all degree requirements, including such additional requirements as may be prescribed to revalidate the over-age credits.

Transfer of Core and Concentration/Elective Courses

Graduate transfer credit for core and concentration/elective courses from either a Wayne State University graduate program or a graduate program at another institution is not routinely granted. Students with a non-business undergraduate degree may only petition to transfer credit from an AACSB accredited M.B.A. program. A petition for transfer credit must be initiated by the student in the form of a letter to the Graduate Committee, prior to the completion of the first twelve credits in graduate course work. To be eligible for consideration for transfer of credit, the following conditions must be satisfied:

1. The course must have been taken at an AACSB accredited college or university;

2. The course must have been taken in a class reserved exclusively for graduate students;
3. A letter grade of 'B' (3.0) or higher must have been awarded; passed-not passed credit is not acceptable. A letter grade of 'B-minus' or less is not acceptable.
4. The course must be relevant to the student's Plan of Work as approved by the Graduate Committee.
5. The course may not be more than six years old at the time of graduation.
6. The course cannot have provided credit toward a prior degree.

A maximum of six semester credits (normally two courses) may be considered for transfer credit. In addition to evidence regarding the above six conditions, the student must submit additional supporting materials concerning any proposed transfer course. Course syllabi, examinations, class notes, texts, and the like constitute such materials.

Waiver of Course Prerequisites

Requests for waiver of course prerequisites are not routinely granted. Waiver requests must be made in writing to the Graduate Committee and must include full documentation of the case. No waiver will be granted if the supporting documentation consists solely of professional experience proposed in lieu of course work.

Waiver of Foundation Courses

Students are allowed to waive foundation course requirements (except BA 6005) based on equivalent course work taken at a regionally-accredited college or university. A grade of 'C' (2.0 g.p.a.) or above must have been earned in this course work. Normally these waivers are granted after review of the student's transcript(s). Students who believe additional waivers are warranted must submit evidence of course equivalency, including course syllabi, class notes, and textbooks. Waivers will not be granted on the basis of professional experience.

Withdrawals from Class

Students should consult the instructor as to his/her policy on withdrawal from class, as well as Drop/Add procedures, see Dropping and Adding Courses, p. 29, for the University policy on withdrawal. Withdrawal and tuition refund policies are also included in the University Schedule of Classes, and located at <http://regwayne.edu/students/policies.php>.

Financial Assistance

Scholarship Awards

The scholarships listed below give preference to students in the Mike Ilitch School of Business. The Mike Ilitch School of Business, through its scholarship committee, a departmental committee, or a joint committee of the School and an external organization can be directly involved in selecting the recipients of certain scholarship awards. The School is also asked to nominate student candidates for certain other scholarship awards though it may not participate in the selection process.

School of Business Administration Alumni Association Endowed Scholarship. Established to recognize scholastic achievement, to encourage continued progress, and to provide assistance to students in financing their education at Wayne State University.

Stanton P. Bockneck Memorial Scholarship. Designated for students demonstrating high academic achievement in accounting.

Lawrence and Charlyne Braun Endowed Scholarship. Established to recognize students who have displayed excellence in leadership, character and scholastic achievement.

Sam and Leonard Fink Memorial Scholarship. Awarded to business administration students demonstrating high academic achievement.

Raymond M. Genick Endowed Scholarship in Small Business Management/ Entrepreneurship. Awarded to an undergraduate or graduate student interested in small business management/ entrepreneurship who exhibits excellence in scholastic and leadership efforts.

Charles Hagler Scholarship in Public Relations. Designated for students demonstrating high academic achievement with a career interest in public relations.

Jack A. Hamm and Bessie I. Hamm Endowed Scholarship. Established to assist men and women who would otherwise be unable to attend the University due to the lack of necessary funds.

Norris and Vivlore Hitchman Endowed Scholarship and Mentorship Fund: Established to recognize scholastic achievement of students demonstrating high academic achievement.

Wilfred Kean Memorial Scholarship. Established in 1989 in memory of alumnus Wilfred Kean. Designated for a student enrolled in evening classes in the Mike Ilitch School of Business.

Bruce E. Mullican Memorial Scholarship. Established in 1984 in memory of M.B.A. alumnus Bruce E. Mullican. Designated for students with demonstrated interest and involvement in small business management.

Marie L. Nash Memorial Endowed Scholarship. Recognizes scholastic achievement of female graduate students in the Mike Ilitch School of Business.

Brian A. Sturtz Annual Scholarship Fund. Established to recognize scholastic achievement, to encourage continued progress, and to provide assistance to business students in financing their business education.

Assistantships, Graduate

A limited number of graduate research assistantships are available. For further information the student should write to the department chairperson in his/her area of interest, or to the Graduate Programs Office, Mike Ilitch School of Business, Wayne State University, Detroit, Michigan 48202.

Financial Assistance, Additional

Several assistance programs are administered by the Office of Financial Aid and by the Graduate School (6305 Maccabees Building; 313-577-2172). The Office of Financial Aid (Welcome Center; 313-577-3378) assists students enrolled in degree programs on at least a half-time basis, who do not have sufficient personal or family financial resources to attend the University. See the section on graduate financial assistance, see Financial Assistance, Graduate, p. 26.

The following opportunities may be of special interest to students in the Mike Ilitch School of Business:

Graduate Professional Scholarships

The Graduate School sponsors one competition for Graduate-Professional Scholarships for each academic year. Scholarships cover tuition for the full academic year (fall and winter terms) for qualified applicants pursuing graduate (master's or Ph.D.) or advanced professional (Ed.D., M.S.W., Pharm.D.) degrees in all University programs. Awards are available to both full-time and part-time students. Students receiving a full-time award receive tuition coverage up to twelve graduate credits per term and are required to enroll in a minimum of eight graduate credits per term. Students receiving a part-time scholarship receive up to six graduate credits per term.

Students holding graduate teaching or research assistantships, or other tuition-paying fellowships, internships, traineeships or scholarships, and salaried or full-time employees of Wayne State University are not eligible for these scholarships. Additional information and application forms are available from the Scholarships and Fellowships Office of the Graduate School.

Support Services and Organizations

Graduate Programs Office

The Graduate Programs Office is responsible for credential evaluation, admissions processing, advising, and graduation certification of business administration graduate students. In addition, personnel prepare and distribute the Plan of Work for students enrolled in graduate programs.

Any student seeking academic, vocational or personal counseling should make an appointment to see a member of the counseling staff: 313-577-4511.

Career Planning and Placement

The Mike Ilitch School of Business has its own placement department that is part of the Graduate Programs Office. The office offers students assistance in making informed career decisions and securing employment. Individual and group assistance is available on career planning, resume writing, interview techniques and business etiquette. For more information, call 313-577-4781.

Organizational and Industrial Competitiveness, Institute for (IOIC)

IOIC provides companies with current information about the elements of organizational competitiveness; fosters interaction among executives, policy makers and academics; and increases the exposure of students to the opportunities and challenges confronting organizations. The Institute facilitates and supports research to assist companies in gaining and sustaining a competitive advantage. For further information, call 313-577-4501.

Canada - U.S. Border Policy Institute

The Institute studies issues related to the Canada - U.S. border, security, trade and transportation. The Institute holds seminars and provides training on border issues. For further information, call 313-577-4525.

Computing Resources

The Mike Ilitch School of Business is committed to providing Business School students with access to state-of-the-art computing and support. The school has an extensive array of computer equipment and software available for student use including three computing laboratories, one of which serves as a student walk-in facility and the other two laboratories are designated for classroom usage. The Student Walk-In Laboratory is reserved for business students only.

All the machines have current operating systems, with access to thirty different software packages, Internet, email system, the University mainframe and local area network financial datasets such as CRSP and Compustat. Students have access to numerous databases on-campus and off-campus through the library information network. Laboratory Staff is on hand to answer questions on various software packages.

In addition to the Walk-In computer laboratories in the School that are open five days a week, students have twenty-four-hour access to the walk-in laboratory located in the David Adamany Undergraduate Library on the main campus. Additional computing facilities are also available at main campus and extension center locations.

The University has also set up wireless access points for the students on main campus allowing students the ability to use laptops

and PDAs to access the library resources in classrooms or in common areas.

Student Organizations

Association of Latino Professionals in Finance and Accounting

The Association of Latino Professionals in Finance and Accounting (ALPFA) is the largest professional business organization devoted to Latino professionals and students. With over 19,000 members nationwide, the association seeks to enhance opportunities for Latinos by building leadership and career skills through promoting professional growth, integrity, culture, relationship building, service, inclusiveness, and teamwork.

American Advertising Federation

The American Advertising Federation is a national advertising trade association headquartered in Washington, D.C. It has more than 8,000 student members in 226 college chapters across the United States. The WSU chapter participates in the National Student Advertising Competition (developing a fully integrated marketing communications program for a national advertiser), a variety of internship programs, and Alpha Delta Sigma (national advertising honorary society).

American Marketing Association

The American Marketing Association (AMA) is a professional organization dedicated to the advancement of the science of marketing. Collegiate chapters promote professionalism and practical education for marketing students through exposure to, and assistance from, practitioners of the discipline. The AMA is an excellent resource for anyone involved in business, marketing, advertising and public relations. All students are welcome to join.

Association for Information Systems

The Association for Information Systems (AIS) is a worldwide organization devoted to education and research. The Wayne State chapter brings leading practitioners to campus, sponsors information sessions on new technologies, links students to local professionals and organizations in information systems, and much more. Membership in the Wayne State student chapter of AIS is open to any Wayne State student, undergraduate or graduate, with an interest in information systems.

Beta Gamma Sigma

Beta Gamma Sigma is the national honor society for students in business administration. The Wayne State chapter was installed in national membership in March 1979. Beta Gamma Sigma is the only scholastic honor society recognized by the American Assembly of Collegiate Schools of Business, the major accrediting body for schools of business administration. Election to membership in this honor society is the highest scholastic honor that a student in business administration can achieve. To be eligible for membership, students must rank in the upper five percent of their junior class, or the upper ten percent of their senior class, or rank in the upper twenty percent of those receiving master's degrees. Membership is by invitation only.

Beta Alpha Psi

Beta Alpha Pi is a national honorary organization for accounting, finance and information systems students. It encourages and promotes networking opportunities through speakers from various firms, special projects, and community service. They also provide free tutoring for introductory accounting courses.

Business Student Senate

The Business Student Senate is the official student government body of the Mike Ilitch School of Business and is composed of two representatives from each recognized Business Administration student organization, at-large members elected from the student body, Student Council representatives, other students appointed by the Dean,

the faculty or School advisor ex officio, and the Dean of the School ex officio. The Business Student Senate's mission is to facilitate interaction between the local business community, business school organizations, and the students and faculty of the Wayne State Mike Ilitch School of Business. The Senate helps develop business students to be civic leaders and contributors in the advancement of the field of business.

Delta Sigma Pi

Delta Sigma Pi is an international professional fraternity in business administration, organized a local chapter at Wayne State University in 1949. The Wayne State Chapter seeks to enhance the educational, social, and professional experiences of its members through association with other students, faculty, and members of the professional business community.

Financial Management Association

The Financial Management Association (FMA) provides its members with a better understanding of the field of finance and develops relationships with professionals in the Detroit metropolitan area. The Wayne State chapter of the FMA currently works with the National Investor Relations Institute, the Society of Financial Analysts and the Detroit Economic Club. All majors are welcome to join, however enrollment in a finance degree program is encouraged.

International Business Association (IBA)

This association was formed to promote an understanding of international business practices through programs and information dissemination for students. The organization aims to establish interaction between business students and the international business community.

National Association of Black Accountants (NABA)

This association is a professional organization that sponsors speaking events and other services to its members and the community.

Global Supply Chain Management Student Association

This association promotes an understanding of supply chain management, and is involved with student interaction, industry speakers, case competitions, etc.

Society for Human Resource Management

A global HR professional organization. SHRM student chapters focus on helping students gain real-world experience through connections with business professionals.

Additional information regarding specific student organizations can be obtained from the Mike Ilitch School of Business Student Senate Office (313-577-4783), or the University Student Center and Program Activities Office (313-577-3444).

Accounting Courses (ACC)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7040 Intermediate Financial Accounting I. Cr. 3

No credit after ACC 5100 and ACC 5110. Prereq: BA 6000 or undergrad. equiv. Study of accounting theory and financial statement presentation, underlying assets and income determination at an intermediate level of analysis. Topics include cash and receivables, marketable securities, inventories, property and intangibles. (S,F)

7050 Intermediate Financial Accounting II. Cr. 3

Prereq: ACC 7040 or undergrad. equiv. Continuation of accounting theory and financial statement presentation, underlying liabilities, and shareholder equity at an intermediate level of analysis. Topics include investments, accounting for leases, pensions, income taxes, disclosures and cash flow. (F,W)

7100 Financial Accounting for Managers. Cr. 3

Prereq: BA 7000. No credit for students who have taken ACC 5100 and ACC 5110 or undergraduate equiv. financial accounting courses. No credit for MSA or MST students. Financial accounting theories, principles and standards; interaction between financial accounting concepts and management decisions. (I)

7115 Financial Statement Analysis. Cr. 3

Prereq: ACC 7050 or undergrad. equiv. Development of ability to extract and interpret information reported in financial statements in order to evaluate the operating performance and financial status of a firm. (I)

7120 (ACC 5170) Introduction to Taxation: Individuals. Cr. 3

Prereq: admission to a graduate program. No credit after ACC 5170 or undergrad. equiv. Introduction to taxation, tax research, and tax planning. Fundamental elements of individual taxation; how individuals and business owners benefit from an understanding of tax law. (F,S)

7122 (ACC 5120) Advanced Accounting I. Cr. 3

No credit after ACC 5120 or other undergrad. equiv. course. Prereq: ACC 7050 or ACC 5115 or other undergraduate equiv. course. Theory and practical applications of accounting for consolidation and combination of business entities and accounting for foreign currency transactions and interim and segment reporting. (F)

7125 Advanced Accounting II. Cr. 3

Prereq: ACC 7122 or ACC 5120 or other undergrad. equiv. course. Theory and practical applications of accounting for derivatives, hedging transactions, and corporate bankruptcy reorganizations and liquidations; also includes accounting for partnerships and SEC reporting requirements. (I)

7130 Intermediate Managerial Accounting. Cr. 3

Prereq: BA 7000. No credit after ACC 5160 or undergrad. equiv. Building on managerial accounting skills mastered in BA 7000, this course examines accounting and control issues and the use of information in the decision-making process from a managerial perspective, through the study of cases. (F,W)

7145 Accounting Systems: Design and Controls. Cr. 3

Prereq: ACC 7040 or ACC 5100, or equiv. No credit after ACC 5130 or equiv. Implementation of accounting systems in the computer-intensive business environment; methods for developing and docu-

menting Accounting Information Systems (AIS); evaluation of controls; work with accounting software package. (F,W)

7148 ERP Systems and Business Integration. Cr. 3

Prereq: BA 7000 and ACC 7145, or ISM 7520, or undergrad. equivs. Enterprise Planning (ERP) systems are the primary software packages for accounting, operational, and managerial activities of organizations. How ERP systems integrate and coordinate business processes and the management of the organization. Extensive hands-on use of popular software packages for key business activities such as sales, procurement, and production. Material Fee as indicated in Schedule of Classes. (Y)

7155 Forensic Accounting. Cr. 3

Prereq: BA 6000 or equiv. and admission to graduate program. Accounting and legal fundamentals of forensic accounting. Topics include tax and financial statement fraud, information security, and forensic accounting applications in such cases as bankruptcy, identity theft, and organized crime and terrorism investigations. (Y)

7165 Internal Audit I. Cr. 3

Prereq: BA 6000; and BA 7000 or undergrad. equivs. Theory of internal audit; the context within which internal auditing functions; its relation to the external audit and the audit committee. (Y)

7168 Internal Audit II. Cr. 3

Prereq: ACC 7165. Continued study of principles, theory and standards of internal auditing with emphasis on practical application; includes risk assessment and management, internal controls, corporate governance, planning and execution, report writing and ethics. (Y)

7170 International Accounting. Cr. 3

Prereq: ACC 7050 or undergrad. equiv. Issues in international business environment: currency translations; consolidated statements for multinational corporations, inflation accounting; other issues. (Y)

7180 Auditing. Cr. 3

Prereq: ACC 7050 or undergrad. equiv. Principles and procedures of internal and external auditing; statistical sampling and other modern auditing techniques; professional standards and responsibilities of the auditor. (F,W)

7188 (ACC 5180) Governmental and Not-for-Profit Accounting. Cr. 3

Prereq: ACC 7050 or undergrad. equiv. No credit after ACC 5180 or undergrad. equiv. Theory and practical applications of accounting for governmental and not-for-profit organizations, and how they differ from for-profit entities. Technical accounting issues and management and regulatory issues for both state and local governments and for other governmental and non-governmental not-for-profit entities. (T)

7190 Advanced Auditing. Cr. 3

Prereq: ACC 7180 or equiv. Advanced principles and procedures to perform financial audits; case studies of emerging auditing techniques and methods to detect fraud; application of advanced statistical sampling techniques; analysis of auditor's role in society. (S)

7192 Accounting Theory. Cr. 3

Prereq: ACC 7180; or undergrad. accounting major;. Models, hypotheses, and concepts that form the foundation for the development of accounting theories and principles. (I)

7280 Accounting Data Analytics. Cr. 3

Prereq: BA 7000. Introduces concepts, techniques, and software applications used to analyze accounting and related data to support financial decision-making and planning. These data are generated both within and outside the organization. (F,W)

7300 Accounting and Tax Research and Professional Communications. Cr. 3

Prereq: BA 6000 and BA 7000 or undergraduate equivs.; ACC 7120 or undergrad. equiv, or ACC 7120 as coreq. Course must be com-

pleted within first twelve credits of the M.S.A. and/or M.S.T. programs. Methodology of accounting and tax research, including computer-assisted research and the communication of argument and conclusions. Sources and roles of legislative, executive, judicial and professional bodies in creating, interpreting and enforcing policies and practices. Commonly-used research databases studied through cases. (Y)

7310 Business and Professional Ethics for Managers and Accountants. Cr. 3

Prereq: admission to a graduate program. Laws, regulations and professional codes of conduct as reflection of expectations of corporate stakeholders regarding the ethics of accountants and managers. Significance of integrity, independence, and reputation in light of these rules. (Y)

7320 (ACC 5270) Introduction to Taxation: Business Entities. Cr. 3

Prereq: ACC 7120 or undergraduate equiv. course. Builds on basic U.S. tax concepts learned in ACC 5170/ACC 7120. Taxation of corporations, S corporations, partnerships, estates and trusts. Accounting for income taxes on financial statements, taxation of corporate reorganizations and liquidations, basic multi-state and multi-national taxation principles, and transfer taxes and wealth planning. (F,W)

7325 Advanced Tax Research and IRS Procedures. Cr. 3

Prereq: ACC 7300 and ACC 7320. Builds on research skills developed in ACC 7300 focusing on tax research methodology, writing and citation; role of legal authorities in taxation; IRS practices and procedures. (W)

7330 Taxation of Corporations and Shareholders I. Cr. 3

Prereq: ACC 7320 and 7300. Advanced taxation issues related to the formation of corporations, their operation, treatment of corporate distributions, liquidations or dissolutions and the tax effects on the corporations and their shareholders. (W)

7335 Taxation of Corporations and Shareholders II. Cr. 3

Prereq: ACC 7300 and ACC 7320. Advanced taxation issues related to consolidated tax returns; corporate acquisitions, mergers, divestitures, and reorganizations; survival of tax attributes; accounting for uncertainty in income taxes; other advanced tax topics. (F)

7340 Taxation of Pass-Through Entities. Cr. 3

Prereq: ACC 7300 and ACC 7320. Tax rules governing formation, operation, and dissolution of partnerships, S corporations, and limited liability companies; aggregate and entity theories; distributions, basis adjustments, dispositions, and other related tax issues. (F)

7400 Taxation of International Business and Multinational Transactions. Cr. 3

Prereq: ACC 7300 and 7320. Taxation of U.S. persons investing or doing business outside the United States. Foreign tax credit, sourcing rules, controlled foreign corporation and related tax issues, transfer pricing issues, and overview of tax issues related to non-U.S. persons doing business in the United States. (F)

7410 Tax Accounting Methods and Accounting for Income Taxes. Cr. 3

Prereq: BA 6000 and ACC 7120 or undergrad. equiv. Tax accounting issues faced by business entities and their tax advisers, including tax accounting methods and periods, inventory methods, tax accrual workpapers, tax uncertainties and deferred taxes. (Y)

7420 Taxation by State and Local Jurisdictions. Cr. 3

Prereq: ACC 7120 or equiv. undergraduate course. Survey and examination of state, local, and some international income, franchise, property, sales, and use taxes and their impact on entrepreneurs. Emphasis on North American jurisdictions. (I)

7440 Financial and Estate Planning. Cr. 3

Prereq: ACC 7120 or undergrad. tax course. Financial and estate planning for executives, professionals, and business owners. Tax and nontax personal financial goals considered in light of income tax requirements, trust accounting rules, and estate and gift taxation. (Y)

7450 Taxes and Business Strategy. Cr. 3

Prereq: ACC 7120. Effect of taxation on business decisions such as choice of form of organization, international operations, employee and executive compensation strategies, business mergers, acquisitions and divestitures. Business decisions examined by studying tax, accounting, and non-tax considerations from a management perspective. (W)

7990 Internship in Accounting or Tax Practice. Cr. 1-3

Prereq: completion of all core courses; prior approval of chairperson; approved internship proposal form on file in Office of Student Services prior to registration. Offered for S and U grades only. Application and assessment of concepts developed in studies through meaningful real-world experience. Student must obtain internship position and complete internship application form before registering. Student performs assigned tasks in professional manner under supervision of host-employer for minimum 160 hours during semester; abides by rules and regulations established by employer and expected of all employees; and must complete all course requirements outlined by the School for the internship program. (T)

7995 Directed Study in Accounting. Cr. 1-3 (Max. 3)

Prereq: completion of all core courses; prior approval of chairperson; approved directed study proposal form on file in Office of Student Services prior to registration. Opportunity to conduct research under the supervision of a member of the graduate faculty in areas of special interest to student and faculty member. (T)

7998 Seminar in Tax and Accounting Policy. Cr. 3

Prereq: ACC 7100 or equiv., ACC 7120 or equiv.; coreq: ACC 7300. Must be elected as part of final 12 credits in program. Seminar topics include history of accounting and tax policy in the U.S., establishment of accounting and tax rules and standards, professional responsibilities of accounting and tax professionals; relationship and application to recent and current events. (T)

Business Administration Courses (BA)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6000 Introduction to Accounting and Financial Reporting. Cr. 2

Prereq: admission to a School of Business graduate program. Offered for graduate credit only. Introduction to accounting principles and the understanding and analysis of financial statements. (T)

6005 Basics of Financial Management. Cr. 2

Prereq: admission to a School of Business graduate program. Offered for graduate credit only. Basic aspects of finance: time value of money, financial markets, risk and return, valuation and basic capital budgeting. Required of all graduate students; may be waived only through waiver exam. (T)

6010 Basics of Business Economics. Cr. 2

Prereq: admission to a School of Business graduate program. Offered for graduate credit only. Survey course; fundamental principles that guide decision making in market-based economic systems. (T)

6015 Marketing Foundations. Cr. 2

Prereq: admission to a School of Business graduate program. Offered for graduate credit only. Fundamental principles that guide decision making in market-based management systems. (T)

6020 Contemporary Principles of Management. Cr. 2

Prereq: admission to a School of Business graduate program. Offered for graduate credit only. Basic principles of organization theory and behavior in contemporary organizational settings. (T)

6025 Basics of Production/Operations Management. Cr. 2

Prereq: admission to School of Business graduate program. Offered for graduate credit only. Overview of operations management from a strategic perspective. Emphasis on problems and their solutions. (T)

6090 Quantitative Analysis: Theory and Application. Cr. 2

Prereq: one college course in finite math or higher; admission to a School of Business graduate program. Offered for graduate credit only. Statistics of association and statistical inference from samples. Correlation, analysis of variance, multivariate regression, non-parametric statistics. (F,W)

7000 Managerial Accounting. Cr. 3

Prereq: admission to a School of Business graduate program; BA 6000. No credit for undergraduate accounting majors. No credit after ACC 6020. Fundamental principles; preparation and utilization of financial information for internal management purposes. (T)

7020 Corporate Financial Management. Cr. 3

Prereq: BA 6005, BA 6010; admission to a School of Business graduate program. Development of tools to evaluate investment and financial decisions in modern global organizations. (T)

7040 Managing Organizational Behavior. Cr. 3

Prereq: BA 6020, BA 6025; admission to a School of Business graduate program. No credit for undergraduate management majors. Contemporary issues in managing and leading people and organizations. Topics include: creativity, culture change, leadership, teamwork, cross-cultural factors, performance management, and organizational change. (T)

7050 Marketing Strategy. Cr. 3

Prereq: BA 6015, BA 6025; admission to a School of Business graduate program. No credit for undergraduate marketing majors. Application of theory, concepts, and models to contemporary marketing issues and problems. Developing and evaluating successful marketing strategies through analysis of customers, competitors, the organization, and the external environment. (T)

7070 Social Perspectives on the Business Enterprise. Cr. 3

Prereq: BA 6090; admission to School of Business graduate program. Political, social, legal, ethical, regulatory, environmental, and global issues that interrelate with business decisions in the societal fabric. (T)

7080 Strategic Management. Cr. 3

Prereq: to be taken in the final 12 credits of M.B.A. program and only after the completion of: BA 7000, BA 7020, BA 7040, BA 7050, BA 7070; written consent of graduate advisor at 313-577-4511. Application of theory and concepts regarding strategic formulation and implementation from the perspective of senior management, to integrate the functional areas and provide a unified direction for the firm when it is operating in complex local and/or global environments. (T)

7500 Topics in Business Administration. Cr. 3

Selected topics in business administration. (Y)

7995 Directed Study. Cr. 1-3

Prereq: completion of core courses (except BA 7080) and written consent of graduate advisor and department chair. Advanced independent readings and research under supervision of a graduate faculty member, in areas of special interest to student and faculty member. (T)

8050 Seminar in Marketing Theory. Cr. 3

Prereq: BA 7050 or equiv. Reading seminar; approaches to marketing and consumer behavior theory from historical and philosophy of science perspectives. Contributions from disciplines such as international business, economics, psychology, sociology, anthropology, operations research, and psychometrics. Publishable paper expected of students. (B)

8052 Research in Marketing and Consumer Behavior. Cr. 3

Prereq: BA 8050. Reading seminar on issues in consumer behavior research. Consumer and organizational buying behavior, global marketing, market segmentation and analysis, product development and brand management, pricing, integrated marketing communications, supply-chain management. Publishable paper expected of students. (B)

8054 Seminar in Marketing Strategy. Cr. 3

Prereq: written consent of approved doctoral advisor. Seminar focuses on strategic marketing issues, including marketing strategy theory; innovation theory; corporate, business, and marketing strategy; new product development strategy; industry structure, competition, and competitive advantage; market orientation; alliances and inter-organizational relationships; knowledge management and organizational learning; customer relationship management; and marketing organization. (Y)

8056 Special Topics Seminar in Marketing. Cr. 3

Prereq: written consent of approved doctoral advisor. Seminar focuses on the product/branding and the distribution/supply chain functions, as well as the public policy issues in marketing and international business theory and the theory of the multinational enterprise. Its topical coverage will change from one cohort to another in light of faculty interest, department and School staffing needs, and dissertation topic interests of the students in the cohort. (Y)

8058 Advanced Topics in Consumer Behavior. Cr. 3

Prereq: BA 8050. Role of consumer in global economy; integrated marketing issues (IMC), movement toward relationship marketing (RM) across the value added chain to the development of consumer analysis. Conditions, issues, and practices; dimensions of strategic advertising. (Y)

8120 Theory of Finance. Cr. 3

Prereq: FIN 7220 or equiv. Modern corporate finance theory for finance doctoral students. (Y)

8121 Seminar in Corporate Finance. Cr. 3

Prereq: BA 8120. Theoretical and empirical studies in corporate finance for finance doctoral students. (Y)

8122 Empirical Methods in Finance. Cr. 3

Prereq: BA 8120. Fundamental asset pricing theories and empirical methods used in modern financial economics for finance doctoral students. (Y)

8123 Seminar in Corporate Governance. Cr. 3

Prereq: BA 8120. Theories and empirical studies in corporate finance for finance doctoral students. (Y)

8124 Seminar in Asset Pricing. Cr. 3

Prereq: BA 8120 and BA 8122; prior advanced course work in macroeconomics, microeconomics, mathematics and statistics is assumed. Empirical studies in asset pricing for finance doctoral students. (Y)

8220 Seminar in Organizational Behavior. Cr. 3

Prereq: BA 7040 or equiv. Areas such as motivation, reward systems, leadership, organizational culture and performance, job design, groups and teams, and decision making. Concepts, theories and fundamentals of organizational behavior (OB); areas of current research, application in global business environment. (Y)

8221 Seminar in Strategic Management. Cr. 3

Prereq: BA 8220. Theories and concepts in the strategic management literature including contemporary concepts that apply to the international context. (Y)

8420 Seminar in Organizational Theory. Cr. 3

Prereq: BA 8220. Theories of organization for doctoral students. (Y)

8777 Professional Development Seminar for Business Doctoral Students. Cr. 1-3 (Max. 3)

Prereq: admission to Mike Ilitch School of Business doctoral program. Exposure to professional development areas in preparation for productive academic careers; teaching, research writing, and academic culture. (Y)

8900 Development of Effective Research Programs in Business. Cr. 3

Prereq: BA 8122, BA 8420, and BA 8058. For doctoral students with a major cognate in finance, management, or marketing. Development, design and execution of effective research projects. (Y)

8995 Special Research Topics in Business. Cr. 1-3 (Max. 3)

Advanced research topics for business administration Ph.D. students. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by the Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. Dissertation research. (T)

9992 Dissertation II. Cr. 7.5

Prereq: BA 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following BA 9991. Offered for S and U grades only. Dissertation research. (T)

9993 Dissertation III. Cr. 7.5

Prereq: BA 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following BA 9992. Offered for S and U grades only. Dissertation research. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: BA 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following BA 9993. Offered for S and U grades only. Dissertation research. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in BA 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Business Law Courses (BLW)

The following courses, numbered 0990-5999 and 6100-6999, are offered for undergraduate credit. Courses numbered 6000-6090 and 7000-9999 which are offered for graduate credit only may be found in the graduate bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. Students must be admitted to the Mike Ilitch School of Business or receive permission from an advisor in the School to enroll in courses numbered 3000 and above.

7210 Business Law for Entrepreneurs. Cr. 3

Prereq: admission to a graduate program. No credit after ACC 7210. Legal issues related to building and financing of new ventures, including contract law, leases, intellectual property and employment law; formation and operation of business enterprises including sole proprietorships, partnerships, limited liability companies and corporations; benefits and disadvantages of each type; formation, sale or dissolution; tax issues and record-keeping. (Y)

7220 Law of Corporate Management and Finance. Cr. 3

Prereq: admission to a graduate program. No credit after ACC 7220. Law governing business corporations; fiduciary duties of managers and directors in situations such as mergers, acquisitions, securities offerings, market domination, litigation. (I)

Finance Courses (FIN)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7000 Applied Financial Analysis. Cr. 3

Prereq: BA 7020. This course will bridge the gap between the study of financial theory in the classroom and the practical application of financial analysis in the home or workplace. A laptop with the most recent version of Excel will be required in every class session. (I)

7090 Money and Capital Markets. Cr. 3

Prereq: BA 7020; completion of all foundation requirements; admission to a graduate program. Financial intermediaries; the capital markets; the money market and interest rates. (F,W)

7220 Advanced Managerial Finance. Cr. 3

Prereq: BA 7020. Advanced topics in managerial finance, including leasing, merger valuation, reorganization, interactions of investment and financing decisions, and critical evaluation of alternative firm valuation theories. (Y)

7229 Corporate Valuation: Techniques, Models and Strategic Applications. Cr. 3

Prereq: FIN 7220. Tools, techniques and models used to address valuation problems in finance; emphasis on corporate strategic valuation. (Y)

7230 Investment Policies. Cr. 3

Prereq: BA 7020. The key determinants of security prices under changing economic conditions. Theories, strategies and techniques for selection, timing, and diversification; methods of portfolio construction and administration. (F,W)

7280 Entrepreneurial Finance and Venture Capital. Cr. 3

Prereq: BA 7020. The course focuses on the venture capital (VC) cycle and understanding and analyzing the unique financial issues which entrepreneurial start-up firms face. Two distinct perspectives are provided: (a) issues that relate to the venture capitalist and (b) issues that relate to the entrepreneur. As a result, the course should be of interest to those pursuing careers in an entrepreneurial setting as well as those who are interested in a career in venture capital firm, management buyouts or private equity firm. From the entrepreneur's point of view, students will gain experience in pitching a business idea and will learn how to create a successful business plan. We will examine how to determine the amount of capital needed by the venture and the challenges of financing and structuring a deal with financiers. We will also explore the venture capital's perspective and gain insights into the how VCs evaluate a business and what valuation method they use at different rounds of financing. We will also address several aspects of the investment process including the term sheet content and deal structure and negotiation. (F,W)

7290 Topics in Finance. Cr. 3

Prereq: BA 7020. Current developments in such areas as: working capital management, mergers and acquisitions, pension fund management, use of options and futures, high-risk debt management, hybrid securities, management of financial institutions, international financial issues, or market microstructure. (Y)

7330 Fixed Income Securities. Cr. 3

Prereq: BA 7020. Covers the pricing of fixed income securities, examining topics such as bond mathematics, term structure of interest rates, measurement of interest rate risk using duration and convexity, yield spreads, spot and forward rates, and fixed income portfolio management. (Y)

7340 (FIN 6997) Futures and Options. Cr. 3

Prereq: BA 7020. Valuation of options, futures and swaps contracts on equities, fixed instrument securities and foreign exchange; use of these derivatives for risk management. (Y)

7777 Corporate Financial Consulting. Cr. 3

Prereq: FIN 7220. Provides an overview of the largest and most common categories of business consultancies, examples of the tools and techniques used to solve corporate finance problems, and group projects to address case study problems based on real world fact patterns. (I)

7870 International Finance. Cr. 3

Prereq: BA 7020. Identification of basic factors affecting exchange rates; roles of central banks and international monetary system. Exchange-rate forecasting, balance of payments, international economic linkages. Management of foreign exchange risk (translation, transaction, and economic exposure) by hedging with financial derivative securities and using operational hedges that deal with marketing and production strategies. In-depth analysis of multinational companies' investment in foreign countries; cost-of-capital and capital-budgeting issues. (Y)

7890 (FIN 5890) Internship in Finance. Cr. 3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Offered for S and U grades only. Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in finance. (T)

7995 Directed Study. Cr. 1-3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Advanced independent readings and research under the supervision of a graduate faculty member in areas of special interest to student and faculty member. (T)

Global Supply Chain Management Courses (GSC)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Desktop Decision Tools. Cr. 3

Prereq: BA 6090 or equiv. No credit after ISM 7010. Capabilities of decision tools available for personal computers. Methods of forecasting, project management, logistics decisions, cost/benefit analysis, efficiency evaluations, quality methods, and methods addressing other common management challenges. (Y)

7260 Theory of Constraints: Breakthrough Solutions. Cr. 3

Prereq: BA 6025. Problem solving based on Theory of Constraints logic process. Use of cause-effect logic diagrams to identify root cause of problems, discover breakthrough solutions, specify expected results of these solutions (including negative side effects which can thus be avoided), overcome obstacles to implementation, and construct a detailed plan for implementation of solutions. (I)

7620 Global Supply Chain Management. Cr. 3

Introduction to global supply chain management, integrating materials management and physical distribution through the investigation of transportation, inventory, handling and storage, acquisition, order processing and facility location subsystems. (F)

7650 Strategic Procurement. Cr. 3

No credit after MKT 7650. Creation of competitive advantage with superior procurement management. Topics include: negotiating, relationship to the supply chain, quality issues, supplier selection and management, quantity and delivery, and price determination. Strategic, ethical, legal and international issues. (W)

7670 Special Topics in Supply Chain Management. Cr. 3 (Max. 6)

Topics range from automotive supply chain management to international supply chain management fields and countries. (I)

7890 Internship in Global Supply Chain. Cr. 3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Offered for S and U grades only. Student works a minimum 160 hours for fifteen weeks in an entry-level management position in global supply chain. (T)

7991 Principles of Quality Management. Cr. 3

Prereq: successful completion of all M.B.A. foundation requirements. Introduction to philosophies of quality management and quality certification standards such as ISO 9000. System analysis, business process design, leadership, benchmarking, quality standards, performance standards, customer focus. (S)

7992 Methods of Quality Management. Cr. 3

Prereq: GSC 7991. Selection, implementation and applications of the most commonly-used quality methods: statistical process control, design of experiments, process analysis, error proofing, decision analysis, and response surface methods. (F,W)

7995 Directed Study in Global Supply Chain. Cr. 1-3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Advanced independent readings and research under supervision of a graduate faculty member, in areas of special interest to student and faculty member. (T)

Information Systems Management Courses (ISM)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7505 Information Analytics: Inbound Information Technology. Cr. 3

The evolving cyberspace organization. Insights and practical guidelines to create an appealing and engaging digital presence. Discussion focuses on topics relevant to planning, managing, and implementing online and social media interactivity such as search engine organization (SEO), inbound links, blogging, page ranking, tagging content, tweeting, publishing content, analytic reports, and social media. Material Fee as indicated in Schedule of Classes. (F)

7510 Database Management. Cr. 3

No credit after ISM 5993. Overall examination of database management and knowledge management systems. Theories, models, and techniques for designing, developing, understanding, utilizing and creating competitive advantage through database systems. Topics include data modeling, logical and physical database design, strategic value of data, introductory SQL, knowledge management, and emerging database technologies. Material Fee As Indicated In The Schedule of Classes (Y)

7520 Information Systems Design. Cr. 3

No credit after ISM 5820. Non-technical course in how to use information systems to add value to an organization. Use of system analysis techniques to study and identify information needs of organizations and integration of IT specialists and manager-users. Topics include: IT and organizational design, inter-networking infrastructure, organization and leading the IT function. How information systems professionals link MIS to specific business operations and objectives to increase value; how managers may use information systems to support activities and increase individual productivity. (Y)

7530 Societal and Ethical Issues in the Information Age. Cr. 3

Prereq: BA 7070. No credit after ISM 5530. Issues such as computer crime, privacy, copyrighting of software; other ethical issues related to use of business systems and information systems. (Y)

7560 Survey of E-Commerce. Cr. 3

Introduction to electronic commerce: scope, business-to-business and business-to-consumer activities; supporting software, hardware, networking, security technologies; readings and online discussions. (T)

7570 Data Mining. Cr. 3

Tools and techniques used to analyze large data bases; hands-on approach to common techniques. Emphasis on application of data mining to problems in marketing, finance, and other business disciplines. (T)

7575 (ISM 4575) Corporate Computer Networks and IT Security. Cr. 3

Broad selection of contemporary issues in computer security. Security activities, methods, methodologies, and procedures including inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses, and an overview of the Information Security Planning and Staffing functions. Includes many topics for Security+ exam by CompTIA. (Y)

7890 Internship in Information Systems and Management. Cr. 3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Offered for S and U grades only. Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in information systems. (Y)

7900 (MGT 7900) Project Management. Cr. 3

Management of resources (budget, personnel, materials, etc.) within the scope of a given project; understanding and appreciation for the different knowledge areas of project management; insight into identification of inputs, tools, and techniques of project management. (Y)

7994 Digital Content Development. Cr. 3

Development of responsive, smart, and personalized web sites using leading web development tools and technologies. (Y)

7995 Directed Study in Information Systems and Management. Cr. 1-3 (Max. 6)

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. (Y)

7996 Principles for Customer Relationship Management. Cr. 3

Investigation of the antecedents and consequences of implementing a customer-relationship management strategy. The course will provide students with insight on: What CRM and its conceptual foundations are; How CRM forces the interaction between corporate strategy, organizational structure, supply chain, and customer facing front end; The role of measuring and managing customer satisfaction, customer loyalty and customer profitability; Hands-on application with salesforce.com. Material Fee as indicated in Schedule of Classes. (F)

Management Courses (MGT)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6840 Project Management. (IE 6840) (SYE 6840) Cr. 1-4

Prereq: IE 6850 or BA 6020 or equiv. Offered for graduate credit only. Presentation of project management strategies, tools and techniques. Development of management skills for team-building and corporate strategic planning. (Y)

7620 Complex Organizations. Cr. 3

Prereq: BA 7040. The formal structure and processes in complex organizations: departmentalization, decentralization, authority and power, relationships between groups, organizational design and evaluation. Factors affecting organizational design, adaptation to environments, and designing effective decision-making systems. (F)

7630 Organizational Change and Development. Cr. 3

Prereq: BA 7040. Analysis of the impact of dynamic forces, particularly globalization, on the theory, methods, and skills involved in designing and implementing planned changes in organizations. (I)

7640 Management of Human Resources. Cr. 3

Prereq: BA 7040. Theory, policy, research and process issues in employment relationships. The specific personnel practices of planning, selecting, employee development and appraisal, compensation and labor relations examined as they relate to conceptual and pragmatic views of management or employee behavior. (T)

7650 Strategic Human Resource Management. Cr. 3

Prereq: MGT 7640. Survey of human resource management from a strategic perspective. Formulation and implementation of human resource strategy addressed for recruitment, placement, training, development, issues in an international community. (Y)

7660 Entrepreneurial Management. Cr. 3

Prereq: BA 7040. Nature of entrepreneurship and role of entrepreneur. Focus on problematic issues involved in creating and managing a small business. Emphasis on special knowledge and skills required of an entrepreneurial manager. Individual students may act as consultants to entrepreneurs or small business owner/managers. (Y)

7700 Leadership and Management of Innovation and Technology. Cr. 3

Technology and innovation in corporations. Building on principles of leadership and management, consideration of technology, innovation, organizational effectiveness and global competition. (Y)

7750 Labor Relations and Collective Bargaining. Cr. 3

Forces affecting the character and quality of industrial relations and collective bargaining in the United States; their influence on contract negotiations and grievances. Major challenges facing unions and employers today. A collective bargaining situation is generally used, in which participants plan for negotiations and bargain contract issues. (Y)

7770 Union Contract Administration. Cr. 3

Prereq: MGT 7750. Daily union-management relations. Grievance handling and arbitration. The causes of labor-management conflicts under a union contract. (Y)

7780 Concepts and Processes of Dispute Resolution I: Negotiating Theory and Practice. (DR 7210) Cr. 3

Prereq: graduate standing. Theoretical foundations of processes of negotiation, mediation, and multi-party collaborative problem solving. Skill building simulation to integrate theory and practice. (Y)

7790 Compensation Administration. Cr. 3

Prereq: MGT 7640. Process policy and theoretical issues in pay and benefits administration; determination of structural level of individual pay, non-traditional reward systems, and government regulation of benefits. (Y)

7815 Strategic Leadership. Cr. 3

Prereq: BA 7040. Academic and practitioner views of strategic leadership to understand the dynamics of leadership influence in complex organizations. (Y)

7816 Leading in Organizations. Cr. 3

Prereq: BA 7040. Leadership competency development. Participant assessment precedes developmental planning and the formation of feedback and support networks. (Y)

7850 Management through Constructive Persuasion. Cr. 3

Introduction to methods of persuasion. Students learn how persuasion strategies can be applied in listening, speaking and written formats for business management situations. (Y)

7895 Internship in Management. Cr. 3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Offered for S and U grades only. Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in management. (T)

7900 Project Management. (ISM 7900) Cr. 3

Management of resources (budget, personnel, materials, etc.) within the scope of a given project; understanding and appreciation for the different knowledge areas of project management; insight into identification of inputs, tools, and techniques of project management. (Y)

7950 (MKT 7950) Business and Sustainability. Cr. 3

How organizations can be good to the environment while being profitable. Sustainability concerns such as climate change, rising energy prices, natural resource depletions, and air pollution. Evaluation of aspects of business operations including marketing and communications, stakeholder engagement, product development, operations, supply chain management, and reporting concerns. (Y)

7995 Directed Study in Management. Cr. 1-3 (Max. 3)

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. (T)

8000 Seminar in Management. Cr. 3

Prereq: BA 7040. Selected topics in the management and organizational sciences. (I)

Marketing Courses (MKT)

The following courses, numbered 7000-9999, are offered for graduate credit. Courses numbered 0900-6999, which are offered for undergraduate credit only, may be found in the Undergraduate Bulletin. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7150 Global Automotive Marketing Strategy. Cr. 3

Prereq: completion of all foundation requirements. Marketing concepts, strategies, and tactics in global automotive industry. Marketing principles, role of marketing, target market selection, segmentation, brand management, distribution systems. (B)

7430 Advertising Management. Cr. 3

Prereq: BA 7050. Planning, implementing, and controlling advertising and sales promotion. Internal and external relationships of the advertising department, determining advertising objectives and copy platform, setting the budget, selecting media and measuring advertising effectiveness. (Y)

7450 Business Research and Methodology. Cr. 3

Prereq: BA 7050. An intensive study of the objectives and methodologies of research for business decisions. Course topics include: the scientific method, primary and secondary data sources, research design, reliability and validity, sampling, and applied statistics. Focus on the development of decision-oriented research information for all aspects of a business organization. (Y)

7460 International Business. Cr. 3

Globalization, the multinational firm, and emerging economies. Evolution of the international monetary environment and monetary systems. Theory of the multinational firm and foreign direct investment. Cultural and market opportunity analyses. Internationalization patterns and modes of foreign market entry. Strategic and organizational choice in international business. International alliances and emerging market economies. Fundamentals of international financial management. (Y)

7470 Consumer and Industrial Buying Behavior. Cr. 3

Prereq: BA 7050. Behavioral theory as it relates to consumer and industrial decision processes. Relevant concepts, theories, and recent research findings are drawn from the fields of marketing, psychology, social psychology, and communications. Examination of consumer and industrial buying practices. (Y)

7500 International Marketing Strategy. Cr. 3

Prereq: BA 7050. Globalization and marketing in the current decade. Marketing and research in the international environment. Cross-national consumer behavior and cross-national segmentation, targeting, and positioning. Product policy and branding in the international environment. International pricing, supply chain management, and communication strategy. Global branding. Marketing problems and opportunities in emerging markets. Organizational and strategic issues in global marketing. (W)

7700 Management of Retail Enterprises. Cr. 3

Prereq: BA 7050. In-depth study of the retail mix variables as they relate to products and services, pricing, promotion, place, and operating policies. Merchandising, inventory controls, store operations, and research approaches in monitoring current trends in retail management. (I)

7870 Seminar in Marketing. Cr. 3

Prereq: BA 7050 and written consent of instructor. In-depth exploration of new and important subjects or techniques in marketing. Topics vary by semester; consult instructor. (I)

7890 Internship in Marketing. Cr. 3

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Offered for S and U grades only. Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in marketing. (T)

7950 Business and Sustainability. (MGT 7950) Cr. 3

How organizations can be good to the environment while being profitable. Sustainability concerns such as climate change, rising energy prices, natural resource depletions, and air pollution. Evaluation of aspects of business operations including marketing and communications, stakeholder engagement, product development, operations, supply chain management, and reporting concerns. (Y)

7995 Directed Study in Marketing. Cr. 1-3 (Max. 5)

Prereq: completion of core courses (except BA 7080) and written consent of graduate officer and department chair. Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. (T)

7996 Principles for Customer Relationship Management. Cr. 3

Investigation of the antecedents and consequences of implementing a customer-relationship management strategy. The course will provide students with insight on: What CRM and its conceptual foundations are; How CRM forces the interaction between corporate strategy, organizational structure, supply chain, and customer facing front end; The role of measuring and managing customer satisfaction, customer loyalty and customer profitability; Hands-on application with salesforce.com. (T)

College of Education

Dean: R. Douglas Whitman

Foreword to the College of Education

The College of Education at Wayne State University is located in, and serves the needs of, one of the nation's largest metropolitan areas. Thus, the College reflects the dynamic character of urban life, and, in its concern with urban problems, places great faith in education as the means by which human circumstances can be improved. To this end, the College prepares professional educators who have the commitment and competence to help young people achieve dignity, preserve individuality, develop democratic values, and find self-fulfillment.

As society has been altered by such factors as the development of knowledge, technological advances and population growth, the purposes and processes of education have changed. New technologies of instruction are evolving rapidly and offer the educator many opportunities for developing a high level of competence. Problems generated in our urban society are complex, and those related to education are no exception. Yet, the opportunities for curriculum innovation, experimentation and leadership have never been greater.

Graduate Programs

MASTER OF ARTS IN TEACHING with majors in

Elementary Education — with concentrations in

Art Education
Bilingual-Bicultural Education
Children's Literature
Early Childhood Education
General Elementary Education
Mathematics Education
Science Education
Social Studies Education
Special Education (K-12 state certification)

Secondary Education — with concentrations in

Art Education (K-12 state certification)
Bilingual-Bicultural Education
Career and Technical Education
English Education
Foreign Language Education
Kinesiology Pedagogy (K-12 state certification)
Mathematics Education
Science Education
Social Studies Education

MASTER OF ARTS with majors in

Counseling with concentrations in

Community Counseling
School Counseling

Counseling Psychology
Rehabilitation Counseling and Community Inclusion
School and Community Psychology
Sports Administration — with concentrations in

Interscholastic Athletic Administration
Intercollegiate Athletic Administration
Professional Sports Administration
Commercial Sports Administration

MASTER OF EDUCATION with majors in

Art Education — with concentrations in

Art Education
Art Therapy

Bilingual-Bicultural Education — with concentrations in

English as a Second Language

Career and Technical Education

Counseling
Early Childhood Education
Educational Leadership
Educational Psychology

Elementary Education — with concentrations in

Children's Literature
Early Childhood Education
General Elementary Education
Language Arts and Reading
Mathematics Education
Science Education
Social Studies Education

English Education (Secondary) — with concentrations in

English: Secondary
English as a Second Language

Evaluation and Research

Foreign Language Education (Secondary)
— with concentrations in

Foreign Language: Secondary
Foreign Language: English as a Second Language

Health Education

Learning Design and Technology — with concentrations in

Design and Performance Systems
Learning Technologies

Kinesiology — with concentrations in

Exercise and Sport Science
Physical Education Pedagogy

Mathematics Education

Reading
Science Education
Social Studies Education
Special Education — with concentrations in

Autism Spectrum Disorders
Cognitive Impairment
Emotional Impairment
Learning Disabilities

POST-BACHELOR'S TEACHING CERTIFICATES

with majors and minors in:

Elementary Education — with concentrations in

Bilingual-Bicultural Education
Early Childhood Education
General Elementary Education

Secondary Education — with concentrations in

Bilingual-Bicultural Education
Career and Technical Education
Dance
English Education
Foreign Language Education
Health Education
Mathematics Education
Science Education
Social Studies Education
Speech

K-12 Education — with concentrations in

Art Education K-12
Kinesiology K-12
Music — Instrumental K-12
Music — Vocal K-12

EDUCATION SPECIALIST CERTIFICATES *with majors in*

Administration and Supervision

Counseling — with concentrations in

Counseling
Rehabilitation Counseling

Curriculum and Instruction — with concentrations in

Bilingual Education
Career and Technical Education
Early Childhood Education
Elementary Education
English Education
K-12 Curriculum
Mathematics Education
Science Education
Secondary Education
Social Studies Education

Learning and Design Technology — with concentrations in

Instructional Design
Interactive Technologies
K-12 Technology Integration
Performance and Improvement Training

Reading

Special Education

GRADUATE CERTIFICATES *in*

Advanced Studies in School Psychology
College and University Teaching
Online Teaching

BRIDGE GRADUATE CERTIFICATES *in*

Bilingual Education
Educational Technology
English as a Second Language
Online Teaching

DOCTOR OF EDUCATION and DOCTOR OF PHILOSOPHY
with majors in

Counseling
Curriculum and Instruction — with concentrations in

Art Education
Bilingual-Bicultural Education (Ed.D. only)
Career and Technical Education
Early Childhood Education
Elementary Education
English Education — Secondary
Foreign Language Education — Secondary
K-12 Curriculum (General)
Mathematics Education
Science Education
Secondary Education
Social Studies Education — Secondary

Educational Leadership and Policy Studies
Educational Psychology (Ph.D. only) — with concentrations in

Learning and Instruction Sciences
School Psychology

Evaluation and Research
Kinesiology (Ph.D. only) — with concentrations in

Exercise and Sport Science
Physical Education Pedagogy

Learning Design and Technology — with concentrations in

Instructional Design
Interactive Technologies
K-12 Technology Integration
Performance and Improvement Training

Reading, Language and Literature (Ed.D. only)
Special Education

Directory of the College of Education

INTERIM DEAN OF THE COLLEGE OF EDUCATION:
R. Douglas Whitman: Room 441, Education Building;
313-577-1620

CHIEF OF STAFF TO THE DEAN
Joseph White: Room 441, Education Building; 313-577-8285

ASSOCIATE DEAN, RESEARCH AND
COMMUNITY ENGAGEMENT:
Thomas G. Edwards: Room 421, Education Building;
313-577-8282

ASSISTANT DEAN, ACADEMIC SERVICES:
Janice Green: Room 489, Education Building; 313-577-1605

INTERIM ASSISTANT DEAN, ADMINISTRATIVE AND
ORGANIZATIONAL STUDIES:
William Hill: Room 367, Education Building; 313-577-1728

ASSISTANT DEAN, KINESIOLOGY, HEALTH, AND SPORT
STUDIES:
Nate McCaughtry: 2177 Faculty/Administration Building; 313-577-2177

ASSISTANT DEAN, TEACHER EDUCATION:
Kathleen Crawford-McKinney: Room 241, Education Building;
313-577-0122

INTERIM ASSISTANT DEAN, THEORETICAL AND
BEHAVIORAL FOUNDATIONS:

JoAnne Holbert: Room 361, Education Building; 313-577-1691

GRADUATE OFFICER AND CERTIFICATION OFFICER, ACADEMIC SERVICES:

Paul W. Johnson: Room 489, Education Building; 313-577-1606

Website: <http://coe.wayne.edu/>

Academic Regulations for the College of Education

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the College of Education.

Master of Arts Degrees

The Master of Arts degrees offered by the College of Education are administered by the Division of Kinesiology, Health and Sport Studies, and by the Division of Theoretical and Behavioral Foundations. The generic degree requirements and specific requirements associated with individual majors and areas of concentration are described in the respective divisional sections.

Master of Arts in Teaching

The Master of Arts in Teaching degree is administered by the Division of Teacher Education. Both generic degree requirements and specific requirements associated with individual majors and areas of concentration are described in that section; see Teacher Education, p. 124.

Master of Education

The Master of Education degree is offered in various curricular areas administered by each of the College's academic divisions: Administrative and Organizational Studies; Kinesiology, Health and Sport Studies; Teacher Education; and Theoretical and Behavioral Foundations. Specific requirements associated with individual majors and areas of concentration are presented in the respective divisional sections; generic degree requirements applicable to all Divisions are as follows:

Admission

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants must satisfy the following criteria:

For some programs, a teaching certificate is required for admission. Additional prerequisites include a satisfactory background in the area of specialization and the completion of general undergraduate academic requirements appropriate to the degree for which admission is sought. A personal interview in the chosen major may be required.

Application

Applications are online at <http://gradadmissions.wayne.edu/apply.php>.

DEGREE REQUIREMENTS

The minimum requirement for a Master of Education degree is thirty credits, at least twenty-four of which must be taken at the University. Many programs in the College of Education require more than the minimum, in which case those requirements take precedence. The Master of Education is offered under the following options:

Plan A:

A minimum of twenty-two credits in course work, plus eight credits for the terminal seminar and thesis.

Plan B:

A minimum of twenty-seven credits in course work, plus three credits for the terminal seminar and essay or project

Plan C:

A total of thirty credits. The essay/project or thesis is not required.

The course work for the Master of Education degree is divided into three areas: major requirements, general professional core courses, and electives.

Major Requirements consist of a minimum of eight credits in the specialization selected by the student in addition to and when required the terminal seminar and thesis, essay, or project. Specific course requirements for the various majors are presented in the respective divisional sections.

General Professional Requirement: Fundamental Areas and Core Courses

Philosophical and theoretical perspectives unite the College of Education in its mission to prepare educators and other professionals as agents of change for an equitable, inclusive, global society that improves the lives of children, adults, families, and community.

This goal is achieved in the Masters of Education by emphasizing the following Fundamental Areas and/or Core Courses in education, performance improvement, health, and human development:

- Philosophical, historical, sociocultural, and political influences;
- Impact of ecological factors on human development, health, and wellbeing across the life span;
- Research, writing, and innovation.

Preparation includes the development of knowledge, skills, and dispositions and thus can be achieved through various means, such as coursework, field experiences, research, and community engagement. Although these fundamental areas provide an overarching umbrella that unites the College, individual Divisions and Programs may articulate these philosophical and theoretical tenets in different ways.

All students in a Masters of Education program must meet the General Professional Requirement through completion of the following Fundamental Areas and/or through completion of Core Courses, which are listed below:

Fundamental Areas**Philosophical, Historical, Sociocultural, and Political Influences include:**

- Global/local education as social justice
- Knowledge of history and systems of discipline area and implications
- Issues of power and empowerment
- Perspectives on inclusive society
- Preparation for serving as agent of change

Ecological Perspectives on Development, Health, and Wellbeing include:

- Psychology of learning across the life span
- Knowledge of human development, child/adolescent psychology
- Ecological influences on the quality of life issues

Research, Writing, and Innovation include:

- Methods of evaluation & research
- Critique of research

Core Courses

In addition to the Fundamental Areas above, the General Professional Requirement is met through completion of professional Core

Courses. The student must complete three courses from three different areas chosen from those listed below. Courses within a student's major area cannot be used to satisfy this requirement.

- Counseling: CED 6700
- Educational Administration: EDA 7600
- Educational Psychology: (may select only one of the following) EDP 5450, or 5480, or 7350
- Evaluation and Research: EER 7610
- History and Philosophy of Education: EHP 7600
- Special Education: SED 7050

Electives are those courses recommended outside the major and general professional sequences. A minimum of six credits is recommended in this area. The purpose of elective courses is to provide breadth to the student's program.

See the individual programs in the following Divisional sections of this bulletin for specific courses required by certain program areas in the major, the general professional sequence, or the elective sections of *Plans of Work*.

Plan of Work: After consultation with the advisor, the master's applicant prepares a Plan of Work for the program, setting forth the courses that will satisfy the requirements for the degree.

Candidacy: This status is established upon completion by the master's applicant of nine credits toward degree requirements, and after filing an approved Plan of Work with the College Graduate Office, 489 Education Building. The Plan of Work **MUST** be filed prior to or during the term in which the applicant completes twelve graduate credits toward the degree. Failure to file a Plan of Work will preclude further registration for courses.

Time Limitations: Requirements for the Master of Education must be completed within six years after completion of the first course to be applied toward the degree.

Post-Bachelor's Teaching Certificate

This program provides a means of obtaining teacher certification for those who do not intend to pursue the Master of Arts in Teaching. The program incorporates classroom theory with practice, requires a minimum of four semesters to complete and is available at both the elementary and secondary levels. Courses are offered during the day. Admission requires a baccalaureate degree with an appropriate teaching major and minor earned at a regionally accredited institution. Undergraduate course work should reflect a minimal 2.5 g.p.a., the student must successfully complete the State Professional Readiness Examination (PRE), provide a current Michigan State Police criminal background check, provide documentation of a current TB test, a verification of group work with children and, for Foreign Language majors/minors and Bilingual/Bicultural Education minors, appropriate language proficiency test results. A complete list of requirements is found online at: <http://coe.wayne.edu/as/admission-post-bachelor.php>.

Education Specialist Certificate

The Education Specialist Certificate program is a thirty credit minimum curriculum beyond the master's degree. It is a self-contained concentration, separate from other existing programs, with a distinct form of recognition at its completion. This is a planned program, not merely recognition for thirty credits of graduate study accrued beyond the master's degree.

The Education Specialist Certificate is offered in various curricular areas administered by the following academic divisions: Administrative and Organizational Studies, Teacher Education, and Theoretical and Behavioral Foundations. Specific requirements associated with individual majors and areas of concentration are presented in the Divisional sections (see Administrative and Organizational Studies, p. 107 and Education Courses (ED), p. 161); generic certificate requirements applicable to all Divisions are cited below:

Admission

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Minimum entrance requirements established by the College of Education are:

- a) A master's degree from an accredited institution.
- b) In general, applicants must present a grade point average of 2.75 or above for upper division undergraduate work. Applicants with an undergraduate grade point average below 2.75 must have a grade point average of 3.4 or above on their master's degree work.
- c) Fulfillment of the special requirements of the area of concentration in which the student wishes to work.
- d) All major areas with the exception of administration and supervision, instructional technology and counseling require a minimum of three years of teaching experience or equivalent.

Application

Applications are online at <http://gradadmissions.wayne.edu/apply.php>.

CERTIFICATE REQUIREMENTS

The Education Specialist Certificate program requires a minimum of thirty credits beyond the master's degree. The purpose of the Certificate program is to strengthen the liberal education of administrators, counselors, instructional designers and teachers to contribute to more effective productivity of professional workers in and outside the field of education. The specific content of each major is dependent upon the individual student's needs and interests.

Plans of Work are adapted to the professional needs of students and each one is developed by the individual student with the help of his/her advisor. A Plan of Work must be approved by the advisor and filed with the Education Graduate Office, 489 Education Building, before six credits have been completed following acceptance into the program. Failure to file a Plan of Work at the appropriate time may preclude further registration for courses.

Research studies, projects, or field studies may be accepted in partial fulfillment of requirements for the Certificate. Such projects will be in the nature of culminating experiences and arranged with the individual student's advisor.

Time Limitations: Requirements for the Education Specialist Certificate must be completed within six years after admission to the program. Credit earned beyond the master's degree which is over six years old *at the time of admission* may not be applied toward meeting requirements of the certificate. Credit earned after acceptance as a certificate applicant may not be over six years old at the time the certificate is granted.

Transfer Credit:

A maximum of ten semester credits of graduate post-master's degree work earned at another accredited university, or at Wayne State University *prior* to admission to the Education Specialist program, may be applied to the certificate provided the courses are approved by the advisor and the College Graduate Officer as appropriate to the program plan.

A maximum of six semester credits of graduate post-master's degree work earned at another accredited university after admission to the Education Specialist program may be transferred and applied to the program provided no prior transfer credit from another university has been included in the program. Course work used toward a previously received degree or Education Specialist certificate cannot be used toward the current Education Specialist certificate.

Doctoral Degrees

The doctoral programs of the College of Education at Wayne State are designed to afford opportunity for advanced study and research to persons who have demonstrated: 1) superior scholarship; 2) leadership in education; 3) promise in the field of research; and 4) potential for professional leadership.

Advanced graduate degrees are conferred not merely upon the completion of a prescribed number of courses, nor necessarily after a given period of residence; but, rather, in recognition of outstanding ability and high attainment in course work, examinations, research, scholarly writing, and personal fitness for education as a profession.

The Ed.D. degree is typically more application oriented; the Ph.D. degree more research oriented. Ed.D. study includes development of specialized practitioner skills; application of other educational foundations and techniques to a field; or applied research which primarily addresses localized practitioner problems. Ph.D. study includes theoretical foundations in the field; application of foundational or related disciplines; or research directed toward theory-building.

Doctoral degree programs are administered by the following academic divisions of the College: Administrative and Organizational Studies, Kinesiology, Health and Sport Studies, Teacher Education, and Theoretical and Behavioral Foundations. Specific requirements associated with individual majors and areas of concentration can be found in the respective divisional sections; generic degree requirements applicable to all Divisions are stated below.

Admission to Graduate Programs

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to doctoral programs in the College of Education are expected to meet the following minimal criteria:

1. Undergraduate grade point average of 3.0. Applicants with grade point averages of less than 3.0 for the baccalaureate degree must present a grade point average of 3.5 or above in their master's degree work before being considered for acceptance as doctoral applicants. Some fields of concentration require a higher g.p.a.
2. Most programs require a master's degree from an accredited graduate school.
3. Some fields of concentration require a minimum of three years teaching experience or equivalent.
4. Successful completion of a written examination evaluated on writing ability and when deemed appropriate by the program area, knowledge of the field.
5. Recommendation for admission from an interview committee.
6. Some fields of concentration require additional testing.

Applications are online at <http://gradadmissions.wayne.edu/apply.php>

Doctor of Education Requirements

Credit Requirements: The minimum credit requirement for the Ed.D. degree is ninety credits in graduate work beyond the baccalaureate degree. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Residence: At least one full year of course work, i.e., thirty credits of course work beyond the master's degree, must be taken in residence at Wayne State University. This may include work in research techniques, but *does not include dissertation research credit*.

The Ed.D. program requires the completion of six graduate credits in regular course work in each of two successive semesters after admission as an Ed.D. applicant. The residence requirement must be completed following admission to the Ed.D. program.

All degree requirements must be completed within seven years from the time of admission as a doctoral applicant.

Doctoral Seminars: Students must elect two doctoral seminars from an area outside the field of concentration from the following foundation areas: educational administration, educational psychology, educational sociology, history and philosophy of education, and curriculum and instruction. These seminars are open only to doctoral students.

Research Methods: A minimum of eleven credits is required in course work, approved by the College's Doctoral Advisory Committee, aimed at developing competence in statistics and research methodologies. At least six credits of the minimum requirement will consist of a comprehensive course in evaluation and statistics and an advanced course in research methodology and experimental designs. The remaining five credits will include research electives appropriate to the needs of the student, department research seminars, internships in research, or any combination thereof.

Concentrations: A minimum of thirty credits is required in the student's area of concentration. The courses constituting the major will be specified by the department in which the student selects the concentration. Course work in the field of concentration is not restricted to courses offered by the College of Education.

Cognates: A cognate in professional education or in a single field is optional at the discretion of the major advisor. Courses included in the cognate will be selected by the student and advisor in conjunction with the cognate field committee member.

Dissertations: The doctoral student is required to submit a dissertation on a topic satisfactory to the doctoral committee. Twenty credits are required in dissertation research (ED 9989). Prior to candidacy, students may register for up to eight (8) credit hours. The balance of hours are completed after advancement to candidate status. Registration must be completed prior to the Final Public Lecture-Presentation Defense.

Electives may be chosen from the foundations of education, non-dissertation research techniques, or any course work the applicant and advisor consider appropriate to the student's individual program.

A Plan of Work must be filed and approved by the advisor and graduate officer during the semester in which the student is completing eighteen credits of work under advisement. Failure to file a Plan of Work may preclude further registration.

Annual Progress Reports are required and completed at the end of the winter semester (due by April 30). The annual review of student progress is an important cornerstone of quality training of doctoral students. An Annual Review from each year of the program is required when requesting a time extension.

Final written and oral examinations in the major field of concentration is required. Testing in the cognate is optional at the discretion of the major advisor. The exact times of these examinations are determined by the Graduate Officer. Students will register for the examinations with advisor approval. The Qualifying Examination Committee will consist of a minimum of three members: the advisor, one member representing the area of the concentration, and one member outside of the area of concentration. The outside member may be from the area of the cognate. Two members of the committee, including the advisor, must hold a Regular Graduate Faculty Appointment. When performance on a final examination is unsatisfactory, the student may request a re-examination which must be taken within one year of the date of the examination and after one semester has elapsed since the examination. The second examination shall be considered final.

Selection of Advisor and Dissertation Advisory Committee: Students will be assigned an advisor at the time of admission. The advisor acts as the chairperson of the student's doctoral committee, which will consist of a minimum of three members: the advisor, one member representing the area of the concentration, and one member outside of the concentration area. Two members of the committee, including the advisor, must hold a Regular Graduate Faculty Appointment. The committee must be fully constituted not later than the time the student begins active work on dissertation research or project. The main function of the doctoral committee is to advise the student in research activities and to administer the final defense. The dissertation committee chair assumes the responsibility for overseeing the procedures of the dissertation defense, serving as the advocate for the student and resolving conflicts.

Candidacy is achieved when the dissertation prospectus receives final approval by the Graduate Officer following approval by the Dissertation Advisory Committee through a proposal oral defense and by the Internal Review Board (when applicable).

Time Extensions may be granted to candidates in good standing with demonstrable progress towards completion of the dissertation. The request for a time extension must be made within six months of the original 7-year completion deadline and the student's dissertation proposal must have been approved prior to making the request. Students who have not completed the Ed.D. requirements within ten years of their application date are required to re-take the Final Qualifying Examination and may need to complete additional coursework to prepare for the examination. The total time for earning the Ed.D., including all time extensions and any required revalidation, is 12 years.

A final oral examination on the dissertation is conducted by the student's doctoral committee under the auspices of the Education Graduate Office. The student must be registered the semester during the Final Public Lecture-Presentation Defense.

Doctor of Philosophy Requirements

The Doctor of Philosophy embraces the same fields of concentration as the Doctor of Education, except that the Ph.D. degree is not available in the areas of Reading, Language and Literature; and Curriculum and Instruction: Bilingual-Bicultural Education, but is available in Educational Psychology and Kinesiology.

Ph.D. programs in the College of Education require a minimum of ninety graduate credits beyond the bachelor's degree, with the exception of the Ph.D. in Educational Psychology. The Educational Psychology Ph.D. requires a minimum of one hundred graduate credits beyond the bachelor's degree. Of the minimum of ninety graduate credits (or one hundred for the Ph.D. in Educational Psychology), a minimum of twenty credits in course work must be completed in the major field, including at least twenty-four credits of graduate work in Education. Thirty credits in dissertation research are required in the Ph.D. program. The thirty credit dissertation registration requirement is fulfilled by registering for the courses ED 9991, ED 9992, ED 9993, and ED 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. The remaining credits will be assigned to research or course work in accordance with the needs of the students and the requirements in the field of concentration. A minimum of fifteen credits in research technique courses approved by the College's Doctoral Advisory Committee are required. A cognate in a field inside or outside the College of Education is optional at the discretion of the major advisor.

A Plan of Work, qualifying examinations, and a Final Public Lecture-Presentation are required. Satisfactory completion of the full-time residency requirement must be certified by the advisor and the College graduate officer. Ph.D. applicants should consult the procedures of the Graduate School, see Admission, Graduate School, p. 17 for additional information. Also, please consult the College of Education

Doctoral Policies and Procedures bulletin, available in Room 489, Education Building, for further specific Ph.D. requirements.

Financial Aid and Scholarships

For general sources of graduate financial aid, see *Financial Assistance, Graduate*, p. 26. See also individual departmental sections.

Over 100 scholarships established by private donors are available through the College of Education. A number of them are targeted toward graduate students, all require a cumulative g.p.a. of at least 3.0, and all are awarded to applicants who demonstrate high academic achievement and leadership potential. Most, though not all, are also based on financial need. Application materials are available online at <http://coe.wayne.edu/student/scholarship.php>. Review the website for more information and for the specific deadline date.

Program Load, Normal

A full-time graduate student load is eight credits per semester in Fall and Winter and is limited without exception to a sixteen credit maximum by the Graduate School. In Spring/Summer full-time is two credits. If a significant portion of a student's time is spent in outside work, corresponding adjustments must be made in the college schedule. A graduate student working full-time who desires to carry more than eight credits must secure permission from the Assistant Dean for Academic Services, who serves as Graduate Director.

Attendance

Regularity in attendance and performance is necessary for success in college work. Although there are no officially excused absences as defined by College policy, the conscientious student is expected to explain absences to the instructor. Such absences may be due to illness; to participation in inter-college activities, certified by the sponsoring faculty member; or other similar types of absence for which the student can present to the instructor evidence that he/she was engaged in authorized University activities. Each instructor, at the beginning of the course, will announce his/her attendance requirements.

Probation and Withdrawal

If, at any time, a graduate student's scholastic grade point average falls below 3.0, the student is automatically placed on probation. A student on probation must submit a plan of action completed with their advisor to the Graduate Officer of the College of Education. The plan of action addresses the necessary steps and timeline for the student to regain good academic standing and identifies the coursework to be repeated or new coursework necessary to achieve good academic standing. The plan of action must be approved by the Graduate Officer before registering for subsequent work in the College. The College reserves the right to ask a student to withdraw at any time from specific courses or from the College entirely, if progress does not warrant continuance.

Readmission

Graduate students who have received a master's degree from Wayne State University and have not registered since the degree was conferred, and who desire to pursue further non-degree graduate work must complete a Returning Student Update Record form: <http://reg.wayne.edu/pdf-forms/return-form.pdf>.

Revalidation of Credit — Master's Degree

Upon recommendation of the advisor and approval of the Graduate Director, a master's degree student may revalidate over-age credits which are between six and ten years old, and that represent courses completed at Wayne State University with grades of 'B' or better. Stu-

dents are not permitted to revalidate credits earned at other institutions. The advisor and student must complete a Request for a Time Extension form (http://coe.wayne.edu/pdfs/masters_ed_specialist_time_extension.pdf) and set a terminal date for completion of all degree requirements, including such additional requirements as may be indicated by the graduate officer to revalidate over-age credits.

Criminal History Review, Educator

PUBLIC ACT 68 of 1993 Sec. 1230: This act requires public and non-public schools to conduct a criminal history check of new teachers, school administrators, school psychologists and other personnel required to hold State Board of Education approvals. Criminal history checks may be required at various stages from admission to certification/graduation in some programs. A Judgment of Sentence for any conviction must be on file with any student's application for the College of Education to recommend that student for certification to the Michigan Department of Education. This document may be obtained from the court where the matter was adjudicated. In addition, a narrative describing the circumstances surrounding the conviction or action from the student's perspective must be on file. The State Board of Education may refuse to grant a certificate or approval to an applicant pursuant to the following State Board of Education Teacher Certificate Code:

State Board of Education Teacher Certificate Code: R 390.1201 Certificates; denial, suspension, or revocation.

1. The superintendent of public instruction may refuse to grant or renew, or may suspend for a fixed term, or revoke, or may impose reasonable conditions on, a teaching certificate or state board approval granted pursuant to these rules for the following reasons:

(a) Fraud, or material misrepresentation, concealment or omission of fact in the application for, or the use of, a teaching certificate or state board approval.

(b) Conviction of an offense listed in MCL 380.1535a or MCL 380.1539b.

2. The superintendent of public instruction may refuse to grant or renew a teaching certificate or a state board approval for failure or ineligibility of the applicant to meet the criteria for the applicable certification or state board approval.

Additional criminal history checks may be required at the discretion of the College. A criminal history check, by name, without fingerprints may be accessed for a fee at <http://apps.michigan.gov/ICHAT/>

Graduation

Applications for graduate degrees, graduate certificates and the Education Specialist Certificate must be made not later than the fourth week of classes for the semester in which degree or certificate requirements are to be completed. Graduation deadline dates for the semester in which candidates are completing doctoral (Ed.D. and Ph.D.) degree requirements are established by the Graduate School and posted online at <http://gradschool.wayne.edu/phd/deadlines-requirements>.

Information concerning commencement announcements, caps and gowns, invitations, tickets, time and place, and other relevant information is posted online at <http://commencement.wayne.edu/> Candidates for doctoral degrees are requested and expected to attend the commencement ceremony at which the University confers upon them the degree earned. Graduate Certificate and Education Specialist Certificate students do not participate in the Commencement Ceremony, which is limited to degree granting programs.

Academic Services

Office: 489 Education; 313-577-1601

Assistant Dean: Janice Green, Ph.D.

Graduate Advising: LaSondra Dawn, Paul Johnson, Mary Walker, Kevin Williams

Undergraduate Advising: Fawne Allossery, Ebony Green, Chelsea Smith, Cassandra Tackett, Kurt Troutman

Website <http://coe.wayne.edu/admissions/index.php>

Purposes of the Division

The Wayne State College of Education's Division of Academic Services is the initial point of contact for both current and prospective students at all degree levels in the college. Academic Services provides advising on the admission process, certification and degree requirements, as well as graduation procedures. The division also is the compliance agent for internal and external policies and procedures for all programs in the college.

Academic Services works across five key areas to help students earn certification and complete degree requirements, connect students with unique opportunities and professional experiences, and establish or advance career opportunities: Admission, advising, graduation and certification, career placement and alumni.

Graduate advising

Academic Services also provides pre-admission advising to students interested in graduate programs. Graduate advisors provide guidance with program selection, satisfaction of admission requirements and completion of the graduate admission application.

- Graduate advising is an invaluable resource at every stage of your graduate education, offering:
- Degree and certificate audits for graduation.
- Recommendations to the Michigan Department of Education for certification and licensure.
- Plans of work for teaching endorsements in the core subject areas.
- Requests for time extensions and monitoring of the university's academic probation system.

Certification

As a liaison to the Michigan Department of Education, the Division of Academic Services recommends candidates for initial certification as teachers, administrators and school psychologists, as well as licensure for school counselors. Additionally, the division helps candidates secure endorsements to existing teacher and administrator certificates, and also completes approval recommendations for supervisors and directors of special education.

Career placement

Academic Services sponsors several outreach and promotional events to help graduates increase employment opportunities and network with professionals in the field. The annual Educator Job Fair, held in the spring, is an opportunity for candidates to meet with employers servicing the needs of preK-12 children in schools and community organizations in Michigan and across the country.

Alumni

Academic Services works with the Wayne State Alumni Association to help establish supportive and insightful connections with our network of successful alumni. The College of Education encourages alumni to connect with students to share their experiences and offer valuable advice. These connections can prepare you for success in and out of the classroom, often leading to new career opportunities and experiences.

Administrative and Organizational Studies

Office: 341 Education Building; 313-577-1728

Interim Assistant Dean: William Hill

Website: <http://www.coe.wayne.edu/aos>

Professors

Michael F. Addonizio, Rita C. Richey (Emerita), William Sosnowsky (Emeritus), Ingrid J. Guerra-Lopez, Carolyn Shields, Ke Zhang

Associate Professors

Silverenia Kanoyton (Research), Ben M. Pogodzinski, Monica W. Tracey

Assistant Professors

William E. Hill (Clinical), Sarah Lenoff

Senior Lecturer

Timothy W. Spannaus

Lecturer

Craig Harting

Degrees and Certificates, Graduate

MASTER OF EDUCATION with majors in Educational Leadership and Learning Design and Technology

EDUCATION SPECIALIST CERTIFICATE Programs with majors in Administration and Supervision, and a concentration in Charter School Administration; and Learning Design and Technology

GRADUATE CERTIFICATE in College and University Teaching

GRADUATE CERTIFICATE in Online Teaching

DOCTOR OF EDUCATION with majors in Educational Leadership and Policy Studies, and Learning Design and Technology

DOCTOR OF PHILOSOPHY with majors in Educational Leadership and Policy Studies, and Learning Design and Technology

BRIDGE GRADUATE CERTIFICATE in Educational Technology, and Online Teaching

The Division of Administrative and Organizational Studies has as its primary goal the development and enhancement of leadership and organizational learning. It is within the scope of this division to study emergent trends, technologies and educational innovations; to develop rationales for supporting educational change; to present viable programs of study for advanced students in education which will enable them to function skillfully as educational leaders in facilitating change, and in developing and conducting on-going programs; and to design and implement learning innovations, and the impact of instructional methodologies on the improvement of human and organizational performance. Program areas, Educational Leadership and Policy Studies, and Learning Design and Technology, are under the guidance of this Division.

Educational Leadership and Policy Studies Programs

In this area the College offers the Master of Education in Educational Leadership, and doctoral degrees with a major in Educational Lead-

ership and Policy Studies, as well as an Educational Specialist Certificate program in Administration and Supervision. The master's degree is a basic, entry-level program in this discipline designed to assist educators in improving their competence in leadership roles in schools and the community. The master's program in Educational Leadership is approved by the Michigan Department of Education.

Individuals aspiring to positions such as building administrators, central office administrators, special education directors, higher education administrators, or other educational policy making positions in business, industry or government should undertake study at the specialist and doctoral levels in educational leadership and policy studies. At the specialist level individuals may seek an emphasis in elementary administration, secondary administration, special education administration, or the superintendency. The College offers certification programs in all areas of administration approved by the Michigan State Board of Education. In the doctoral programs individuals may emphasize educational foundations, general educational administration, or special education administration.

The doctoral program in Educational Leadership and Policy Studies is approved by the University Council for Educational Administration (UCEA).

Educational Leadership (M.Ed. Program)

Admission: Applicants must have a 2.75 Undergraduate GPA for regular admission (or a 2.50 Undergraduate GPA for qualified admission); submission of official transcripts from the undergraduate degree institution; and a personal statement to include career/academic goals (500-1000 words).

DEGREE REQUIREMENTS: General requirements for the Master of Education degree may be found at Master of Education, p. 102. This major in educational leadership is offered only as Plan B or C options; specific requirements are as follows:

The required forty-three credits must include EDA 7620, 7660, 7670, 7675, 7690, 8650, 8990, LDT 6135, ED 7999, and one course selected from: EDA 7640 or 7650.

EDA 7600, EDP 7350 and EER 7610 are required as part of the six-credit general professional (core) area.

All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively. Students interested in emphasizing special education administration at the master's level should consult with the advisor in that area to select courses.

Administration and Supervision (Education Specialist Certificate Program)

ADMISSION REQUIREMENTS: Applicants must have a 2.75 Undergraduate GPA or a 3.40 Graduate GPA in the master's program for regular admission; a master's degree from an accredited institution; submission of official transcripts from the undergraduate and graduate degree institutions; a personal statement to include career/academic goals (500-1000 words); and if applicant is seeking the Special Education Administrator concentration, the following two additional requirements apply: 1) Must have current and valid certification in an area of special education including but not limited to the following: Certified Special Education teacher, School Social Worker, School Psychologist, or Speech & Language Pathologist and 2) a minimum three years of experience in Special Education

CERTIFICATE REQUIREMENTS: Thirty to thirty-nine credits are required for this certificate predicated on the admission status of the applicant as cited below under the concentrations A-D. Basic requirements are cited under Education Specialist Certificate, p. 103. Since

this program is specifically designed to strengthen the individual background of teachers and administrators, all Plans of Work are developed in consultation with the appropriate advisor.

A.) Central Office Administrator concentration: Applicants with a Master's Degree in Educational Leadership/Administration (thirty credits): EDA 7670, 8620, 8630, 8990; EPS 9600; ED 7998; LDT 8135; and electives: six credits.

B.) Elementary and Secondary Administrator concentration: Applicants with Master's Degree other than in Educational Leadership/Administration (thirty credits): EDA 7625, 7660, 7675, 7690, 8630, 8650, 8990; ED 7998; and LDT 6135.

C.) Special Education Administrator (thirty credits): EDA 7660, 7675, 7800, 7810, 7820, 7830, 8630, 8650; and LDT 8135.

D.) Charter School Administration (thirty-nine credits): EDA 7635, 7640 or 7650, 7685, 7690, 8611, 8630, 8650, 8990; ED 7998; and LDT 6135.

All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively. All Plans of Work are developed in consultation with the student's assigned advisor.

Educational Leadership and Policy Studies (Ph.D. and Ed.D. Programs)

Admission: Both the Doctor of Education program and the Doctor of Philosophy program in Educational Leadership and Policy Studies require a master's degree from an accredited institution or 30 graduate semester hours beyond the bachelor's degree from an accredited graduate school with no grade lower than 'B' and a graduate GPA of at least 3.50. In addition, an Autobiographical Statement to include career/academic goals and research interests (1000-1500 words), three recommendations (two professional and one academic), and an interview may be required.

The Doctor of Education program is primarily for practicing educational administrators and as such requires demonstrative leadership experience with adults as a prerequisite for admission. This program is offered with a concentration in higher education administration.

The Doctor of Philosophy program requires evidence of past research efforts and interests as a prerequisite for admission. Applicants for this degree should be interested in careers which include a research emphasis.

Degree Requirements: The general requirements for the degrees are stated under Doctor of Education (Ed.D.) In addition, all students must complete at least a sixteen-credit sequence in the major. Specific requirements for the major are determined in consultation with the assigned advisor. A minimum six credits is required in doctoral seminars for non-majors. The research courses required are: EER 7630, EER 7650, and LDT 9110 or EER 8992 for both doctoral programs. In addition, the Ed.D. student will take either EER 7870 or 8800. The Ph.D. student will take EER 8800 and either EER 7870 or 8820. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Learning Design and Technology Specialties

Effective Fall 2016, Instructional Technology (IT) has been renamed Learning Design and Technology (LDT). The university will be transitioning to this new title for all related majors and courses during the 2016-17 academic year. Please contact the Division of Administrative and Organizational Services in the College of Education for more information.

Each degree, certificate and endorsement program in Learning Design and Technology is designed to prepare persons for positions in educational institutions, business or industrial organizations, government and the military, and/or health care and other human services agencies. The newest technologies are incorporated into these programs, enabling the graduate to function in the ever-changing roles of this profession, including: instructional designer, developer, or researcher; advanced technology and e-learning specialist; media or learning resources consultant or manager; professor, teacher or curriculum specialist; faculty developer, technology coordinator and performance technologist, trainer, training manager, or consultant. Students can achieve advanced skills in specialty areas such as:

1. Instructional design and evaluation;
2. Performance improvement, training and organizational development;
3. Interactive technologies design and development;
4. e-learning and distance education;
5. Technology integration in the schools;
6. Instructional media design and production;
7. Research and publication in the field; and
8. Other emerging applications of instructional technology.

Further information can be found on the Instructional Technology Webpage at the following address: <http://coe.wayne.edu/aos/it>

Learning Design and Technology (M.Ed. Program)

Admission: see Admission, p. 102. The Graduate Record Examination may be required for those students with undergraduate grade point averages between 2.50 and 2.80. Contact the program area for further information.

DEGREE REQUIREMENTS: There are two program emphases at the Master's level: 1) Design and Performance Systems (minimum thirty-one credits); and 2) Learning Technologies (minimum thirty credits). Each emphasis is directed toward different career opportunities. General requirements for the Master of Education may be found under Master of Education, p. 102. This degree is offered only as a Plan C option, as defined under the general requirements section, see Master of Education, p. 102. Courses required for the curricular emphases are:

Emphasis 1: 1 (Concentration in Design and Performance Systems): Required courses include LDT 6110, 7100, 7140, 7150, 7850, 7940, and eight credit hours of electives from the following: LDT 7115, 7140, 7180, 7210, 7220, 7230, 7310, 7320, 8120 and 8320.

Emphasis 2: Required courses include: LDT 6110, 7100, 7150, LDT 7980 and a minimum of 17 credits from the following list: LDT 5140, 6230, 6140, 7130, 7140, 7180, 7210, 7220, 7230, or 8120.

Requirements for the credits in General Professional Core (see General Professional Requirement: Fundamental Areas and Core Courses, p. 103) courses vary in terms of the program emphasis. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Programs, University, p. 15 and Academic Regulations for the College of Education, p. 102, respectively.

Online Programs: Each of the two Learning Design and Technology M.Ed. program emphases are offered online. For further information on the online programs please consult <http://coe.wayne.edu/aos/>. All Plans of Work are developed in consultation with the student's assigned advisor.

Learning Design and Technology (Education Specialist Certificate Program)

Admission: see Admission, p. 102. Three academic recommendations and a resume are required. Related work experience is expected of students who have no previous course work in Learning Design and Technology.

CERTIFICATE REQUIREMENTS: A minimum of thirty-one credits is required for this certificate. The Plan of Work for the Education Specialist Certificate in Learning Design and Technology is highly individualized. Basic certificate requirements may be found at Education Specialist Certificate, p. 103. Courses required are LDT 8100 and 8110. Students who do not have a previous degree in LDT will normally include additional courses from the M.Ed. plan of work (see above). The remainder of the plan of work is created by the student with the advice and approval of the advisor. The plan of work must present a coherent academic program with a clear area of focus.

Learning Design and Technology (Ph.D. and Ed.D. Programs)

Admission: see Admission to Graduate Programs, p. 104. Admission to the Ph.D. and Ed.D. programs in Learning and Design Technology requires completion of the Verbal, Quantitative and Writing sections of the Graduate Record Examination, four academic letters of recommendation, a statement of research interests, and a resume.

DEGREE REQUIREMENTS: The general requirements for these degrees are stated at Doctor of Education Requirements, p. 104. Core requirements in the major include LDT 6110, 7100, 7150, 7320, 8100, 8110 and 8150. In addition, Ph.D. students are required to complete sixteen credits in LDT professional focus areas; Ed.D. students are required to complete twenty-four credits in LDT professional focus area. Students with a K-12 Technology Integration focus must take a minimum of six credits in Foundations of Education (Doctoral Seminars). Two courses are to be selected from EHP 9600, EDP 9310, EDS 9620, TED 9130, and EDA 9790. Eighteen credits in research courses are required in this program for both Ph.D. and Ed.D. students. Ph.D. students are to elect EER 7630, EER 7870, one of EER 7880, EER 8700, or EER 8800, plus LDT 9105 and 9110. Additional coursework is required in a cognate area and in dissertation research requirements.

A minimum of ninety credits are required for a doctoral degree in Learning Design and Technology. All doctoral committees must include a minimum of two faculty members from Learning Design and Technology; three LDT faculty members are preferred for Ph.D. students. All Plans of Work are developed in consultation with the student's assigned advisor.

Educational Technology (Bridge Graduate Certificate)

The Graduate Bridge Certificate in Educational Technology is designed to enhance the credentials of practitioners. For certified teachers, completion of this program leads to the additional endorsement to the Michigan teaching certificate in Educational Technology. Teachers with this certificate are expected to play leadership roles in selecting, planning, developing, implementing and evaluating technology applications in the teaching and learning process.

As a bridge program this Graduate Certificate allows students to apply all of their coursework for the Certificate to the Master of Education degree with a major in Learning Design and Technology if they decide to pursue that degree after completing the Certificate.

Courses taken for this certificate will require students to incorporate technology into lessons, select strategies that promote the use and transfer of technological knowledge and skills for their own students. This program stresses fieldwork by requiring applicants to use Infor-

mation-age Technology with their own students and to support colleagues' use of technology-based resources.

Admission Requirements: For candidates seeking the Educational Technology endorsement, a valid Michigan teaching certificate is required.

CERTIFICATE REQUIREMENTS: The Bridge Certificate in Education Technology requires a minimum of nineteen credits including fifteen credits of core courses and four elective credits to be chosen from the courses cited below. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

CORE COURSES (15 credits)

- LDT 5140 – Producing / Evaluating Tech.-Based. Instr. Materials: Cr. 4
- LDT 6140 – Designing Web Applications for the Classroom: Cr. 4
- LDT 6230 – Internet in the K-12 Classroom: Cr. 4
- LDT 7980 – Capstone Seminar: K-12 Technology Integration: Cr. 3

ELECTIVE COURSES (4 credits):

- LDT 7130 – Facilitating Online, Face-to-face and Blended Learning: Cr. 4
- LDT 7140 – Web-based Courseware Development: Cr. 4
- LDT 7210 – Foundations of Distance Education: Cr. 4

Online Teaching (Bridge Graduate Certificate)

The Bridge Graduate Certificate in Online Teaching is designed to prepare graduate students for teaching positions in online or other distance education settings in both the K-12 and higher education environments. The certificate provides students with essential knowledge and skills in pedagogy, course development, evaluation, instruction, and other aspects of the educational process in online learning environments.

As a bridge program this Graduate Certificate allows students to apply all of their coursework for the Certificate to the Master of Education degree with a major in Learning Design and Technology if they decide to pursue that degree after completing the Certificate.

Admission Requirements: see Admission to Graduate Programs, p. 104.

CERTIFICATE REQUIREMENTS: The Bridge Certificate in Online Teaching requires a minimum of eighteen credits including ten credits of core courses and eight elective credits to be chosen from the courses cited below. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

CORE COURSES: (10-16 credits)

- LDT 7130 – Facilitation of Online and Face-To-Face Learning: Cr. 4
- LDT 7210 – Foundations of Distance Education: Cr. 4
- LDT 8120 – Practicum in Instructional Technology: Cr. 1-9

Upon consent of the Certificate Program Director, specific previous online teaching experience may be substituted for the LDT 8120 course requirement. Note: this does not mean that credit will be given for practical experiences - only that this particular course requirement may be waived.

ELECTIVE COURSES: (2 required; 8 credits)

Select two courses from the following:

- LDT 6140 – Designing Web Tools for the Classroom: Cr. 4
- LDT 6230 – Internet in the Classroom: Cr. 4
- LDT 7140 – Interactive Course Design: Cr. 4

- LDT 7220 – Multimedia for Instruction: Cr. 4
- LDT 7230 – Advanced Multimedia for Instruction: Cr. 4
- LDT 7310 – Learning Management Systems: Cr. 4

Online Teaching (Graduate Certificate Program)

The Graduate Certificate Program in Online Teaching is designed to prepare students for teaching positions in online or other distance education settings in both the K-12 and higher education environments. The certificate provides students with essential knowledge and skills in pedagogy, course development, evaluation, instruction, and other aspects of the educational process in online learning environments.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

CERTIFICATE REQUIREMENTS: A minimum of twelve credits is required for this certificate including:

- LDT 7130 – Facilitation of On-line and Face-to-Face Learning: Cr. 4
- LDT 7210 – Foundations of Distance Education: Cr. 4
- LDT 8120 – Practicum in Instructional Technology: Cr. 1-9

Additional courses to meet the minimum number of credit hours are selected with advisor approval. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

For additional information, please contact: Dr. Ke Zhang, Program Director; 313-577-1728, or 313-577-1679.

College and University Teaching (Graduate Certificate Program)

The Graduate Certificate in College and University Teaching is designed to equip doctoral students with insight, skills and experience to excel as classroom instructors and members of the academic community.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. This program is open only to recent graduates of and students currently enrolled in a Wayne State University doctoral or terminal master's program and who plan to seek faculty positions upon completing their degree

CERTIFICATE REQUIREMENTS: A minimum of fifteen credits is required for this certificate including:

- LDT 7310 – Learning Management Systems: Cr. 4
- LDT 8500 – Strategies for Teaching in Higher Education: Cr. 4

Additional courses to meet the minimum number of credit hours are selected with advisor approval. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

For additional information, please contact: Dr. Timothy Spannaus, Program Director; 313-577-1728, or 313-577-1741.

Educational Technology (State of Michigan Endorsement Recommendation)

This program allows currently certified teachers to obtain a recommendation from the College for a State of Michigan Endorsement in Educational Technology. The program can be combined with a Master's Degree or Educational Specialist Certificate with an emphasis in K-12 Technology Integration. Teachers with this endorsement are expected to play a leadership role in selecting, planning, developing, implementing and evaluating technology applications in the P-12 setting. Candidates for this endorsement will complete projects that adhere to both the Michigan technology standards for teachers and the standards for the International Society for Technology in Education.

Endorsement Requirements: A minimum of eighteen credits is required for the endorsement, including LDT 5140, 6140, 6230, 7980, and one elective course.

Education Administration Courses (EDA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7600 The Structure of American Education. Cr. 2

Major organizational, financial, administrative, legal and extra-legal problems affecting public education in the United States. Role of the educator in effecting change. (T)

7625 Leadership, Administration and the Principalship. Cr. 4

Provides a conceptual framework of the administrative process; examines interrelationships between the person, the job, the organizational setting, and the wider social context of education; examines the ways in which political, social and economic factors influence administrative decision making and leadership. (T)

7635 Introduction to Charter School Leadership. Cr. 4

Knowledge and skills necessary to education organizational leadership, specifically to develop charter school educational leaders who can create school cultures that are conducive to school learning. (F)

7640 The Elementary School Principalship. Cr. 4

Prereq: teaching experience. For experienced teachers and administrators entering the field of elementary school administration. Research findings and sources of information in the field. The principal's role in instructional leadership. A concurrent field experience is required with the lecture component of this course; specifications are provided in the course syllabus. (W,S)

7650 Secondary School Administration. Cr. 4

Prereq: teaching experience. Organization and administration of middle, junior and senior high schools. Analysis of administrative problems relating to curriculum improvement, staff personnel, guidance, instruction, school-community relations, and student activities. A concurrent field experience is required with the lecture component of this course; specifications are provided in the course syllabus. (F,S)

7660 Administrative Leadership in School-Community Relations and Public Relations. Cr. 3

Relationships between the school and the community; special reference to social change, community needs and the total school program; demographic and public relations techniques for school improvement, program development in special area, and millage campaigns in the context of the structure, function, and organization of the total educational system in a multicultural and pluralistic society. (T)

7670 Economic Issues in Education. Cr. 4

Economic issues in education at the local, intermediate, state, and federal levels. (W,S)

7675 Public School Finance and Budgeting. Cr. 4

Elementary and secondary public school finance and budgeting; legal foundations of school funding, how revenue is raised and dis-

tributed by states, the ways resources are allocated at the local district and school levels. (F,W)

7685 School Resource Allocation, Organizational Budgeting, and Facilities Management. Cr. 4

Development of business plans, fiscal accountability, reporting systems, and facilities management. (F)

7690 Introduction to Michigan School Law. Cr. 4

Constitutional and legal factors affecting Michigan public education. (T)

7800 Administration and Supervision of Special Education. Cr. 4

Professional problems; standards and procedures; references to history, development, philosophy, legal provisions, rules and regulations; major developments and trends at federal, state and local levels; services of other organizations and agencies. (F)

7810 Michigan Special Education Law. Cr. 4

Prereq: EDA 7800. Implications of statutes and regulations undergirding the education of the handicapped; educator's role in implementing, monitoring and influencing state and federal mandates for special education. (W)

7820 Emergent Policies in Special Education Administration. Cr. 2

Offered for S and U grades only. Discussion of research and literature relating to changing and emergent policies. (T)

7830 Practicum in Special Education Administration and Supervision. Cr. 3-6 (Max. 6)

Offered for S and U grades only. Prereq: EDA 7800, 7810. Supervised field-based experiences or individualized and contracted plan of supervised field study for special education administrators, curriculum resource consultants, supervisors, administrative consultants, and project directors. Multi-level practicum sites arranged. (T)

8611 Charter School Program Design and Evaluation. Cr. 4

Introduction to decision-making theory and methods of evaluation for charter school administrators. (W)

8620 School Personnel Administration. Cr. 4

Analysis of the personnel function in educational administration. (F,S)

8630 Supervision. Cr. 4

Basic issues in motivation, job satisfaction, and goal attainment in educational and human service organizations. Establishing productive supervisor/staff relations. Monitoring employee performance. (F,W)

8650 Staff Development and School Improvement. Cr. 2-6 (Max. 6)

A clinical experience in planning, design, and implementation of in-service and of staff development programs. (T)

8710 Readings in General Administration. Cr. 4

Prereq: admission to doctoral program. Directed readings in the principles underlying administration in education, government, business and social agencies and other major areas. (W)

8990 Internship in Administration. Cr. 1-8 (Max. 8)

Offered for S and U grades only. Supervised experience in administration of public education, government, business, and social agencies. Internship in cooperating school system. Includes seminar. (T)

9790 Doctoral Seminar in Educational Administration. Cr. 3

Prereq: admission to a doctoral program in education; for doctoral majors in other areas of concentration. Purposes of education as defined in federal and state constitutions, statutes and administrative rules; interpretation of policy statements of organizations and commissions. Role of the educational leader in our society. (W)

Educational Leadership and Policy Studies Courses (EPS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

8530 Seminar in the History of Education. (EHP 7670) (HIS 8110) Cr. 4

The growth and development of American education K-16, including events, circumstances, and influential ideas. Emphasis on the relationship between social, political, and economic change and the evolution of education. (I)

8560 Administration in Higher Education. Cr. 4

Examination of alternative theories of organizational and administrative behavior as these relate to colleges and universities. Consideration of the issues of academic governance and college bargaining as they impact on the role of the administrator. Special projects according to positions held and particular interests of students. (I)

8570 Contemporary Issues in Higher Education. Cr. 4

Seminar for advanced doctoral students. Intensive exploration of major issues and problems confronting higher education. (I)

8710 Readings in General Administration. Cr. 4

Prereq: admission to doctoral program. Directed readings in the principles underlying administration in education, government, business and social agencies and other major areas. (W)

8880 Workshop in Administrative and Organizational Studies. Cr. 1-10 (Max. 10)

Offered for S and U grades only. Practicum in the study of current problems affecting administrative and organizational studies. (I)

9600 Seminar in Research and Theory of Administration. Cr. 3

Research and theory relating to administration. Examination of textbooks, journals, and associations which promote educational administration research; review of the focus of inquiry and methodology for research in educational administration. (I)

9610 Seminar in Educational Policy Development. Cr. 4

Role and nature of educational policies; observation, assessment, reporting, and discussion of policy-making bodies; review of policy research method; relationship of public values and public school policy. (W)

9620 Seminar in Educational Policy Initiatives. Cr. 4

Prereq: EPS 9610. Recent policy initiatives in elementary and secondary education, with some attention to higher education. Techniques of policy analysis are utilized. (F)

Learning Design and Technology Courses (LDT)

Effective Fall 2016, Instructional Technology (IT) has been renamed Learning Design and Technology (LDT). The university will be transitioning to this new title for all related majors and courses during the 2016-17 academic year. Please contact the Division of Administrative and Organizational Services in the College of Education for more information.

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5140 Producing and Evaluating Technology-Based Instructional Materials. (LIS 6360) Cr. 4

Prereq: graduate standing. Design and development of instructional materials and media with an emphasis on technology applications integration. Creation and evaluation of instructional media and materials, based on national and state technology standards. (F,W)

5275 Training and Development. Cr. 4

Prereq: LDT 3115 or LDT 6110; LDT 3125 or LDT 7150; LDT 3135. Creating, implementing, managing and evaluating effective training and development; strategizing to incorporate adult learning concepts; determining marketing strategies. (Additional requirements apply if elected for graduate credit.) (B)

5285 Developing Technical Training. Cr. 4

Prereq: LDT 3115 or LDT 6110; LDT 3125 or LDT 7150; LDT 3135. Foundations of effective technical training: planning and managing the technical training function; issues in course design and technical training. (Additional requirements apply if elected for graduate credit.) (B)

6110 Design Thinking and Knowledge. (LIS 6350) Cr. 4

Exploring broad conceptions of design including all activities involved in generating intentional change via artifacts and experiences; design thinking and knowledge. (F,W)

6135 Technology Applications in School Administration. Cr. 2-3 (Max. 3)

Use of technology tools by school administrators; factors related to leadership and research in technology integration. Also offered online. (F)

6140 Designing Web Tools for the Classroom. Cr. 4

Design, development and evaluation of learning experiences using the World Wide Web. Student creates and evaluates learning activities using the Web; creation of personal learning portal. Basics of HTML and common authoring tools. Also offered online. (F)

6230 Internet in the Classroom. Cr. 4

Prereq: LDT 6140. Students use a variety of tools from the read/write web and explore their potential for use in K-12 education. Students also examine the use of online learning in the K-12 classroom. (W)

7100 Foundations of Instructional Technology. Cr. 3

Introduction to the foundations of instructional technology: intellectual history, careers, job roles, organizations, scholarly literature, requisite technology skills; introduction to course content and initial planning for students' programs. (T)

7110 Advanced Instructional Design Tools and Techniques. (LIS 7350) Cr. 4

Prereq: LDT 6110. Exploration and application of those techniques, tools and competencies characteristic of expert designers. Topics include: use of design software, program design, advanced analysis techniques, motivation design, rapid prototyping, reducing design cycle time, designing instruction for diverse learner populations. (I)

7115 Understanding the Adult Learner. Cr. 4

Analysis of how adults learn: learner readiness, development, motivation. Developmental and learning theories, memory, creativity, experiential learning, and affective learning. Content based primarily on psychology of teaching and learning of adults; secondarily on application to instruction and training. (B)

7130 Facilitation of On-Line Learning. Cr. 4

Design, development, implementation, facilitation and evaluation of various learning activities for diverse learners in online contexts, using appropriate learning technologies. (W)

7140 Interactive Course Design. Cr. 4

Prereq: LDT 6110; Windows and web literacy, or consent of instructor. Design, development and implementation of web-based courseware. Characteristics, advantages and limitations of the web as an instructional delivery system. Appropriate instructional strategies for the web. Use of contemporary development tools to create engaging, interactive, instructionally-sound web materials; design and development teams create and test a web-based instructional module. Also offered online. (F,W)

7150 Evaluation of Learning and Performance. Cr. 4

Prereq: LDT 6110. Evaluation of learning and performance interventions. Link to evaluation stakeholders, decision-making, and performance needs; identification of measurable indicators and alignment of methodology. Deriving actionable performance improvement recommendations. (F,W)

7180 Message Design for Learning. Cr. 4

Analysis and application of principles of perception, message design, and foundation research for publication of print and electronic materials. Includes use of color, shape, typography, and page and screen design principles. (B)

7210 Foundations of Distance Education. Cr. 4

Critical review of the theoretical foundations, principles, current status and future directions of distance education. Offered online. (F)

7220 Multimedia for Instruction. Cr. 4

Prereq: LDT 6110; Windows and web literacy, or consent of instructor. Instructional design and development applied to multimedia instruction, such as games for learning. Instructional strategies for higher-order learning, including problem solving. Alternative design and development methodologies. Essential multimedia production tools. Also offered online. (B)

7230 Advanced Multimedia for Instruction. Cr. 4

Prereq: LDT 7140 or 7220, or consent of instructor. Advanced topics in multimedia and web-based learning, including topics such as design, planning, production and editing of digital audio and video for use in multimedia websites and CDs/DVDs used for learning. (F)

7310 Learning Management Systems. Cr. 4

Prereq: LDT 7140 or 7220. Design and implementation of systems to support e-learning and traditional delivery. Implementation of traditional courses in a generic LMS; interface of course materials to stan-

dards-based management systems, reusable learning objects, standards, and collaborative learning. Also offered online. (F)

7320 Human Performance Technology. Cr. 4

Fundamentals of human performance technology, performances, standards, tools and techniques for the performance improvement consultant; analyzing jobs and tasks; improving individual performance; performance technology and instructional development strategies and tactics for performance improvement, performance support systems, organizational behavior; strategic planning and thinking; general processes; professional practices; human performances interventions of an instructional and non-instructional nature. Also offered online. (B)

7850 Needs Assessment and Analysis. Cr. 4

Discussion and application of needs assessment and analysis concepts, approaches and procedures across various performance levels (organizational, human, and instructional). Discusses evidence and processes required for performance intervention selection. (F)

7920 Strategic Planning for Training and Organization Improvement. Cr. 4

Prereq: LDT 7320. Current organizational issues and new competencies in the training profession, respecting: growth of organizational intellectual capital, resolution of complex performance problems, transformation of organizational culture and engineering of change. (B)

7940 Capstone Seminar in Organizational Learning. Cr. 4

Offered as a web course. Offered for S and U grades only. Prereq: completion of all other LDT courses on plan of work. Terminal project for Design and Performance Systems concentration in the Learning Design and Technology program. (W)

7980 Capstone Seminar in Learning Technologies. Cr. 4

Offered as a web course. Offered for S and U grades only. Prereq: completion of all other technology integration courses on plan of work. Capstone seminar for advanced students in Learning Technologies track. (W)

8100 Background, Issues and Trends in Instructional Technology. Cr. 4

History of instructional technology practice and intellectual foundations; implication for current issues. Factors likely to affect the future of the field, including contributions of key leaders. Electronic communication techniques used to explore issues with others in the field. (F)

8110 Advanced Instructional Design Theory and Research. Cr. 4

Prereq: LDT 6110. Analysis of theoretical foundations of instructional design and their application in design practice. Current design research and theory, future directions in design theory and practice. (W)

8120 Practicum in Instructional Technology. Cr. 1-9 (Max.9)

Prereq: LDT 6110. Offered for S and U grades only. Students design, develop, use, and evaluate instructional systems and subsystems in an educational, business, industrial, or human services setting. (F,W)

8130 Individual Projects in Instructional Technology. Cr. 1-6 (Max. 6)

Prereq: written consent of instructor. Students develop instructional technology material packages and devices through individual design and production. (F,W)

8135 Technology Applications in Central Administration. Cr. 3

Use of technology tools and data by central administrators; factors related to central office leadership and research in technology integration. (W)

8180 Readings in Instructional Technology. Cr. 1-6 (Max. 6)

Prereq: nine credits in instructional technology. Individually-paced course: investigation of recent research studies and theoretical essays in the field. (F,W)

8320 Performance Consulting and Analysis. Cr. 4

Prereq: LDT 7320. Practical application of principles of performance consulting to solve problems in large and small organizations. Topics include: role of performance consultant, identifying business needs, assessing performance, contracting techniques, managing the performance improvement process. Also offered online. (W)

8500 Strategies for Teaching in Higher Education. Cr. 3

Prereq: admission to a graduate program. Teaching in higher or adult education; topics may include: course design, writing tests, presentation skills, leading discussions, use of technology including course management systems. (W)

9105 Conducting Research in Instructional Technology. Cr. 3

Prereq: six credits in evaluation and research courses. Design, execution, and reporting of instructional technology research on selected topics. (F)

9110 Advanced Research Seminar and Practicum. Cr. 4

Prereq: doctoral student near completion of content major and research methods courses; and written consent of advisor. Course designed for advanced doctoral students in Learning Design and Technology; however it is also appropriate for students in other disciplines. Students should have completed almost all of their coursework in their major, and preferably also their work in EER. (W)

Kinesiology, Health and Sport Studies

Office: 2152 Faculty Administration Building; 313-577-4249
Assistant Deans: Nate McCaughtry
Website: <http://coe.wayne.edu/kinesiology/>

Professors

Hermann-J. Engels, Mariane Fahlman, Jeffrey J. Martin, Nate McCaughtry

Associate Professors

Qin Lai, Bo Shen

Assistant Professors

Erin Centeio, Rachael Dombrowski, Neha Gothe, Noel Kulik, Peter A. Roberts

Lecturers

Judith S. Anderson, Linda Jimenez, Janne Postma, Steven P. Singleton, Mario Vassallo, Laurel Whalen

Graduate Degrees

MASTER OF EDUCATION with a major in Health Education

MASTER OF EDUCATION with a major in Kinesiology, with concentrations in Exercise and Sport Science, Physical Education Pedagogy

MASTER OF ARTS IN TEACHING with a major in Secondary Education and a concentration in Kinesiology (Physical Education Pedagogy) or Health Education

MASTER OF ARTS with a major in Sports Administration, with concentrations in Interscholastic Athletic Administration, Intercollegiate Athletic Administration, Professional Sports Administration, or Commercial Sports Administration

DOCTOR OF PHILOSOPHY with a major in Kinesiology with concentrations in Exercise and Sport Science and Physical Education Pedagogy

Health and kinesiology, as integral parts of a general education, focus attention upon the vital needs of the human being to acquire attitudes, knowledge and skills necessary for regular participation in healthful living and physical and leisure-time activities. Accordingly, the Division provides courses of instruction both to promote physical well being through athletic and exercise programs, and to prepare teachers and practitioners to promote such health in others. The decreased demands for physical vigor, as well as the increased tensions caused by the technological progress of the modern society, demand a scientific approach to these vital phases of well-being.

The Division of Kinesiology, Health and Sport Studies (KHS) provides courses of instruction in health education, kinesiology (exercise and sport science and physical education pedagogy) and sports administration for the general student body. In addition, it provides professional curricula at the undergraduate and graduate levels for those students seeking careers in these areas. For students interested in advanced study and research the Division offers a doctoral program in Exercise and Sport Science, and Physical Education Pedagogy.

Advisors: Each student admitted to the College at the graduate level and seeking a degree is assigned to a faculty member who acts as

the advisor. The advisor guides the student in the selection of courses and counsels the student in solving academic problems.

Assistantships, Scholarships and Financial Aid

A number of assistantships are available in the area of kinesiology. Application should be made to the Office of the Assistant Dean, 2177 FAB. Scholarships, loans, work-study, and other types of financial aid are available through Wayne State University; contact the University Office of Financial Aid; 313-577-3378.

Scholarships are also available in the College of Education; contact Julie Osburn, Chair of the College of Education Scholarship Committee; julie.osburn@wayne.edu or 313-577-0909.

Admission to Master's Programs

Current and prospective students should always review the KHS web page, <http://coe.wayne.edu/kinesiology/>, for the most current information regarding admission and degree requirements.

Admission to graduate programs in the Division of Kinesiology, Health and Sport Studies is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to any program in the Division must meet the following criteria, as applicable:

Regular Admission: Applicants must have an undergraduate grade point average of 3.0 or above, and an undergraduate degree directly relating to the field of specialization being applied for, or an undergraduate degree accompanied by extensive educational background in a closely-related field.

Qualified Admission: Applicants whose undergraduate grade point average is between 2.5 and 2.9, and who otherwise meet the criteria for regular admission, will be admitted on this basis but will be required to successfully complete additional course work and/or other requirements as stipulated by the Division Graduate Officer.

Non-Degree Admission (Pre- or Post-Master's): Applicants must have an undergraduate grade point average of 2.5 or above, and an undergraduate degree in any field. Non-degree applicants must include a personal statement with their initial graduate application, specifying their intent to apply to a Kinesiology, Health and Sport Studies degree program prior to the earning of nine credit hours. Only one semester of full-time graduate study, part-time registrations not to exceed nine credits, are normally permitted in this classification. Based on the approval of the College of Education Graduate Officer, no more than nine credits taken in graduate non-degree admission status may later be applied to graduate degree program requirements. (See Admission, Graduate Non-Degree, p. 18.)

Post-Bachelor Admission: Applicants must have an undergraduate grade point average of 2.25 or above, and an undergraduate degree in any field. Post-Bachelor status allows students to elect courses through the 6000 level, for undergraduate credit only. (See Admission, Post-Bachelor, p. 19.)

Special Admission (Non-Degree or Post-Bachelor): Upon recommendation of an advisor and the Division Graduate Officer, an applicant whose undergraduate grade point average is below 2.25 may be admitted on Non-Degree or Post-Bachelor status, if the applicant demonstrates substantial evidence of meritorious academic achievement subsequent to the conferral of his/her undergraduate degree.

Senior Rule Admission: In their last undergraduate semester, Wayne State students with a 3.0 (or above) upper division grade point average have the option of taking a limited number of graduate credits. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements. Undergraduate and graduate courses combined may not exceed sixteen credits for the final semester of baccalaureate degree work. A Senior Rule student must register for at least one credit which is required for the under-

graduate degree in order to be eligible for this status. Students who have completed all required registrations for the baccalaureate may not obtain Senior Rule status. Completion of the *Application for Graduate Admission* form is required, and students are advised to consult their advisors and the Office of University Admissions. Application deadlines for Senior Rule admission are the same as for regular graduate admission. Students who qualify and are recommended by the department or college will be admitted for one semester. Graduate admission will be regularized upon evidence that the student has completed all requirements for the bachelor's degree; it is the student's responsibility to provide this transcript.

As a courtesy, the University permits a student to pay undergraduate fees for the graduate courses elected in a Senior Rule status. It is recommended that students elect only courses numbered 5000-6999 in their Senior Rule semester.

Health Education (M.Ed. Program)

Health Education is a professional field that is expanding rapidly, primarily because of recent Federal legislation that has emphasized health promotion and disease prevention as major priorities of national health and social policy. The goal of health education is to facilitate voluntary health-related behavioral and social change through application of the principles of the behavioral and social sciences. As such, health education is concerned with helping individuals and groups to assume responsibility for their health by learning and adopting behaviors, and by supporting social policies that can promote and maintain health. To this end, those earning a Master of Education with a major in health education develop competencies in: assessing individual and group needs for health education; planning, implementing, and evaluating effective health education programs; coordinating provisions for health education; acting as resource persons in health education; and communicating health and health education needs, concerns and resources. Successful completion of the degree program prepares students to become Certified Health Education Specialists (CHES).

There are two different programs for this degree:

M.Ed in Health Education for those pursuing employment with health departments, hospitals, businesses, and other community agencies.

M.Ed in Health Education with a teaching endorsement in Health, grades 6-12

M.Ed. In Health Education

DEGREE REQUIREMENTS: The Master of Education with a major in health education degree is offered under the following plans:

Plan A: *Thirty-six credits including an eight-credit thesis*

Plan B: *Thirty credits including a three credit project*

Plan C: *Thirty credits (neither thesis or project required)*

Requirements for this degree include: general professional education courses; specialization courses and elective courses. Professional education courses and electives should be chosen in consultation with an advisor. A minimum g.p.a. of 3.0 is required for graduation. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

GENERAL PROFESSIONAL COURSES:

Students must select EER 7630 HE 7310.

Minimum: 6 credits

REQUIRED SPECIALIZATION COURSES:

HE 6350 – Health Education and the Nation's Health: Cr. 3

HE 6420 – Introduction to Health Education Program Design: Cr. 3

HE 6530 – Principles and Practice of Health Education and Promotion: Cr. 3

HE 6501 – Eval and Measurement in Community Health Ed

HE 6550 – Teaching Methods in Health Education: Cr. 3

KHS 5522 – Health Psychology Cr. 3

KHS 8540 – Theories of Health Behavior: Cr. 3

and one of the following:

KHS 7999 – Master's Essay and Project,

KHS 8999 – Master's Thesis: Cr. 3-8

KHS 8750 – Internship Cr. 3

Minimum: 24 credits

M.Ed. With Teaching Endorsement

Teachers who possess a current Michigan teaching certificate may earn a health teaching endorsement by selecting this option.

DEGREE REQUIREMENTS: The professional preparation in Health Education leading to a Master of Education degree with a teaching endorsement in Health grades 6-12 requires a minimum of thirty credits and is divided into two general areas of study: specialization courses (twenty-four credits) and general professional courses (six credits) as outlined below. This option for the MED in Health Education is offered as a Plan C option for which neither an essay/project or thesis is required.

PRE-REQUISITE COURSES

HE 2330 – First Aid and CPR: Cr. 3 (or certification)

HE 4340 – Family and Reproductive Health: Cr. 3 (or equivalent)

REQUIRED HEALTH EDUCATION COURSES: (24 credits)

HE 5220 – Health Behavior Change: Cr. 3

HE 5440 – Mental Health and Substance Abuse: Cr. 3

HE 5620 – Performance Based Assessment in Health Education: Cr. 3

HE 6350 – Health Education and the Nation's Health: Cr. 3

HE 6500 – Comprehensive School Health Education: Cr. 3

HE 6550 – Teaching Methods and Techniques in Health Education: Cr. 3

KHS 6540 or KHS 7990 or RLL 6802

– Workshop in KHS; Nutrition: Cr. 3

– Special Problems in KHS. Cr. 1-3 (Max. 9)

– Assessment and Differentiated Instr. for Diverse Learners: 6-12: Cr. 3

KHS 5522 – Health Psychology: Cr. 3

THREE GENERAL PROFESSIONAL COURSES (2 credits each)

CED 6700 – Role of the Teacher in Guidance: Cr. 2

EDP 5480 – Adolescent Psychology: Cr. 2-3

EDP 7350 – The Learning Process: Cr. 2-3

EER 7630 – Fundamentals of Statistics: Cr. 3

EHP 7600 – Philosophy of Education: Cr. 3

Total degree requirements: 30 credits

Kinesiology (M.Ed. Program)

The Master of Education with a Major in Kinesiology is offered under three concentrations: Physical Education Pedagogy, Exercise and Sport Science, and Wellness Clinician/Research. Completion of this degree requires satisfaction of one of these specializations as outlined below.

Admission to this program is contingent upon admission to the Graduate School and the Division of Kinesiology, Health and Sport Studies; for requirements, see Admission, Graduate School, p. 17, and the section above on 'Admission.'

DEGREE REQUIREMENTS: This Master of Education with a major in Kinesiology degree is offered under the following options:

Plan A: *A minimum of thirty credits including an eight credit thesis*

Plan B: *A minimum of thirty credits including a three credit project*

Plan C: *Thirty credits (neither thesis or project required)*

Physical Education Pedagogy (M.Ed. Program)

This specialization is designed to prepare students for academic or professional careers in teaching physical education or physical activity leadership. It involves the study of concepts related to conducting physical activity programs, with an emphasis on those relating to school-based, community-based and sport-based contexts. This degree is intended to enable teachers certified in physical education to continue their studies in physical education pedagogy (including adapted physical education), and for teachers certified in other areas of education to obtain certification in physical education while simultaneously obtaining their graduate degree. As such, candidates for the program must hold a current Michigan teacher certification (but not necessarily in physical education).

DEGREE REQUIREMENTS: This Master of Education degree requires a minimum of thirty credit including major requirement/elective courses (minimum of twenty-four credits) and general professional courses (minimum of six credits). All courses are selected at the discretion and with the guidance of an advisor. A minimum g.p.a. of 3.0 is required for graduation. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

GENERAL PROFESSIONAL COURSES:

Students must elect a minimum of six general professional credits from the following courses:

- CED 6700 – Role of the Teacher in Guidance: 2
- EDP 5450 – Child Psychology: Cr. 2-3
- EDP 5480 – Adolescent Psychology: Cr. 2-3
- EDP 7350 – The Learning Process: Cr. 2-3
- EER 7630 – Fundamentals of Statistics: Cr. 3
- EER 7870 – Fundamentals of Qualitative Research: Cr. 3
- EHP 7600 – Philosophy of Education: Cr. 2-3
- SED 5030 – Education of Exceptional Children: Cr. 3
- SED 5140 – Behavior Management: Positive Behavior Support: Cr. 3

MAJOR REQUIREMENT/ELECTIVE COURSES

Students must complete a minimum of 24 credits of specialization and elective courses in the areas of Kinesiology, Health, Sport Studies and Education. Sample courses to fulfill this requirement might include but are not limited to the following courses:

- KHS 6540 – Workshop in KHS: Cr. 1-3
- KHS 7990 – Special Problems in KHS: Cr. 1-3
- KHS 7999/8999 – Master's Essay and Project, or Thesis: Cr. 3-8
- KIN 5110 – Motor Learning and Development: Cr. 3
- KIN 5210 – Movement Education: Cr. 3
- KIN 5220 – Sports I: Cr. 3
- KIN 5240 – Fitness Instruction: Cr. 3
- KIN 5200 – Effective Teaching and Instructional Practices: Cr. 3
- KIN 5530 – Technology and Assessment in Kinesiology: Cr. 3
- KIN 5600 – Socio-Cultural Issues in Physical Activity: Cr. 3
- KIN 7560 – Achievement Motivation in Physical Education: Cr. 3
- KIN 8530 – Motor Learning: Cr. 3
- KIN 5400 – Adapted Physical Activity: Cr. 3
- KIN 5410 – Adapted Aquatics: Cr. 3
- KIN 5420 – Disability and Sport: Cr. 3
- KIN 5425 – Assessment & Service Delivery in Adapted Physical Education: Cr. 3
- KIN 5430 – Leadership Training & Practicum in Adapted Physical Education: Cr. 3

Exercise and Sport Science (M.Ed. Program)

This graduate degree in kinesiology with an exercise and sport science concentration is designed to prepare students on the knowl-

edge and skill in sport and fitness activities, psychology of exercise and sport, apply knowledge about human movement systems to fitness/wellness, and analyze and evaluate human performance of individuals in various age groups and at differing fitness levels.

DEGREE REQUIREMENTS: Thirty credits are required. Students selecting this program will concentrate in one of four areas: biomechanics, exercise physiology, motor control/development/learning, or exercise and sport psychology.

REQUIRED COURSES

- KHS 5523 – Physical Activity and Exercise Psychology: Cr. 3
- KIN 6210 – Physical Activity and Cognition: Cr. 3
- KIN 6310 – Physiology of Exercise II: Cr. 3
- KIN 6320 – Fitness Assessment & Exercise Prescription: Cr. 3
- KIN 7580 – Biomechanical Analysis of Motor Activity: Cr. 3
- KIN 8530 – Motor Learning: Cr. 3

CULMINATING EXPERIENCE (one of the following)

- KHS 7999/8999/8750 – Master's Essay and Project, or Thesis, or Graduate Internship: Cr. 3-8

ELECTIVE COURSES: as approved by advisor to complete the thirty credits required for graduation.

Secondary Education with a Concentration in Kinesiology (Physical Education Pedagogy) (M.A.T. Program)

This program prepares students for the teaching profession or academic studies in physical education pedagogy. Students study the physiological, psychological, and sociological bases of human movement; instructional methodologies; teacher education; and school curricula through a combination of intensive academic practical and research activities.

This M.A.T. degree is designed to enable individuals with a Bachelor's degree in a non-teaching field to attain a Master's degree, while simultaneously acquiring Michigan teacher certification. The degree is comprised of three sequential components: post-bachelor prerequisite courses, teacher certification courses, and Master's degree finalization courses. After completion of the post-bachelor prerequisite coursework, students apply for graduate status in the College of Education, develop a graduate plan of work, and complete the remaining two areas of coursework. Students obtain teacher certification after completion of the second component of the program and typically begin teaching employment while they complete the Master's finalization coursework. For more details see the Graduate Student Handbook at <http://www.kinesiology.wayne.edu>

NOTE: Teaching candidates certified after July 1, 2004 are required by the State of Michigan Department of Education to obtain First Aid and Adult and Child CPR certification before they can be recommended for the Michigan Teaching Certificate.

Admission Requirements:

- 1) Bachelor's degree from an accredited college or university. Regular admission requires a minimum 2.75 grade point average. Qualified admission requires a minimum 2.5 grade point average.
- 2) A minimum 3.0 grade point average in prerequisite coursework and with a 'C' or better grade in all coursework.
- 3) Successful completion of the Michigan Test for Teacher Certification (MTTC) Professional Readiness Examination (PRE). MTTC PRE scores must be furnished directly to Wayne State University by the MTTC testing agency: Evaluation Systems Group of Pearson, When registering for the MTTC, select "Wayne State University (31)" as a "College or University to Receive Scores". Students whose examination scores were not released to Wayne State University should request an original score report from Evaluation Systems Group of Pearson. An original score report is required by the Michigan Department of Education for verification of test scores.

- 4) Verification of experience working with children.
- 5) A current (not older than 6-months from application date) State of Michigan Criminal Background check.
- 6) Copy of transcript evaluation for teaching major and minor.
- 7) Admission to the Graduate School (see Admission, Graduate School, p. 17).

DEGREE REQUIREMENTS: Students must complete at least forty credits preceded by any identified prerequisites. Teacher certification is required degree completion. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively. Courses offered in the three components of the program are as follows:

TEACHER CERTIFICATION COURSES

- KIN 5100 – Anatomical and Physiological Bases to Physical Activity: Cr. 3
- KIN 5110 – Motor Learning and Development: Cr. 3
- KIN 5200 – Effective Teaching and Instructional Practices: Cr. 3
- KIN 5210 – Movement Education: Cr. 3
- KIN 5220 – Sports I: Cr. 3
- KIN 5240 – Fitness Instruction: Cr. 3
- KIN 5400 – Adapted Physical Activity: Cr. 3
- KIN 5530 – Technology and Assessment in Kinesiology: Cr. 3
- KIN 5600 – Socio-Cultural Issues in Physical Activity: Cr. 3
- EDP 6210 – Foundations of Educational Psychology: Cr. 3
- KIN 5780 – Student Teaching and Seminar: Cr. 10
- RLL 6121 – Teaching Reading the Middle/Secondary Subject Area: Cr. 3

Select One of the Following Three Courses:

- KIN 5230 – Sports II: Cr. 3
- KIN 5350 – Adventure and Outdoor Pursuits: Cr. 3
- KIN 5260 – Aquatic Leadership: Cr. 3

MASTER'S DEGREE FINALIZATION COURSE

- KHS 7999 Master's Project: Cr. 3

Sports Administration (M.A. Program)

This online M.A. program is designed to prepare students for a career within the broad spectrum of sports programs, agencies, and related organizations. Students may specialize in one of four areas of concentration: interscholastic athletic administration, intercollegiate athletic administration, commercial sports administration, or professional sports administration. Students may custom-design their curriculum through internships and elective coursework as approved by their advisor.

Admission to this program is contingent upon admission to the Graduate School and the Division; for requirements, see Admission, Graduate School, p. 17 and Admission to Master's Programs, p. 115.

DEGREE REQUIREMENTS: This Master of Arts degree is offered as a Plan C option. Plan C requires thirty-four credits in course work including twenty-four credits in required courses, with the remaining credits from courses to be selected in consultation with an advisor. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

REQUIRED COURSES:

- KHS 6570 – Sports Marketing: Cr. 3
- KHS 6660 – Risk Management in Physical Ed and Sports: Cr. 3
- KHS 6661 – Equity and Access in Sport: Cr. 3
- KHS 7540 – Concepts in HE, PE and Recreation Management: Cr. 3
- KHS 7581 – Sport Finance: Cr. 3

- KHS 8750 – Internship in KHS: Cr. 6
- KIN 6410 – Introduction to Sports Administration: Cr. 3

Selected Courses: Additional courses from a list approved by the advisor to complete the minimum of thirty credits required for graduation. A minimum of twenty-four of these thirty credits required for graduation must be earned in courses within the Division of Kinesiology, Health and Sport Studies.

Adapted Physical Education (Teaching Endorsement)

This program leads to a state teaching endorsement as a "teacher of students requiring adapted physical education" (SP endorsement). The program requires twenty-four credits in approved special education and adapted physical education courses. The requirements for the Adapted Physical Education endorsement can be completed as part of a graduate program leading to a Master of Education (M.Ed) with a Major in Kinesiology (Physical Education Pedagogy).

Admission to this program is contingent upon admission to the Graduate School and the Division; for requirements, see Admission, Graduate School, p. 17 and Admission to Master's Programs, p. 115. Additionally, applicants must possess a valid Michigan teaching certificate in physical education or any area of special education.

ENDORSEMENT REQUIREMENTS

- KIN 5400 – Adapted Physical Activity: Cr. 3
- KIN 5410 – Adapted Aquatics: Cr. 3
- KIN 5420 – Disability and Sport: Cr. 3
- KIN 5425 – Assessment & Service Delivery in Adapted Physical Education: Cr. 3
- KIN 5430 – Leadership Training & Practicum in Adapted Physical Education: Cr. 3
- SED 5030 – Education of Exceptional Children: Cr. 3
- SED 5140 – Behavior Management: Positive Behavior Support: Cr. 3

Total: 21 credits

Kinesiology (Ph.D. Program)

The Ph.D. program in Kinesiology will prepare students to become teachers and researchers at academic institutions and other venues requiring Ph.D.-trained professionals. The exercise and sport science concentration offers students unique research opportunities in an urban setting as well as study and research options with other units such as nutrition and food science, physical therapy and the school of medicine. The physical education pedagogy concentration students benefit from a strong faculty research program in physical education pedagogy and access to other units in the College of Education. These provide students with both a unique and wide range of study.

Admission to this program is contingent upon admission to the Graduate School and the Division; for requirements, see Admission, Graduate School, p. 17 and Admission to Master's Programs, p. 115.

DEGREE REQUIREMENTS: The general requirements for this degree are stated at Doctor of Education Requirements, p. 104. For the Ph.D. program in Kinesiology, the core courses provide a background in the respective concentrations. The statistics/research methods courses provide background in the design of research protocols and subsequent analysis of data. The doctoral seminar courses provide the opportunity to interact with other doctoral students in a setting that promotes the discussion of specific research topics. The cognate/elective courses supplement the knowledge base for the student's research. The dissertation credits allow the students to design and implement a program of original research culminating in a dissertation.

All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

tively. Students may enroll on a full-time or part-time basis but must complete requirements within seven years of admission.

REQUIRED CORE COURSES

Physical Education Pedagogy concentration (24 credits total):

- KHS 9600 – Doctoral Sem. in Kinesiology, Health, and Sport Studies: Cr. 3
 - KIN 7440 – Rsch. and Mthds. in Physical Ed. for Elem. School Children I: Cr. 3
 - KIN 7460 – Rsch and Mthds. in Physical Ed. for Secondary School Children: Cr. 3
 - KIN 7510 – Socio-Cultural Issues in Physical Education: Cr. 3
 - KIN 7560 – Achievement Motivation in Physical Education: Cr. 3
 - KIN 8400 – Research in Physical Education: Cr. 3
- Additional credits of approved Kinesiology courses

Exercise and Sport Science concentration (25 credits total):

- KHS 8700 – Research in Psycho-Social Dimensions of Physical Activity: Cr. 3
 - KHS 9600 – Doctoral Sem. in Kinesiology, Health, and Sport Studies: Cr. 3
 - KIN 6310 – Physiology of Exercise II: Cr. 3
 - KIN 7580 – Biomechanical Analysis of Motor Activity: Cr. 3
 - KIN 8530 – Motor Learning: Cr. 3
- Six additional credits of approved Kinesiology courses

REQUIREMENTS FOR BOTH CONCENTRATIONS

Statistics and research methods courses as approved: fifteen credits.

Doctoral seminar courses as approved: Six credits.

Cognate courses: Ten credits in the student's area of interest.

Elective courses: Additional courses in student's area of interest to meet the total requirement of ninety credits.

Dissertation Courses: thirty dissertation credits.

Health Education Courses (HE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

Students are strongly advised to visit the KHS website (<http://coe.wayne.edu/kinesiology/>) to verify the current schedule of planned course offerings.

5220 Health Behavior Change. Cr. 3

Prereq: PSY 1010 or higher PSY course and Intermediate Composition (IC). Principles of behavior modification; theories of health behavior and program planning as they relate to health promotion and wellness. (B)

5440 Mental Health and Substance Abuse. Cr. 3

Prereq: HE 2310 or HE 3300 and Intermediate Composition (IC) or graduate status. Identification, treatment, and prevention of mental health/substance abuse problems. How school-age children and their families are affected by these problems; role of the teacher. (F,W)

5522 Health Psychology. Cr. 3

Prereq: PSY 1010 or higher PSY course or graduate status. Foundations of health, research methods, biological foundations of health/illness, stress, nutrition, obesity, eating disorders, substance abuse and health, cardiovascular disease, diabetes and health, exercise and cancer; HIV, AIDS, and health; pain management and patient behavior, complementary and alternative medicine, health psychology across the life span. (F)

5620 Performance Based Assessment in Health Education. Cr. 3

Prereq: admission to College of Education Level 2; successful completion of 15 credits in HE courses or graduate status. Assessment and evaluative techniques applied to health education, including test construction and performance-based assessment. Designed to meet assessment and evaluative competencies required for entry-level health teachers in Michigan. (S)

5780 Directed Student Teaching. Cr. 10

Offered for S and U grades only. Prereq: admission to student teaching as listed in the undergraduate handbook. Secondary school teaching experience. (F,W)

6350 Health Education and the Nation's Health. Cr. 3

Introductory course for graduate health program. Overview of current national health status; diseases linked to behaviors, health care, proposed solutions to problems in the health care system and delivery of health care. (B)

6420 Introduction to Health Education Program Design. Cr. 3

Prereq: HE 5220, Math Competency (MC) and min 2.5 cumulative g.p.a. or Graduate Status. Overview of health education program process in all practice settings. Introduction to needs assessment, objective writing, staff training, and evaluation in health education. (B)

6500 Comprehensive School Health Education. Cr. 3

Open only to major or minor in health education. Prereq: graduate standing; or HE 2310, HE 3300, HE 3440, HE 4340, HE 5440 and admission to College Level 2. Overview of comprehensive school health education. Study of major comprehensive health curricula with intensive training in the Michigan Model. This class leads to certification to teach the Michigan Model in public schools. (F)

6501 Measurement and Evaluation in Community Health Education. Cr. 3

Prereq: HE 6420 and min 2.5 cumulative g.p.a. or Graduate Status. Frameworks, principles, models and strategies for evaluating health education programs. (B)

6530 Principles and Practice of Health Education and Health Promotion. Cr. 3

Principles and application of health education programs in the community or health care setting. Consultation skills, marketing and motivational strategies within the role of the health educator. (B)

6550 Teaching Methods and Techniques in Health Education. Cr. 3

Strategies employed in dissemination of health information in the community and school system. Integration of cognitive skills, behavior change theory, and learning styles to produce effective health instruction. (B)

7310 (EDP 7310) Psychology of Learning Across Development Cr. 3

A selection of human development and learning theories and concepts emphasizing application to various professional contexts, e.g., community, health, business, school, and other organizational settings; focus is on late adolescence (ages 18-22) and adulthood. (Y)

Kinesiology Courses (KIN)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

Students are strongly advised to visit the KHS website (<http://coe.wayne.edu/kinesiology/>) to verify the current schedule of planned course offerings.

5100 Anatomical and Physiological Bases of Physical Activity. Cr. 3

Open only to students with junior, senior, or graduate standing. Basic anatomical and physiological principles that have direct application to physical activity programming in the K-12 school setting and in community-based physical activity settings. The course will include practical application experiences to illustrate the theoretical knowledge base. (F)

5110 Motor Learning and Development. Cr. 3

Open only to students with junior, senior, or graduate standing. Principles and practices that affect the learning and development of motor skills from birth to early adulthood. Study of theories of motor development, motor learning, and motor control; motor skill classification and games classification; developmental and motor learning stages; methodological considerations including how to measure and assess motor learning in field-based situations; and professional applications of the motor learning and development in physical education and physical activity programming. (W)

5200 Effective Teaching and Instructional Practices. Cr. 3

Open only to students with junior, senior, or graduate standing. Effective teaching and instructional practices in physical education and physical activity. Study of the learning process, factors that influence the learning process, effective teaching skills, effective task presentation and content development, and management of and motivation in the learning environment. Research on effective teaching practices, including behavior management, in quality physical education and physical activity programs. (F)

5210 Movement Education. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5200. Advanced study of elementary movement education through and in-depth analysis of Graham's movement skill themes. Study of movement concepts, skill themes, curriculum design, and the implementation of activities in a practical application. Students will also investigate research supporting the inclusion of movement education in quality physical education and physical activity programs. (F)

5220 Sports I. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5200. This course is designed for students to learn sports across three categories: tag, invasion, and field games. Students will learn multiple sports from each category and will be able to make extensions to many other sports in that category. In addition to instructional strategies, basic concepts, and planning for effective teaching, students will become familiar with the Sport Education Model and Tactical Games Approach. (W)

5230 Sports II. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5200. This course is designed for students to learn sports across two categories: target and net/wall games. Students will learn multiple sports from each category and will be able to make extensions to many other sports in that category. The specific instructional strategies, basic concepts, and planning for effective teaching will be focused and the sport education model will be further developed. Meanwhile, other instructional models for physical education, such as cooperative learning, teaching game for understanding, and teaching personal and social responsibility, will be introduced. (S)

5240 Fitness Instruction. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5200. Introduction to instructing children, youth, adolescents, and young adults in group fitness activities both in a physical activity environment and community setting. Instructional strategies, basic concepts, and planning for teaching group fitness as well as using basic technology to enhance teaching will be taught. (W)

5250 Adventure and Outdoor Pursuits. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5200. Instructing youth in adventure activities and outdoor pursuits. Basic principles and concepts behind teaching youth how to be physically active in the outdoors; planning appropriate instructional strategies. Content might include lessons focusing on initiatives and trust activities appropriate for school-aged youth as well as rock climbing, hiking, kayaking, and orienteering. (S)

5260 Aquatic Leadership. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5200. Leadership responsibilities in the area of aquatics. Emphasis on a broad range of aquatic experiences and teaching methodologies including swimming and rescue skills necessary to complete certification as an American Red Cross Water Safety Instructor and Lifeguard. The course will also include program development, including programming for individuals with disabilities, risk management, and staff management. (W)

5350 Exercise Science Internship. Cr. 2-4 (Max. 8)

Prereq: KIN 6320, LFA 2330. Supervised experience in health and exercise programs with various populations at approved sites. Material Fee as Indicated in the Schedule of Classes. (T)

5400 Adapted Physical Activity. Cr. 3

Prereq: KIN 3400 or KIN 5110; admission to College Level 2. Discussion of historical and contemporary issues in adapted physical activity; instruction on appropriate evidence-based intervention strategies for individuals with varying disabling conditions; techniques for adapting the environmental conditions to improve performance and attending behaviors; and designing, implementing, and evaluating individualized programs of physical activity for individuals with emerging disabilities that face the community. (F)

5410 Methods and Materials: Adapted Aquatics Cr. 3

Prereq: KIN 5400; admission to College Level 2. Teaching methods and materials to meet the needs individuals with special needs through adapted aquatics including water orientation, swim instruction, fitness instruction, facilities and equipment considerations, and research on adapted aquatics. (S)

5420 Disability and Sports Cr. 3

Prereq: KIN 5400; admission to College Level 2. This course will address teaching and coaching of developmental, recreational, and competitive sports across school-based and community-based settings including Paralympic, Special Olympic and deaf sport; and wheelchair and ambulatory sports for various age groups. (W)

5425 Assessment and Service Delivery in Adapted Physical Education. Cr. 3

Open only to students with junior, senior, or graduate standing. Prereq: KIN 5400. This course addresses how to appropriately and

accurately select, administer and interpret assessment results for adapted physical education purposes; use assessment results to design and implement effective adapted physical education programs for PK-12 populations of students with disabilities; and participate collaboratively in the individualized education program (IEP) process. (F)

5430 Leadership Training and Practicum in Adapted Physical Education Cr. 3

Prereq: KIN 5400, KIN 5410, KIN 5420; admission to College Level 2. Offered for S and U grades only. Prepares adapted physical education specialists for leadership positions in K-12 adapted physical education programs and community-based adapted physical activity programs. Includes directed fieldwork in adapted physical education as required by the State of Michigan. (W)

5510 Coaching Principles and Certification. Cr. 3

Specific topics on the coach and the athlete in areas of administration, motor learning, physical growth, motor skill acquisition, philosophy, psychology and sociology. (S)

5520 Sport Psychology. Cr. 3

Prereq: Intermediate Composition (IC) and PSY 1010 or higher PSY course or graduate status. History, personality, psychology of injury; theories of motivation, arousal, and anxiety; competition and cooperation, feedback, reinforcement and intrinsic motivation. Team dynamics, group cohesion, communication and leadership processes, psychological qualities and skills (such as goal setting, imagery, concentration). Unhealthy sport behaviors, burnout, over-training. Psychology of youth sport; character development. (W)

5523 Physical Activity and Exercise Psychology. Cr. 3

Prereq: Intermediate Composition (IC) and PSY 1010 or higher PSY course or graduate status. Introduction of physical activity and exercise psychology from a multi-theory perspective. Determinants, well-being and interventions in physical activity, physical education and exercise settings will be explored through a broad spectrum. (F,W)

5530 Technology and Assessment in Kinesiology. Cr. 3

Prereq: KIN 5200, 5210, 5220 and 5240.; admission to College Level 2. Current methods and activities for assessment in physical education and physical activity programming. Course also includes the use of technology in physical education and physical activity programming. (W)

5550 Health and Physical Education for the Elementary School Teacher. Cr. 3

Required for Elementary Education program. Broad content knowledge of developmentally appropriate physical education and health education for children in grades K-6. (T)

5600 Socio-cultural Issues in Physical Activity. Cr. 3

Prereq: Level II or Graduate Student Contemporary and historical perspective on socio-cultural and philosophical issues that influence American youth and instruction in a physical activity setting, including race, gender, sexuality, obesity, and urbanization. (F)

5770 Physical Activity Leadership Internship. Cr. 7

Level II admission to the College of Education. Open only to students with junior, senior, or graduate standing. Individually arranged, supervised, educational and professional experience at an approved on-campus or off-campus based internship site. Opportunities to organize and conduct physical activity leadership responsibilities under close supervision. Through this type of exposure, the student will receive practical, on-the-job experience in one or more types of physical activity leadership. (W)

5780 Student Teaching and Seminar. Cr. 10

Prereq: written consent of kinesiology student teaching coordinator; Level 2 admission to College of Education. Offered for S and U grades only. This course prepares students for initial teaching certification through K-12 student teaching experience and seminars. The

regular seminar will cover a variety of issues and topics related to teaching methods and becoming an effective teacher. (F)

6100 Methods of Group Exercise Instruction. Cr. 2

Open only to students with junior, senior, or graduate standing; prereq: KIN 3570. This course will provide students the opportunity to gain fitness leadership knowledge and ability of how to safely instruct a group exercise class. (F,W)

6120 Strength and Conditioning. Cr. 3

Prereq: KIN 3570, KIN 3580, Jr./Sr. status or grad status only. A comprehensive overview of strength and conditioning with an emphasis on the exercise sciences (including anatomy, exercise physiology, and biomechanics) and nutrition, exercise technique, program design, organization and administration, and testing and evaluation. Additionally, this course is designed to prepare students for the nationally accredited Certified Strength and Conditioning Specialist (CSCS) certification exam. (W)

6150 ECG Interpretation. Cr. 3

Prereq: BIO 2870 or equiv. with grade of C or above; KIN 3570. This course provides students with an understanding of ECG and how to interpret static and dynamic ECG strips. It gives the opportunity for students to gain a basic knowledge of ECG and how to recognize normal and abnormal ECGs. (W,S)

6160 Pharmacology for the Physical Activity Professional. Cr. 3

Prereqs - KIN 3570 and KIN 3580; Jr./Sr. status or grad status only. Provides students with an understanding of the concepts of pharmacology, how drugs work, and different pharmacologic actions and adverse effects that drugs produce. (T)

6210 Physical Activity and Cognition. Cr. 3

Prereq: Jr./Sr. status or grad status only, KHS 5523. An overview of physical activity as it relates to cognitive functioning across the lifespan. Exploration of measures of physical activity, neuropsychological test batteries assessing various domains of cognitive functioning. Review studies examining the effect of physical activity on cognition and its underlying mechanisms. (W)

6310 (PSL 6010) Physiology of Exercise II. (PT 6310) Cr. 3

Prereq: KIN 3570; BIO 2870 or equiv. with grade of C or above. Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. (F)

6320 Fitness Assessment and Exercise Prescription. Cr. 3

Prereq: KIN 3570; BIO 2870 or equiv. with grade of C or above or KIN 6310. Physiological principles of physical fitness, including health and fitness appraisal, body composition assessment, and exercise prescription guidelines. (F,W)

7510 Socio-Cultural Issues in Physical Education. Cr. 3

Contemporary and historical perspective on socio-cultural and philosophical issues that influence American public schooling and physical education teacher preparation, including race, class, gender, sexuality, and urbanization. (F)

7530 Research in Teaching in Physical Education. Cr. 3

Practical experiences in the research process. Topics include: methods for research on teaching, current research trends, research results related to teaching and teacher effectiveness, critique of current trends in educational practice. (F)

7560 Achievement Motivation in Physical Education. Cr. 3

Prereq: written consent of instructor prior to registration. Enhancement of understanding of achievement motivation from a multi-theory perspective. (F)

7580 Biomechanical Analysis of Motor Activity. Cr. 3

Prereq: basic course in biomechanics/kinesiology. Principles and practice in the analysis of human movement. Selected methods of analysis are used in demonstrations and lab experiences. Students complete a biomechanical analysis project on an appropriate human motor skill. (W)

8400 Research in Physical Education. Cr. 3

Prereq: graduate standing. Understanding physical education research in the three dominant research traditions of curriculum, teaching, and teacher education. (F)

8530 Motor Learning. Cr. 3

Examination of research in motor learning and performance. Relation of the nervous system and other physiological mechanisms to motor behavior and other conditions which affect the acquisition of motor skill: perception, motivation, psychology of motor behavior. (F)

Kinesiology, Health and Sport Studies Courses (KHS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

Students are strongly advised to visit the KHS website (<http://coe.wayne.edu/kinesiology/>) to verify the current schedule of planned course offerings.

5740 Facility Planning, Design and Construction. Cr. 3

Process of planning, design and construction from dream of a new facility through its completion and opening for business. Methods of working with architects, consultants, engineers and contractors to design and build sports and recreation facilities that optimally support the programs that will use them. Overview of latest concepts, trends, and innovations in activity-related facilities. (F)

5900 Research Methods in KHS. Cr. 4

Prereq: Level II or graduate standing. Research proposal preparation, including literature review, hypothesis construction, research design, and computer-aided data analysis. Application of skills to critical reading of primary sources. (F,W)

6410 Introduction to Sports Administration. Cr. 3

Current categories of competitive sports and athletics identified and analyzed to determine potential administrative positions in their structures and the qualifications necessary for each position. (F,W)

6530 Professional Sports Administration. Cr. 3

Introduction to the business strategies of a professional sports team, including an in depth look at breaking into the industry, the importance and value of community affairs, corporate sponsorship, business public relations and player relations. (W)

6531 Sports Event Management. Cr. 3

Comprehensive study of the planning, maintenance, operations, financial considerations, customer engagement, and personnel management of sporting events and the facilities that host the events. (S)

6540 Workshop in Kinesiology, Health and Sport Studies. Cr. 1-3 (Max. 12)

Prereq: written consent of advisor prior to registration. Exploration of topics of current interest for the profession. (S)

6550 Publicity, Promotion and Public Relations. Cr. 2

Practical marketing methods and procedures used in promotion of athletics and related fields. Development of proposals, workshops, public relations policies. (F)

6560 Media Design and Communication. Cr. 3

Examines the impact sports and the media have on each other and explores the use of technology in promoting, marketing, and managing health, PE, recreation, and sports programs. (W)

6570 Sports Marketing. Cr. 3

Concepts and principles of marketing as applied to sports. Topics include: structure of sports industry, sports markets and products, market research, and sports sponsorships. (F)

6640 Legal Issues in Health, Physical Education, and Recreation. Cr. 3

Identification and analysis of legal issues in the health, physical education, and recreation profession. Review of relevant litigation patterns. (Y)

6660 Risk Management in Physical Education and Sports. Cr. 3

Fundamentals of safety and liability and the risks involved in managing activity-related programs. Development of knowledge and skills to recognize potential litigation in management, supervision and administration. (F)

6661 Equity and Access in Sport. Cr. 3

Offered for graduate credit only. Historical and contemporary sport and physical activity experience in context of race, socioeconomic class, gender, age, disability, and culture. (F)

6750 Fieldwork in KHS. Cr. 1-4 (Max. 8)

Prereq: written consent of advisor. Professional experience in public or private institutions relevant to student's specialization. Supervision by professional supervisor and university faculty. Can be taken at any time during student's program. Material Fee as Indicated in the Schedule of Classes. (F,W)

7300 Interscholastic Athletic Directing. Cr. 3

Michigan and national interscholastic athletic directing organizations; issues and skills to direct athletic programs in middle and secondary education. Philosophy, personnel, financial and general athletic policies and guidelines. (Y)

7310 Collegiate Athletic Administration. Cr. 3

NCAA and NAIA as governing bodies. Difference in divisions and compliance rules for each division. Current collegiate athletic occupations; current issues and future trends in collegiate athletics. (Y)

7540 Concepts of Management in Health, Physical Education, and Recreation. Cr. 3

Responsibilities and concerns of administrators of health, physical education and recreation programs. Basic administrative procedures, policy-making and evaluation; establishment of program goals; alternative management styles; leadership principles. (W)

7580 Entrepreneurship and Fund Raising in Kinesiology, Health and Sport Studies. Cr. 2

Entrepreneurial opportunities created by changing trends and developments in athletics and KHS; development and study of current fundraising concepts and ideas. (W)

7581 Sport Finance. Cr. 3

Understanding financial management for planning, administering, and evaluating financial performance of sport-related entities. (W)

7990 Special Problems in KHS. Cr. 1-3 (Max. 9)

Prereq: written consent of supervising faculty. (F,W)

7999 Master's Essay and Project Direction. Cr. 3

Prereq: written consent of supervising faculty. Offered for S and U grades only. Development and review of essay or project. (F,W)

8540 Theories of Health Behavior. Cr. 3

Prereq: graduate status. Selected theories from behavior sciences developed to apply to people's health actions. (B)

8700 Research in the Psychosocial Aspects of Physical Activity. Cr. 3

Prereq: graduate standing; admission to kinesiology Ph.D. program; written consent of instructor for doctoral and master's students from other programs. Development of in-depth understanding of psychosocial aspects of research in physical activity (exercise, sport, leisure activity). (W)

8750 Internship in KHS. Cr. 1-8 (Max. 8)

Prereq: successful completion of two-thirds of master's coursework; written consent of advisor. Professional experience in public or private institutions relevant to student's field of specialization. Initial plan of involvement and final evaluation. Material Fee as Indicated in the Schedule of Classes. (F,W)

8999 Master's Thesis Direction. Cr. 1-8 (Max. 8)

Prereq: written consent of supervising faculty. (F,W)

9600 Doctoral Seminar in Kinesiology, Health and Sport Studies. Cr. 3

Prereq: graduate standing. Introduction to active programs of research in the field of kinesiology; research presentations and discussion by faculty, guest lecturers and students. (F)

Teacher Education

Assistant Dean: Kathleen Crawford-McKinney
Office: 241 Education Building; 313-577-0122
Art Education Advising Office: 163 Community Arts Building
Website: <http://coe.wayne.edu/ted>

Professors

Jazlin Ebenezer, Thomas Edwards, Susan Gable, Janice Hale, Steve Ilmer

Associate Professors

Poonam Arya, Navaz Bhavnagri, Kathleen Crawford-McKinney, Gina DeBlase, Holly Feen, Maria Ferreira, Gerald Oglan, S. Asli Özgün-Koca, Thomas Pedroni, Kathryn Roberts, GERALYN STEPHENS, Jacqueline Tilles

Assistant Professors

Chris Crowley, Christina DeNicolò, Sandra Gonzales, Chavon Jackson, Justine M. Kane, Mark J. Larson, Jennifer Lewis, Sally K. Roberts, Jon Wargo, Min Yu

Lecturers

Elsie Babcock, James Brown, Placidia Frierson, Elizabeth Corah-Hopkins, Kristen McIlhagga, Anna Miller, Leah van Belle, Sandra Yarema

Degrees and Certificates, Graduate

MASTER OF ARTS IN TEACHING

with majors in:

Elementary Education - with concentrations or minors in:

Bilingual-Bicultural Education (minor)

Early Childhood Education

English as a Second Language (minor)

General Elementary Education

Mathematics Education

Science Education

Social Studies Education

Special Education (elementary certification required) - with the following areas of specialization:

Autism Spectrum Disorders

Cognitive Impairment

Emotional Impairment

Learning Disabilities

Secondary Education - with concentrations or minors in:

Art Education (K-12)

Bilingual-Bicultural Education (minor)

Career and Technical Education

English as a Second Language (minor)

English Education

Foreign Language Education

Kinesiology (secondary certification required)

Mathematics Education

Science Education

Social Studies Education

MASTER OF EDUCATION

with majors in

Art Education - with concentrations in:

Art Education
Art Therapy

Career and Technical Education
English Education (Secondary) - with concentrations in

English Education: Secondary
English as a Second Language

Reading

Teaching and Learning - with concentrations in

Bilingual-Bicultural Education
Early Childhood Education
Elementary Education
Foreign Language Education
Mathematics Education
Science Education
Social Studies Education
Special Education

BRIDGE GRADUATE CERTIFICATE in

Bilingual Education
English as a Second Language

EDUCATION SPECIALIST CERTIFICATE

with majors in:

Curriculum and Instruction — with concentrations in

Bilingual Education
(with emphasis in Bilingual Education and/or
English as a Second Language)
Career and Technical Education
Early Childhood Education
Elementary Education
English Education
K-12 Curriculum
Mathematics Education
Science Education
Secondary Education
Social Studies Education

Reading

Special Education

DOCTOR OF EDUCATION

and DOCTOR OF PHILOSOPHY — with majors in

Curriculum and Instruction — with concentrations in

Art Education
Bilingual-Bicultural Education (Ed.D. only
with emphasis in Bilingual Education and/or
English as a Second Language)
Career and Technical Education
Early Childhood Education
Elementary Education
English Education — Secondary
Foreign Language Education (with emphasis in
Foreign Language or English as a Second Language)
K-12 Curriculum (Curriculum Studies)
Mathematics Education
Science Education
Secondary Education
Social Studies Education (K-12)

Reading, Language and Literature (Ed.D. only)
Special Education

POST-BACHELOR'S TEACHING CERTIFICATES
with majors and minors in:

Elementary Education - with concentrations in:

Bilingual-Bicultural Education (minor only)
Early Childhood Education
English as a Second Language (minor only)
General Elementary Education
Mathematics Education
Science Education

Secondary Education - with concentrations in:

Art Education (K-12)
Bilingual-Bicultural Education (minor only)
Career and Technical Education
Dance
English as a Second Language (minor only)
English Education
Foreign Language Education
Kinesiology K-12
Mathematics Education
Music - Instrumental K-12
Music - Vocal K-12
Science Education
Social Studies Education (K-12)
Special Education
Speech

Teacher Education, Graduate

The graduate unit of the Division of Teacher Education emphasizes the development of competence in instruction, the improvement of curriculum at all levels, and the ability to conduct scholarly research. The graduate programs in teacher education are designed to prepare educators and researchers who are:

effective in schools and other educational settings;

knowledgeable in content areas for which they are responsible;

knowledgeable about growth and development of learners, teaching and learning styles, philosophical purposes of schooling and methodologies of education;

committed to the continuous improvement of the processes of education;

responsive to a rapidly-changing technology and cognizant of its implications for education and schooling;

cognizant of the uniqueness of urban and metropolitan areas;

cognizant of the values and contributions of various racial, ethnic, gender, sexual, national, ability and linguistic groups;

capable of promoting an understanding of the dynamics of cultural and linguistic pluralism in our society;

able to promote collaboration between teachers, schools, parents, community and students;

capable of creative thought and able to stimulate and promote creative thought in their students;

able to study educational issues through the design and implementation of a research project;

able to identify and use the results of educational research;

able to reflect on and develop their own patterns of ethical behavior;

able to serve educational institutions in local, national and international settings.

The Division offers degree programs for a wide range of advanced professional roles:

1. supervisory and resource teachers, coordinators, consultants, and curriculum specialists;
2. teachers and consultants in parent education in school and non-school settings;
3. college and university teachers and researchers in the field of education.

Teaching (M.A.T. Program)

The Master of Arts in Teaching (M.A.T.) degree is designed for students who have completed a bachelor's degree in a non-education program with appropriate teaching majors and minors, and who desire both a master's degree and Michigan Provisional Teaching Certification at either the elementary or secondary level. Teaching certification can be earned prior to completion of the master's degree requirements (see Teaching Certification at Certification Requirements, p. 128). Each of the M.A.T. programs consists of graduate level courses (several involving work with children in a school setting) and field experiences (pre-student teaching for one semester and student teaching for one semester).

Information regarding teaching certificate requirements can be found at Teaching Certificates, p. 128 of this bulletin.

Admission to the Master of Arts in Teaching is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students without appropriate teaching majors and minors and other general education requirements will be required to complete the necessary course work as post-degree students before entering the M.A.T. program.

Applicants to M.A.T. programs must be admissible to the Graduate School and the College of Education Division of Teacher Education. In order to be eligible for admission, all M.A.T. applicants must pass the State of Michigan Professional Readiness Exam (PRE) and must present verification of participation in group work with children and (not older than 6-months from application date) Michigan State Police Criminal Background check. Additional testing is required for Foreign Language majors and minors and Bilingual-Bicultural Education minors prior to admission.

The Michigan Test for Teacher Certification (MTTC) examination scores (PRE and subject area tests) must be furnished directly to Wayne State University by Evaluation Systems Group of Pearson, the MTTC testing agency. When registering for the MTTC, students should select "Wayne State University (31)" as a "College or University to Receive Scores."

Students whose examination scores were not released to Wayne State University should request an original score report from Evaluation Systems Group of Pearson (<http://www.mttc.nesinc.com>). The scores must be mailed directly from Evaluation Systems Group of Pearson to Wayne State University. An original score report is required by the Michigan Department of Education for verification of test scores.

Persons interested in the elementary or secondary education M.A.T. degrees should consult with an advisor in the Teacher Education Division regarding appropriate teaching majors and minors and the process for a formal transcript evaluation.

Credit Requirements (General M.A.T.)

Credit requirements for the various M.A.T. programs range from a minimum of forty to a maximum of fifty-two credits, depending on the applicant's background in his/her teaching field at the undergraduate level and specialized requirements.

All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively. Requirements for the Master of Arts in Teaching degree must be completed within six years after completion of the first course to be applied to the degree.

Course work for the degree must be distributed among four areas: the major, the general professional sequence (core courses), elective courses, and a professional field experience. A teaching certificate is required in order to receive a M.A.T. degree.

General Professional Core: All M.A.T. students are required to complete the following general professional sequence:

- EDP 6210 – Foundations of Educational Psychology: Cr. 3
- EHP 7600 – Philosophy of Education: Cr. 2

Elective Courses, if needed for diversity in the program, are selected in consultation with an advisor at the time a Plan of Work is prepared.

Professional Field Experiences (pre-student teaching and student teaching) are integral parts of all M.A.T. programs, and must be completed during daytime school hours. Courses which involve field experiences are TED 5150, 5160, 5650, 5780, 5790 and BBE 6600. Information on the student teaching phases of the program is presented at Student Teaching, p. 129 of this bulletin.

Secondary Education Major (M.A.T. Program)

Major Requirements: Courses which must be completed prior to student teaching are TED 5150, EDP 5480, RLL 6120. Additional courses required for certification are EHP 7600, BBE 5000, SED 7050 and TED 6020. Courses required for the M.A.T. degree following completion of the certification program are courses specific to the concentration area of study (see below) and ED 7999.

Elementary Education Major Leading to K-8 Certification (M.A.T. Program)

Elementary Education Major

Major Requirements: Courses which must be completed prior to student teaching are AED 5050; EDP 6210; TED 5150; RLL 6120; ELE 6200, 6290, 6310, 6390, 6500, 6600, BBE 5000, and SED 7050. Students wishing additional specialized endorsement may elect to complete one of the following minor concentrations.

Elementary Education Minor Concentrations (M.A.T. Program)

Early Childhood General and Special Education (ZS)

In addition to the elementary education requirements stated above, students seeking an Early Childhood General and Special Education (ZS) endorsement on their teaching certificate may choose the ZS as a minor. Courses that must be completed prior to student teaching are EDP 6210; TED 5150; RLL 6120; ELE 6020, 6040, 6200, 6310, 6340, 6390, 6600. In addition to student teaching, other courses required for the ZS endorsement minor and the M.A.T. degree are EDP 5450, ELE 6010 or 6060, 6080, SED 6040; BBE 5000; SED 7050; EHP 7600. The plans for the ZS minor must be done in consultation with their faculty advisor.

Bilingual/Bicultural Education

In addition to the elementary education requirements stated above, students seeking an M.A.T. in elementary education with a bilingual-

bicultural minor and endorsement must complete BBE 5000, 5500, 6560, 6590, 6600, 6850; TED 7000; LED 6520 and 6555 and RLL 6700.

Only one general professional core course is required: EDP 5450 as an alternate for EDP 6210.

All students in the bilingual-bicultural program must successfully complete the language proficiency examinations in English and in the designated language of his/her individual program prior to admission.

English as a Second Language

In addition to the elementary education requirements stated above, students seeking an M.A.T. in elementary education with an English as a Second Language minor and endorsement must complete BBE 6600, 6850; LED 6510, 6520, 6555, 6565, 6580 and RLL 6700.

Only two general professional core courses are required: TED 5150 and EDP 5450 as an alternative for EDP 6210. All students in the English as a Second Language program must successfully complete language examination in English and must document experience learning a second/foreign language before completing twelve credits toward the degree.

Science Education

In addition to the elementary education requirements stated above, students seeking elementary certification with a science major must complete TED 7000; twelve credits of science education course work including ELE 6500. Additional courses required for the M.A.T. degree are selected in consultation with an advisor.

Secondary Education Major Concentrations (M.A.T. Program)

Bilingual-bicultural Education:

Students in an M.A.T. program in secondary education with a bilingual-bicultural minor and endorsement must complete BBE 5000, 5500, 6560, 6590, 6600, 6850; LED 6520, 6555; RLL 6121; TED 7000; and ED 7999. Six credits in methods courses in the major field are to be selected in consultation with the appropriate major advisor.

The required general professional core courses should include EDP 5480 as an alternate for EDP 6210.

All students in the bilingual-bicultural program must successfully complete the language proficiency examinations in English and the designated language of his/her individual program prior to taking courses for this minor.

Early Childhood General and Special Education (ZS)

In addition to the elementary education requirements stated above, students seeking an Early Childhood General and Special Education (ZS) endorsement on their teaching certificate may choose the ZS as a major. Courses that must be completed prior to student teaching are EDP 6210; TED 5150; RLL 6120; ELE 6020, 6040, 6100, 6200, 6310, 6340, 6390, 6600. In addition to student teaching, other courses required for the ZS endorsement major and the M.A.T. degree are EDP 5450, ELE 6010, 6060, 6080, 6090, SED 6040; BBE 5000; SED 7050; EHP 7600. The plans for the ZS major must be done in consultation with their faculty advisor.

English as a Second Language

Students in the M.A.T. program in secondary education with an English as a Second Language minor and endorsement must complete BBE 5000, 6600, 6850; LED 6510, 6520, 6555, 6565, 6580; RLL 6121; TED 7000 and ED 7999. Six credits in methods courses in the major field are selected in consultation with the appropriate advisor.

English Education

Requirements for this major include EED 5200, 6120, 6210, 6310, 6330; ED 7999; RLL 6121, plus elective courses chosen in consultation with an advisor.

Foreign Language Education

Requirements for this major include TED 7000; LED 6520, 6530; RLL 6121; ED 7999 and specialty courses including the following: LED 6510 and 6580.

The required general professional core courses should include: EDP 6210 or 5480, and EHP 7600.

Additional methods courses are chosen with the approval of the advisor.

Students must complete the language proficiency examination in the designated language of his/her program prior to taking courses for this program.

Mathematics Education

Requirements for this major include TED 7000; ED 7999; RLL 6121; MAE 5150; MAE 6050; and two courses selected from: MAE 6150, 7150, 7200, 7250, and 7300. Additional courses are selected in consultation with an advisor.

Science Education

Requirements for this major include TED 7000; ED 7999; SCE 5060, 5070 and two elective science courses; RLL 6121; and CHM 6740 or SCE 6010. Additional methods courses and electives are selected in consultation with an advisor.

Social Studies Education

Required courses in this major include SSE 6710, 6720, 6730, 7780, 8740; ED 7999; RLL 6121; EHP 7600, SED 7050, BBE 5000, and TED 6020 and 7000.

Career and Technical Education

Required courses for this major include: CTE 5410, 6993; EDP 5480, EHP 7600, RLL 6121, TED 6020, ED 7999, SED 7050, and one elective. There is also a requirement of two years (4000 hours) of recent and relevant work experience (within the past five years) in an approved vocational occupation for this program.

Two specific methods courses are required for each of the above-mentioned fields and must be selected in consultation with an advisor. Some programs require a third methods course.

Among the general professional core courses (see General Professional Requirement: Fundamental Areas and Core Courses, p. 103) for secondary education, EDP 5480 should be substituted for EDP 6210.

The student teaching assignment (TED 5780) for this program requires a full-time assignment to a public school for a minimum of one University semester.

Applicants should consult with the appropriate advisor prior to filing an admissions application in order to determine the appropriateness of various major and minor areas of study to the student's interest.

K-12 Education Concentration (M.A.T. Program)

Foreign Language Education, K-12

In addition to the elementary or secondary education requirements described above, students seeking an elementary or secondary certification with a K-12 foreign language endorsement must complete the coursework for a teaching major in the foreign language and the following pre-requisites: LED 6500 (for secondary education), LED 6530 (for elementary education), EDP 5450 (for secondary education), EDP 5480 (for elementary education) and RLL 6700.

Special Education

In addition to the elementary education requirements stated above, students seeking elementary certification with a special education major must complete a special education program. Additional

courses in special education (29-35 credits) are selected in consultation with an advisor.

Teaching Certificates

Present-day education is characterized by specialization at the secondary and elementary levels, related to both subject-matter fields and the age of school children. The Michigan Certification Code provides for specialization in either the elementary, or secondary school areas by authorizing state certification for teaching on those levels. Thus, a person who has kindergarten through grade eight endorsement is not legally qualified to teach in the secondary schools above grade eight, and a person with grades six through twelve endorsement is not legally qualified to teach below grade six. An exception is made in certain fields such as art, physical education, dance and music education, where the holder of a provisional certificate is qualified to teach his/her major subject in all grades, and, if indicated by his/her certificate, other subjects in other grades.

The certification code recognizes subject-matter specialization by requiring that the candidate for a teacher's certificate present concentrations of credits called majors and minors. In general, the secondary school teacher must have a major and minor teaching field. The elementary school teacher must have one of the following options: 1) a core subject major or two minors and the Elementary Planned Program or 2) a student-centered program and the Elementary Comprehensive Major. The Elementary Planned Program/Comprehensive Major is a series of courses designed to support the teaching of all subjects K-5: Health and Physical Education, Language-Arts, Mathematics, Science, Social Studies, Technology and the Arts. All majors and minors must be in subject-matter fields appropriate to teaching at the level for which certification is to be recommended. Individuals must pass state examinations in their major and minor fields before they begin student teaching.

Certification Requirements

Michigan State Teacher's Certificates are granted by the Michigan State Board of Education upon the recommendation of the College of Education. Initial certificates are provisional for a six-year period and may advance to a five-year professional certificate after completing additional requirements. Five-year professional certificates must be renewed every five years. Contact a College of Education advisor for additional information. Certificates will indicate in which grades and subjects the holder is eligible to teach. In certain specified nonacademic fields, however, the holder of a provisional certificate is eligible to teach his/her major subject in all grades from the kindergarten through the twelfth. The qualifications which the College requires for recommendation for the certificate are summarized below.

State Professional Readiness Examination (PRE)

All students seeking admission to a M.A.T. or post-bachelor teacher certification program are required to pass the State PRE prior to admission to the teacher certification program. The test results must be furnished directly to Wayne State University by Evaluation Systems Group of Pearson, the testing agency. When registering for the test, students should select "Wayne State University (31)" as a "College or University to Receive Scores."

Certificates, Provisional

Teaching certificates as listed below are granted when all certification requirements have been met, which usually occurs upon the completion of the professional education sequence of the M.A.T. program.

Elementary Provisional Certificate—for Kindergarten through Grade Five all subjects, Kindergarten through Grade Eight in a self-contained classroom, and Kindergarten through Eight in subjects corresponding to majors and minors.

1. The candidate must have graduated with a bachelor's degree from an approved or accredited institution.

2. Students seeking elementary certification must meet major/minor requirements according to the curriculum guide - see academic advisor. All Elementary Programs must include the Planned Program/Comprehensive Major.

3. Completion of a professional education sequence is required.

4. Teaching candidates are required by the Michigan State Department of Education to obtain First Aid and Adult and Child CPR Certification, by a state approved program, before they can be recommended for a teaching certificate in the State of Michigan. Also, a Michigan State Police Criminal Background check no more than six months old is required <http://apps.michigan.gov/ICHAT/>

Secondary Provisional Certificate—for Grades Six through Twelve

1. The candidate must have graduated with a bachelor's degree from an approved or accredited teacher education institution.

2. In general, the academic background must include a single subject major or a group major, and one minor in subjects in which the applicant expects to teach that are appropriate to the Secondary level. Some subjects are available as comprehensive group majors; a minor is not required.

3. Career and Technical Education (CTE) Majors in Health Occupations and Trade and Industry must have two majors: An academic major and the CTE major. A minor is not required.

4. Completion of a professional education sequence is required.

5. Teaching candidates are required by the Michigan State Department of Education to obtain First Aid and Adult and Child CPR Certification, by a state approved program, before they can be recommended for a teaching certificate in the State of Michigan. Also, a Michigan State Police Criminal Background check no more than six months old is required <http://apps.michigan.gov/ICHAT/>

Certificate Endorsement

Holders of one level of certificate who wish to add another level (i.e., elementary to secondary or vice versa) must consult an advisor in the Division of Academic Services, 489 Education Building.

Certificate, Professional Education

This certification is available to holders of provisional certificates who have taught successfully for three years since the issue date, and within the validity and grade level of the teaching certificate after the issue date of their Provisional certificate and have completed within 5 years prior to application 6 credits or 150 State Continuing Education Clock Hours (SCECHs) or 150 District Provided Professional Development (DPPDs) or have a master's degree. Professional development opportunities may be combined with university credits to meet the academic requirement (http://www.michigan.gov/mde/0,1607,7-140-6530_5683-219674-,00.html). A course in Assessment and Differentiated Instruction in Reading is also required (RLL 6801 for Elementary teachers or RLL 6802 for Secondary teachers).

In addition to the above requirements, all candidates for an elementary five-year professional certificate must have completed the six credits in reading instruction in either their undergraduate or post-graduate preparation, three of which must be reading in the content areas.

In addition to the above requirements, all candidates for a secondary five-year professional certificate must have completed in their undergraduate or post-graduate preparation a three-credit course in reading in the content areas.

Bilingual/Bicultural Endorsement

The Bilingual Endorsement certifies a teacher who is qualified to teach classes of bilingual children. Students qualifying for an initial provisional certificate complete a twenty-four credit minor for the endorsement. Students holding existing certificates may add a bilingual endorsement by completing a minimum twenty-credit planned program. Interested students should consult a Bilingual/ESL advisor.

All students in the bilingual-bicultural program must successfully complete the language proficiency examinations in English and the designated language of his/her individual program prior to taking courses for this minor.

English as a Second Language Endorsement

The English as a Second Language (ESL) Endorsement certifies a teacher who is qualified to teach learners with limited English proficiency. Students holding existing certificates may add an ESL endorsement by completing a minimum twenty-credit planned program. Interested students should consult a Bilingual/ESL advisor.

Early Childhood General and Special Education (ZS) Endorsement

The Early Childhood General and Special Education (ZS) endorsement is designed to ensure that teachers working with children from birth to the age of eight years and their families obtain specialty area preparation in early childhood education (ECE) to include working with children with developmental delays or disabilities. Teachers holding an elementary certificate must complete 26-credit hours of course work, lead-teaching experience with two age groups, and pass the Michigan Test for Teacher Certification (MTTC) to obtain the ZS endorsement. The endorsement program consists of a minimum of 26 credits across specified areas beyond the Provisional Certificate requirements and lead-teaching experience in teaching two of the following three age levels: 1) infant - toddlers, 2) preschool, 3) kindergarten - third grade, to include experience with Individual Family Service Plan (IFSP) and/or Individual Education Program (IEP) for young children receiving special education. The courses may be part of a master's, education specialist, or doctor of education program. Interested students should consult an ECE advisor.

Reading Endorsement, K-12

The K-12 Reading Specialist Endorsement is designed to prepare teachers to provide specialized instruction in reading within classrooms or in special programs at all grade levels in elementary, middle, and secondary schools to work with teachers in classrooms to improve literacy instruction and to supervise school or district level reading programs. Teachers holding an elementary or secondary certificate must complete a twenty-four credit program and then pass the State K-12 Reading Specialist examination in reading in order to receive this endorsement. The courses may be part of a master's, education specialist, or doctor of education program. Interested students should consult a reading program advisor.

Middle Level Endorsement

The Middle Level Endorsement is a minimum twenty-credit planned program which adds an area of expertise for teachers who already hold a Michigan elementary or secondary teaching certificate. The endorsement extends Michigan teacher subject area certification to include grades five through nine. Information on this endorsement can be found at <http://ted.coe.wayne.edu/mle/Endorsement.html>.

Vocational Endorsement

A vocational endorsement is available for secondary occupational instructional programs in Career and Technical Education. More information about the requirements can be found at <http://coe.wayne.edu/ted/career-tech/certificate/index.php>.

Student Teaching

Application: Each student must make application for student teaching during the appropriate application period. The date a completed application form is submitted to the Office of Clinical Experiences (221, Education Building.) will determine the semester during which student teaching will take place. Student teaching application periods are as follows:

FALL SEMESTER: Applications are due by December 1 of the previous year

WINTER SEMESTER: Applications are due by April 1 of the previous year

Procedures for Student Teaching Application

1. Confer with advisor to determine eligibility for student teaching.
2. Complete application forms provided by the Office of Clinical Experiences, 221 Education Building, during application period.

Prerequisites for Student Teaching Placement

1. Full admission to a M.A.T. program must be accomplished before application for student teaching can be accepted.
2. A WSU cumulative graduate g.p.a. of at least 3.0
3. Completion of the professional education sequence coursework.
4. Completion of the teaching major and minor(s) as defined by the student's curriculum area in the College of Education.
5. Satisfactory completion of appropriate pre-student teaching courses and appropriate methods courses as outlined by the student's Plan of Work.
6. Satisfactory tuberculosis test within six months before assignment begins.
7. Passing scores on state examinations: (Professional Readiness Examination and Subject Area Examinations).
8. Criminal background check and fingerprinting if required by the school district.

Teaching Certificate, Post-Bachelor's

This program is designed to offer teacher certification to holders of baccalaureate degrees with suitable teaching majors and minors, who do not choose to pursue the master's degree. The program incorporates classroom theory with practice, takes a minimum of four semesters to complete and is available at both the elementary and secondary levels.

Admission to this program requires an undergraduate g.p.a. of 2.5, successful completion of the State Professional Readiness Examination (PRE), and a bachelor's degree with an appropriate teaching major and minor earned at a regionally accredited institution. Also, applicants must submit proof of a Michigan State Police Criminal background check; group work experience with children; and for Foreign Language majors/minors and Bilingual/Bicultural Education minors, appropriate language proficiency testing.

ELEMENTARY EDUCATION: Admission to the elementary education curriculum is predicated upon review of the applicant's transcript to ensure that course requirements for the Elementary Planned Program/Comprehensive Major been satisfied. Depending upon this review, some additional course work may be required before beginning the professional sequence outlined below.

CERTIFICATE REQUIREMENTS: The elementary education certificate requires completion of forty-nine credits and the secondary education certificate requires completion of forty credits as specified in the following programs. These are professional education courses and are applicable to the certificate **ONLY** when taken after formal admission to the College of Education.

The grouping of courses cited below may (or may not) reflect individual semesters' work depending on the student's full- or part-time status. Field courses are taught in the public schools where student teaching assignments are made.

Elementary Education Sequence (Forty-nine Credits)

Field Courses

TED 5150 – (WI) Analysis of Elementary Teaching: Cr. 5

Campus Courses (must be taken prior to TED 5780)

EDP 3310 – Educational Psychology: Cr. 3
ELE 6290 – Teaching Language Arts: Preprimary - 8: Cr. 3
ELE 6210 – Teaching Reading I: Emergent Literacy: Cr. 3
ELE 6390 – Teaching Mathematics: Preprimary - 8: Cr. 3
ELE 6500 – Teaching Science: Preprimary - 8: Cr. 3
ELE 6600 – Teaching Social Studies: PreK - 8: Cr. 3
ELE 6200 – Children's Literature for New and Perspective Teachers: Cr. 3
RLL 6120 – Tchg. Reading II: Comprehension Preprimary-8: Cr. 3

Additionally the following courses must be taken prior to certification

AED 5050 – Integrating the Arts into the Elementary Classroom: Cr. 3
BBE 5000 – Multicultural Education in Urban America: Cr. 2
ELE 6070 – Family, Community and School Partnerships: Cr. 3
SED 5010 – Inclusive Teaching: Cr. 2
TED 5780 – Directed Teaching and Conference: Cr. 10

Secondary Education Sequence (Forty-three credits)

Courses satisfying the methods requirements (first and second courses) vary with each discipline. Students should consult the *Curriculum Guide for Secondary Education* available from the Division of Academic Services, 489 Education Building.

BBE 5000 – Multicultural Education in Urban America: Cr. 2
EDP 5480 – Adolescent Psychology: Cr. 3
EHP 3600 – Introduction to Philosophy of Education: Cr. 3
RLL 4431 – Teaching Reading in Middle and Secondary Areas: Cr. 3
SED 5010 – Inclusive Teaching: Cr. 2
TED 5650 – Pre-Student Tchg. Field Experience: Secondary: Cr. 5
TED 5780 – Directed Teaching and Conference: Cr. 10
TED 6020 – Computer Applications in Teaching I: Cr. 3
Methods I course (in major): Cr. 3
Methods II course (in major): Cr. 3
Methods III course (in minor if applicable): Cr. 3

Master of Education (M.Ed.)

Generic admission and degree requirements for the Master of Education degrees offered by this department are presented under Master of Education, p. 102. The following sections, under major degree headings, enumerate the specific amendments/variations to generic requirements, as well as program options.

Art Education (Visual Art Education) (M.Ed. Program)

The Master of Education degree with a major in Art Education assists graduates in becoming more effective art teachers and leaders in the field of art education. Emphasis is placed on each student designing a curriculum of graduate studies to fit his or her professional needs.

Admission Requirements: see Admission, p. 102. For admission to the program the applicant must have: a baccalaureate degree from a college or university of recognized standing; a major in art; a teaching certificate; and adequate preparation and ability to pursue gradu-

ate study. Entering students should make an appointment with an Art Education graduate advisor for assistance: Room 163, Art Building.

DEGREE REQUIREMENTS: This program requires thirty credits in course work: eight credits in art education research (TED 7000, ED 7999, and AED 7400); six credits in professional education courses; and sixteen credits in electives. Eighteen of the thirty credits required must be in the art education major. The intent is that the thirty credits will comprise a unified, meaningful curriculum extending each student's ability as an artist, a scholar, and a teacher. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Art Therapy (M.Ed. Program)

Art therapy is a specialization available in the Master of Education in Art Education degree program. In addition to the admission requirements stated above, students must submit letters of recommendation, an autobiographical statement, and a digital (CD preferred) portfolio. (A teaching certificate is NOT required for this program.) A concentration in Art Therapy is also available as part of the M.A. in Community Counseling in the Division of Theoretical and Behavioral Foundation.

DEGREE REQUIREMENTS: This program is offered as a master's Plan B. A minimum of forty-eight credits is required for this concentration: twenty-four credits in art therapy; six credits in the general professional sequence; three credits in psychopathology and six research credits. The remaining nine credits are in practicum and internship. A related essay or project of substantial quality concludes the program. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively. Interested candidates should contact the Art Education - Art Therapy office for additional information: Room 163, Community Arts Building; telephone: 313-577-1823.

Bilingual Education (Bridge Graduate Certificate)

The Bridge Graduate Certificate in Bilingual Education leads to an endorsement to the Michigan teaching certificate in Bilingual Education. Students who complete this Bridge Certificate Program as well as the appropriate Michigan Test for Teacher Certification subject area examination will earn the endorsement. As a bridge program this Graduate Certificate allows students to apply all of their course work for the Certificate to the Master of Education degree with a major in Bilingual-Bicultural Education if they decide to pursue that degree after completing the Certificate.

Admission to this program is contingent upon admission to the Graduate School and the Division; for requirements, see Admission, Graduate School, p. 17 and Admission to Master's Programs, p. 115. Additionally, applicants must possess a valid Michigan teaching certificate and must have successfully completed the American Council on the Teaching of Foreign Languages' (ACTFL's) Oral Proficiency Interview (OPI) and Writing Proficiency Test (WPT) in the (non-English) designated language. Contact an adviser for authorization to take the OPI and WPT. For more information, please review the following website: <http://www.testing.wayne.edu/>

CERTIFICATE REQUIREMENTS: The Bridge Certificate in Bilingual Education requires a minimum of twenty-one credits as listed below. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning

under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

REQUIRED COURSES: (21 credits)

- BBE 5500 – Introduction to Bilingual/Bicultural Education: Cr. 3
- BBE 6560 – Teaching Methods in Bilingual /Bicultural Education: Cr. 3
- BBE 6590 or LIN 5310 or LIN 5770
 - Culture and Language in Bilingual/Bicultural Education: Cr. 3
 - Language and Culture (ANT 5310): Cr. 3
 - Sociolinguistics (ENG 5770): Cr. 3
- BBE 6600 – Internship Bilingual/Bicultural Teaching: Cr. 2
- BBE 6850 – Applied Linguistics: Issues in Bilingual Education: Cr. 3 OR
- LED 6520 – Teaching ESL/EFL Methods I: Cr. 3
- LED 6555 – Integration of Language and Content in Language Teaching: Cr. 1
- LIN 5730 – English Grammar (ENG 5730): Cr. 3
- RLL 6700 – Second Language Literacy Development K-12: Cr. 3

Career and Technical Education (M.Ed. Program)

This program is designed for students with a secondary teaching certificate in a career and technical education specialty or teachers with vocational certification only. In addition, certified teachers may meet career and technical educational endorsement requirements in a career and technical education specialty. Upon completing six credits in a planned program within the previous five years, the required three years of appropriate teaching experience, and a course in Assessment and Differentiated Instruction in Reading (RLL 6802), the certified teacher may be eligible for both the five-year professional education certificate and the Occupational Education certificate. Teachers with a vocational certification only, may be eligible for the Occupational Certificate upon completing the requirements above.

Admission Requirements: see Admission, p. 102.

DEGREE REQUIREMENTS: The program consists of a minimum of thirty credits. Required courses include: CTE 6010, 6999, 7820, 8998; TED 7000; EER 7610; and ED 7999; additional courses are selected in consultation with an advisor. Deficiencies in relevant work experience must be completed in addition to the required thirty credits. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Advising: Information regarding career and technical education programs may be obtained from the Teacher Education area on the second floor of the College of Education Building.

English Education (Secondary) (M.Ed. Program)

This program is designed to increase the skills and knowledge of teachers already holding certificates. Additionally, some students find this program useful as a preparation for positions as department heads or resource personnel.

Admission Requirements: see Admission, p. 102. Admission to this program requires a teaching certificate and at least twenty-one credits in English.

DEGREE REQUIREMENTS: The Master of Education is offered in this area under Plans A, B, or C. This program requires a minimum of thirty credits distributed as follows: seventeen credits in major course work including the final essay or project; six credits in general professional courses selected from such fields as educational psychology, educational philosophy, educational sociology, educational evaluation and research, and guidance and counseling; and six to nine

credits in cognate courses selected to enrich the teaching major or minor. Additionally, students with less than a cumulative total of thirty credits in English (including the twenty-one credits required for admission) must make up the deficit within the cognate area. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

English as a Second/Foreign Language: Students in the English Education program may also choose to become either teachers of English as a second language (ESL) or teachers of English as a foreign language (EFL). Persons who wish to devote themselves to ESL/EFL teaching come from a variety of backgrounds. Thus, a number of curricula have been devised to complete the degree, accommodating those who are certified teachers in need of an ESL endorsement, and those who wish only ESL/EFL training.

Requirements for this concentration are similar to the generic English Education major (see above), except that Plan A is not offered.

Teaching and Learning (M.Ed. Program)

The Master of Education (M.Ed.) in Teaching and Learning is for teachers and other professionals who wish to enhance their content and pedagogical knowledge, as well as research skills in teaching and learning. Program activities engage students in the study of teaching and learning using current theoretical developments in order to: (1) develop curriculum illustrating best practices and (2) research inquiries in areas of their interest. The theoretical knowledge and research skills acquired in this program are an important aspect of an educator's professional growth and essential to those interested in taking on leadership roles and/or pursuing another advanced degree in the future.

Program applicants may choose to concentrate in one of eight specialty areas:

- Bilingual/Bicultural (BBE), which may lead to a teaching endorsement
- Early Childhood Education (ECE)
- Elementary Education (ELE)
- Foreign Language (LED):
- Mathematics Education (MAE)
- Science Education (SCE)
- Social Studies Education (SSED)
- Special Education (SED), which can lead to a teaching endorsement in one of two areas:
 - Cognitive Impairment
 - Learning Disabilities

Admission Requirements: Applicants must meet requirements for admission to the Graduate School (a minimum undergraduate degree GPA of 2.75 for regular admission and a GPA of 2.50 for qualified admission). In addition, prior coursework or a teaching endorsement in the field of study is required for admission to the following concentrations: Elementary Education, Foreign Language Education, Mathematics Education, Science Education, Social Studies Education, and Special Education.

Degree Requirements: The Master of Education degree requires a minimum of thirty credits, at least twenty-four of which must be taken at Wayne State University. The program is offered under master's degree plan 'B,' which includes completion of a terminal seminar and essay or project.

The following courses are required of all students in the program (12 credit hours):

- TED 7000 – Introductory Master's Seminar: Cr. 3
- ED 7999 – Terminal Master's Seminar and Essay or Project: Cr. 3
- TED 7030 – Foundations of Teaching and Learning: Cr. 3
- TED 7060 – Inclusive Education, Curriculum and Pedagogy: Cr. 3

The remaining credit hours will come from the area of the concentration (18 to 24 credits). The total number of credit hours for the degree will vary from 30 to 36 depending on the area of the concentration

English as a Second Language (Bridge Graduate Certificate)

The Bridge Graduate Certificate in English as a Second Language leads to an endorsement to the Michigan teaching certificate in English as a Second Language. Students must demonstrate English language fluency and foreign language learning experience to be eligible for the endorsement. Students who meet these requirements, complete the Bridge Certificate Program and the appropriate Michigan Test for Teacher Certification subject area examination will earn the endorsement.

As a bridge program this Graduate Certificate allows students to apply all of their coursework for the Certificate to the Master of Education degree with a major in Bilingual-Bicultural Education and a concentration in English as a Second Language if they decide to pursue that degree after completing the Certificate.

Admission to this program is contingent upon admission to the Graduate School and the Division; for requirements, see Admission, Graduate School, p. 17 and Admission to Master's Programs, p. 115. Additionally, applicants must possess a valid Michigan teaching certificate.

CERTIFICATE REQUIREMENTS: The Bridge Certificate in English as a Second Language requires a minimum of twenty-one credits as listed below. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

REQUIRED COURSES: (21 credits)

- BBE 6600 – Internship in Bilingual/Bicultural Teaching: Cr. 2
- BBE 6850 or LIN 5730
 - Applied Linguistics: Issues in Bilingual Education: Cr. 3
 - English Grammar (ENG 5730): Cr. 3
- LED 6510 or 5750
 - Second Language Acquisition and the Teaching of Grammar: Cr. 3
 - Theories of Second Language Acquisition (ENG 5750): Cr. 3
- LED 6520 – Teaching ESL/EFL Methods I: Cr. 3
- LED 6555 – Integration of Language and Content in Language Teaching: Cr. 1
- LED 6565 – Assessment in Language Teaching: Cr. 3
- LED 6580 or LIN 5770
 - Culture as the Basis for Language Teaching: Cr. 3
 - Sociolinguistics (ENG 5770): Cr. 3
- RLL 6700 – Second Language Literacy Development K-12: Cr. 3

Reading (M.Ed. Program)

This program services graduates of bachelor's degree programs who wish to develop and/or strengthen their expertise in literacy instruction in preprimary through adult levels. This might include elementary and secondary teachers and those who work in college developmental, family literacy, adult basic education, GED, high school equivalency, or workplace literacy programs. This program provides a curriculum that qualifies certified teachers for the Michigan K-12 reading specialist endorsement in reading by the State of Michigan. Graduates of this program are primarily prepared for the roles of classroom teacher of reading and reading specialist.

Admission Requirements: see Admission, p. 102.

DEGREE REQUIREMENTS: This degree is offered under Plan C, requiring a minimum of thirty-six credits in course work distributed as follows: RLL 7100, 7200, 7300, 7350, 7400, and 7500; six credits in general professional courses (see General Professional Requirement: Fundamental Areas and Core Courses, p. 103); and six elective credits. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Education Specialist Certificate

The Teacher Education Division offers a number of education specialist programs at the elementary and secondary levels. These certificate programs are designed to strengthen the educational background of teachers, administrators, and other education professionals.

Admission Requirements: see Admission, p. 104.

CERTIFICATE REQUIREMENTS: These certificate programs require thirty credits beyond the master's degree. The individual student's professional needs and interests are taken into account in determining the specific content of his/her program. The typical plan includes course work in the specialized professional area and subject matter areas supportive of a major or minor. All course requirements for the various majors are selected in consultation with an advisor. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Education Doctoral Degrees (Ph.D and Ed.D Programs)

The Doctor of Education (Ed.D) and the Doctor of Philosophy (Ph.D) programs prepare professional educators and researchers for positions in institutions of higher learning, educational research centers, state and national education agencies, and intermediate and local school districts. Advanced programs are designed for those individuals who are committed to the educational renewal of urban America; whose career goals emphasize the development and improvement of curriculum and instruction; who desire to prepare themselves for leadership roles in various areas of curriculum and educational research; and who will serve as agents of change, creating and expanding the varied institutions and programs needed for the continuing development of educators. This program also serves those interested in the educational aspects of business and industry, health and social services, and other areas that require expertise in curriculum and instruction.

Based on pure and applied research in instruction and curriculum, doctoral study incorporates formal classroom instruction, indepen-

dent study, and direct, clinical experience in a variety of field settings. It reflects 1) the legitimacy of the emerging pattern of inter-institutional partnerships in teacher education at all levels; 2) the significance of the diverse nature of metropolitan society; and 3) the importance of the integration of theory, research, and practice as the basis for sound professional development.

Admission to certain majors and concentrations in the doctoral program may be limited by the availability of faculty advisors. Prior to applying, students should consult with an advisor in 489 Education to discuss current admission limitations.

Admission Requirements: see Admission to Graduate Programs, p. 104.

DEGREE REQUIREMENTS: see Doctor of Education Requirements, p. 104. Courses in the field of concentration in each program are selected in consultation with an advisor to develop a Plan of Work. All students in content-specific concentrations under the major of Curriculum and Instruction are required to complete TED 8130 and 8280; TED 9130 is recommended but not required. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

The K-12 curriculum (Curriculum Studies) area of emphasis, within the curriculum and instruction program, requires the following courses in the major area: TED 8130, 8270, 8280, and 9130.

Early Childhood Education, Infant Mental Health Dual-Title (Ph.D. Program)

Students in the M.Ed., Early Childhood Education (ECE) degree program can apply to earn a Dual-Title in Infant Mental Health (IMH). The dual-title degree is designed to prepare early childhood educators and infant mental health specialists on recommended practices aimed to promote the young child's social and emotional development within the contexts of parent-child and adult-child relationships to include the adult's psychological development and learning as a parent/caregiver; including children and/or parents who have developmental delays or disabilities, and/or physical health or mental health concerns. The dual-title coursework follows competencies outlined by the MI-IMH required for the Level 2 endorsement (i.e., Infant Family Specialist).

Admission Requirements: see Admission, p. 102. Applicants must meet the admission standards and requirements of the Graduate School and the College of Education. Applicants can indicate interest in the dual-title IMH, ECE program on their initial online application or may discuss their interest in the graduate program with their faculty advisor.

DEGREE REQUIREMENTS: Students are required to successfully complete 12-14 credit hours of IMH coursework. All students must maintain a "B" grade point average or above in the following courses:

ELE 7025 – Infant Mental Health: Theory to Practice Across Early Childhood Settings: Cr. 2

ELE 7035 – Infant and Toddler Developmental Assessment for Intervention Planning: Cr. 3

NUR 7880 – Infant/Family Mental Health Assessment: Cr. 2.

SW 7010 – Infant Mental Health Practice: Cr. 2

SW 8883 – Infant Mental Health Seminar I: Cr. 1

SW 8884 – Infant Mental Health Seminar II: Cr. 1

PSY 7425 – Infant Behavior and Development: Cr. 3

All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Masters students must also be assigned an IMH-related field placement in their second year.

K-12 Curriculum Concentration (Ph.D. and Ed.D)

The doctoral program adopts an interdisciplinary approach to teaching and learning, acknowledging the relationship among the learner, the learning, and the learning environment and the consequences this approach has for educational theory, policy, and practice. The program emphasizes the interrelationship between cultural/linguistic diversity and learning and utilizes learners' experiences in curriculum studies. The socio-cultural context of learning in the educative process promotes equity and excellence within larger political and institutional settings. The important frames guiding the doctoral study are the integration of theory and research; the importance of reflection in learning; the role of gender, race, ethnicity, culture, and class as social constructions, which profoundly impact and inform teaching and learning; and the establishment of collaborative partnerships for community-based research. The doctoral program provides a forum that brings together the latest academic and policy discussions, and promotes critical inquiry, discourse, and debate, on the often complex interconnections in education.

The K-12 curriculum (Curriculum Studies) area of emphasis, within the curriculum and instruction program, requires the following courses in the major area: TED 8130, 8270, 8280, and 9130.

Reading, Language and Literature (Ed.D)

The Doctor of Education (Ed.D) in Reading, Language, and Literature prepares individuals for positions in institutions of higher learning, education renewal centers, state and national education agencies, and K-12 school districts. The program is designed for those individuals who are committed to the enhancement of literacy for all learners; whose career goals emphasize the development and improvement of literacy curriculum and instruction; who desire to prepare themselves for literacy leadership roles in pre-service and in-service teacher education; and who will serve as agents of change, creating and expanding the varied institutions and programs to support continued literacy advancement.

Admission Requirements: see Admission to Graduate Programs, p. 104.

DEGREE REQUIREMENTS: see Doctor of Education Requirements, p. 104. Within this program, students select one specific area as their focus (Reading, Language Arts or Literature). The thirty-credit major consists of the core required courses (RLL 8500, RLL 8600, RLL 8700), courses in the focus area, and other courses as determined in consultation with the major advisor. Students also complete twelve credits of research courses, twelve credits in a cognate area, six credits in education seminars, and twenty credits of dissertation research. A maximum of thirty credits of graduate work can be transferred into the program. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Special Education (Ph.D. and Ed.D)

(An admissions moratorium is currently in effect for these programs.)

The Special Education programs promote inclusive education for students with mild to severe disabilities, and see best instructional practices in general education as supporting the growth and development of students with disabilities. Special educators have important roles to play in building a unified system of schooling that supports learning of all students. Leadership is needed to make these goals a reality.

ity. It is the purpose of these programs to provide one important avenue of leadership development. The Special Education doctoral programs provide opportunities to develop and strengthen knowledge and skills in research and inquiry, best instructional practices for inclusive teaching, professional development, leadership, strategies for identifying and promoting innovations, and grant development.

Teacher Education Division Courses (TED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5650 Pre-Student Teaching Field Experience for Secondary Majors. Cr. 3 or 5

Prereq: admission to College of Education; coreq: TED 5160. Mandatory orientation is held prior to beginning of each semester; refer to Schedule of Classes for date, time and location. Mandatory professional development workshops held throughout the semester; dates, times, and locations announced at initial orientation. Field experience in secondary school settings prior to full-time student teaching. (F,W)

5780 Directed Teaching and Conference. Cr. 1-12

Offered for S and U grades only. Prereq: admission to College of Education. Mandatory orientation is held prior to beginning of each semester; refer to Schedule of Classes for date, time and location. Mandatory professional development workshops held throughout the semester; dates, time, and locations announced at initial orientation. Directed teaching in schools at level for which students are preparing for certification. Includes regular conference in which teaching methods in various fields are explored. (F,W)

5790 Directed Teaching and Conference for Special Groups. Cr. 1-15 (Max. 15)

Prereq: admission to College of Education; admission to student teaching. Offered for S and U grades only. Mandatory orientation is held prior to beginning of each semester; refer to Schedule of Classes for date, time and location. Mandatory professional development workshops held throughout the semester; dates, time, and locations announced at initial orientation. Directed teaching in schools at level for which advanced students are preparing for certification; discussion of educational issues. For students seeking endorsements in special areas; for example: special education, early childhood, art. Students interested in completing general elementary and special education field experiences in the same semester should see advisor for eligibility requirements. (F,W)

6020 Computer Applications in Teaching I. Cr. 3

Variety of hands-on experiences where technology is used as a tool to support instruction and assessment purposes in K-12 classrooms. Course activities introduce students to educational technology standards. (T)

6030 Computer Applications in Teaching II. Cr. 3

Prereq: TED 6020 or equiv. Use of computing resources to develop problem-solving strategies and multimedia applications for students in specific K-12 curriculum areas. (F,W)

6140 Local School Curriculum Planning. Cr. 1-6 (Max. 12)

For classroom teachers and teacher educators. Consideration of local problems in elementary and secondary school programs. Planning for better teaching and learning. (I)

6350 Analysis of Teaching in Urban Schools. Cr. 3

Inquiry-based clinical course designed to provide the fundamental elements necessary for teacher candidates to work in high priority urban schools. (S)

6370 Equity and Inclusion in Diverse Urban Education Settings. Cr. 4

Clinical based course, using inclusive instructional practices for all students including, but not limited to, students with disabilities, English Language Learners, and special populations such as: at-risk, and gifted and talented in inclusive urban settings. (F)

6380 Integrating Content. Cr. 1-12 (Max. 12)

Current issues and trends related to integrating content areas; theory, methods, materials and strategies. Content areas announced in Schedule of Classes. (Y)

7000 Introductory Master's Seminar. Cr. 2-3

Prereq: admission to a master's degree program in Teacher Education Division. Skill development in the three primary areas: information access through the variety of resources available in a university library; comprehension and evaluation of technical literature; employment of APA style in technical writing. (F,W)

7030 Foundations of Teaching and Learning. Cr. 3

Open to students in the M.Ed., Ed.D., Ph.D. or Education Specialist Certificate programs. Theoretical foundations guiding classroom teaching and learning with applications to curricular and instructional practices and their implications for the experiences of children of cultural heritages. (T)

7060 Inclusive Education, Curriculum and Pedagogy. Cr. 3

Open to students in the M.Ed., Ed.D., Ph.D. or Education Specialist Certificate programs. This course has two emphases. First, it provides graduate students with foundational knowledge about the philosophy and sociology of inclusive education as it relates to students who are members of marginalized groups. Second, it provides students with opportunities to learn a basic framework for inclusive education, curriculum, and pedagogy. (T)

7800 Practicum in Curriculum Theory, Development, and Evaluation. Cr. 1-5 (Max. 5)

Offered for S and U grades only. Specific curriculum issues; linking theory and practice in educational settings. (T)

7860 Social, Emotional and Aesthetic Perspectives on Curriculum and Instruction. Cr. 3

Social, emotional and aesthetic perspectives on curriculum and instruction their significance for educational practice and student development. (F)

8130 Basic Principles of Curriculum and Instruction. Cr. 3

Theoretical bases of curricular development and instructional innovation. Their application to the tasks of the curriculum maker explored as various education positions are taken and examined. (S)

8270 Seminar: Issues in Curriculum and Instruction. Cr. 2-6 (Max. 8)

For specialist and doctoral students. Analysis of basic issues in curriculum and instruction and their implications for program: early childhood, K-12, adult curricula. Critique of recent research and development efforts. Application to problems of leadership in school-wide curricular improvements. (F)

8280 Research Seminar: Curriculum and Instruction I. Cr. 3

Methods of research in curriculum and instruction. Critical review of types of research in curriculum and instruction. Research design. (W)

9130 Doctoral Seminar in Curriculum and Instruction. Cr. 3

Prereq: formal admission to a doctoral program in education. An examination of curriculum theory and concepts that apply to the

development of content and instructional strategies relevant to contemporary education. (T)

9620 Doctoral Internship in Curriculum and Instruction. Cr. 3-6 (Max. 6)

Prereq: admission to doctoral program, completion of two doctoral seminars, minimum 18 credits in course work in the major, nine credits in required research course work, and six credits in cognate course work. Offered for S and U grades only. Planned and supervised professional field-based experience relevant to doctoral program and projected profession. (T)

Art Education Courses (AED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5000 Introduction to Art Education. Cr. 3

Prereq: admission to College of Education. Design of developmentally appropriate and comprehensive art experiences, teaching strategies, and authentic assessment of student learning in art. History, theories and philosophies of visual arts education; contemporary trends and issues. Material Fee As Indicated In The Schedule of Classes (F)

5020 Painting: Methods and Materials. Cr. 3 (Max. 9)

Methods, materials and processes suitable for teaching painting in the schools. Subject selection, composition, surface selection and preparation, mixing and application of paint, finishing, and presentation. Students develop basic skills in painting for personal artistic expression. Material Fee As Indicated In The Schedule of Classes (F)

5070 Methods and Materials of Sculptural Expression. Cr. 3

Required for certification in art education and prior to student teaching. Exploration of three-dimensional forms using various media; emphasis on sculptural concepts, materials, tools and techniques related to teaching sculpture on the elementary and secondary level. Material Fee As Indicated In The Schedule of Classes (F)

5100 Topics in Art Education. Cr. 1-3 (Max. 9)

Prereq: admission to College of Education. Coreq: AED 5650. Art experiences designed for the specific needs of special groups. Topics to be announced in Schedule of Classes. Material Fee As Indicated In The Schedule of Classes (I)

5150 Computer Graphics in the Classroom. Cr. 3

Introduction to digital media and the production of computer graphics by using drawing, painting, graphic design, animation, video and web techniques. (S)

5160 Theory and Practice in Art Education. Cr. 3 (Max. 9)

Prereq: admission to College of Education; prereq. or coreq: student teaching. Development and analysis of instructional objectives in art education; organization and management of art classrooms; teaching strategies and assessment practices. (S)

5230 Ceramics Education I. Cr. 3

An overview of handbuilding processes, various firing procedures including blackware and raku, decorating, glazing and equipment maintenance. Emphasis placed on the educational benefits and procedures for working with people of various ages and the management of materials for teaching. Material Fee As Indicated In The Schedule of Classes (S)

5280 Printmaking: Methods and Materials Cr. 3 (Max. 9)

Studio exploration of relief, planographic, intaglio, and stencil processes as methods of reproduction for artistic expression. Examination of tools, methods and processes suitable for the classroom.

Includes study in lithography, dry point, etching, calligraphy, woodcut, linocut, and photo screen processes. Material Fee As Indicated In The Schedule of Classes (S)

5650 Art Teaching Laboratory. Cr. 3

Prereq: admission to College of Education; AED 5160; coreq: AED 5100. Laboratory experience in teaching art to elementary, middle, and high school students. Pre-student teaching experiences†under close supervision of an experienced Visual Arts teacher. (F)

5690 Collage, Assemblage, and Multi-Media: Methods and Materials. Cr. 3

Prereq: AH 1110, AH 1120, ADR 1050, ADR 1060, ADE 1200, ADE 1210 or ADE 1230, ADR 2070, APA 2100, ASL 2150; undergrad. students must be Level II in College. History and methods of creating collage, assemblage, and multi-media art works. Integration of developmental issues, use of personal meaning and experience for lesson planning, unit planning, and work assessment strategies. Material Fee As Indicated In The Schedule of Classes (W)

5890 The Art of Indigenous Cultures: Inclusion in the K-12 Curriculum. Cr. 3

Prereq: AH 1110, AH 1120, ADE 1200; and ADE 1210 or ADE 1230; undergrad. students must be Level II, College of Education. Focus on non-Western, indigenous art forms, such as Balinese architecture, ceramics of Papua New Guinea, Aboriginal painting, Precolumbian culture, and Japanese gardens; means of integrating this content into the K-12 Curriculum. (W,S)

6230 Ceramics Education II. Cr. 3 (Max. 9)

Emphasis is placed on throwing procedures, the use of various clay bodies, firing at various temperatures, making and using tools, ceramic history and its use and benefits in a school curriculum. Material Fee As Indicated In The Schedule of Classes (S)

6300 Explorations in Art Therapy. Cr. 3

Provides non-majors with introduction to art therapy, its history and development, and major approaches. (Y)

6320 Art Therapy: Introduction and Ethics. Cr. 3

Introduction to and ethics of art therapy practice. Material Fee as given in Schedule of Classes. (Y)

6340 Theory of Art Therapy. Cr. 3

Slide lectures, studio experiences, assigned readings, discussions, and critical evaluations in the history and literature of art therapy and closely-related fields. (Y)

6360 Aspects of Art Therapy. Cr. 1-12 (Max. 12)

Aspects of the use of art therapy chosen to develop students' breadth or depth in art therapy practice with various groups and settings. (Y)

6910 Multicultural Issues in Visual Arts Education and Art Therapy. Cr. 2-3

Open to graduate students and Level II undergraduates in College of Education. Provides all visual arts education and art therapy students with discipline-specific experiences, current theoretical perspectives, and best practices to enhance the effectiveness of their work in diverse and multicultural learning or therapeutic environments. Requires 40 hours of Service Learning in the community. (W)

7300 Studio Art Therapy. Cr. 3

Open only to Art Therapy majors. Prereq: AED 6320, AED 6340. Students focus on studio art in the development of art experientials to address various client needs. Material Fee as given in Schedule of Classes. (Y)

7310 Art Therapy with Groups. Cr. 3

Prereq: AED 6320, AED 6340, AED 7300. Therapeutic factors of groups; facilitation of art therapy groups. Material Fee as given in Schedule of Classes. (W)

7330 Art Therapy in the Schools. Cr. 3

Slides, lectures and studio experiences relating to the research, theory and practices of art therapy with children. Material fee as given in Schedule of Classes. (B)

7340 Art Therapy with Adults: Assessment and Practice. Cr. 3

In-depth presentation of theory, practice and research in art therapy with older adults. Slides, lectures, studio experiences. Material fee as given in Schedule of Classes. (Y)

7380 Art Therapy Practicum. (RCI 7430)(CED 7150) Cr. 2-3

Laboratory experience and lecture in art therapy with children and/or adults. Includes assessment, planning goals and objectives, implementing the session, evaluating the session, case supervision, and the assessment of and development of therapeutic skills. (Y)

7700 Advanced Graduate Problems. Cr. 3-12 (Max. 12)

Pursuit of specific problems in depth. Laboratory hours coordinated with regularly scheduled classes in the selected area. Material Fee As Indicated In The Schedule of Classes (T)

7890 Art Therapy Internship. (RCI 7460)(CED 7020) Cr. 1-6 (Max. 6)

Prereq: students apply for admission to course through program faculty. Supervised advanced internship of 600 hours in the practice of art therapy with individuals, groups and/or families; includes regular seminar in which art therapy methods in various fields are explored. (B)

Bilingual/Bicultural Education Courses (BBE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5000 Multicultural Education in Urban America. Cr. 2

Cultural, social, political and economic realities of our complex, pluralistic society in relation to our education system. Development of analytical and evaluative abilities of teachers to deal with racism, sexism, value clarification and the parity of power. Strategies for multicultural education. (I)

5500 Introduction to Bilingual/Bicultural Education. Cr. 3

Survey of the history and legislative background of bilingual/bicultural education in the United States. Emphasis on the foundations, methods, concepts and theories of bilingual/bicultural education. (I)

6560 Teaching Methods in Bilingual/Bicultural Education. Cr. 3

Prereq: admission to a bilingual endorsement program. Utilization of traditional and innovative materials, techniques and methods in teaching elementary and secondary school subjects in a bilingual education program. (I)

6590 Culture and Language in Bilingual/Bicultural Education. Cr. 1-3

Research and application of multicultural activities for designing processes to bring language and culture, and instruction in English, into the classroom. (I)

6600 Internship in Bilingual/Bicultural Teaching. Cr. 2-12 (Max. 12)

Offered for S and U grades only. Internship in a bilingual, multicultural setting; assessment of the cultural, educational, and linguistic needs of students of limited English-speaking ability. (I)

6700 Seminar in Cultural Awareness. Cr. 3

Understanding intergroup relations and the appreciation of cultural diversity in a multicultural society such as the United States. Selected topics offered on a semester or yearly basis. (I)

6850 Applied Linguistics: Issues in Bilingual Education. Cr. 3

Current major models of applied English linguistics, contrasting linguistics with special reference to the comparison of English and linguistic minority languages. (I)

9010 Theoretical Implications of Bilingual/Bicultural Education. Cr. 3

Theoretical foundations for the development of bilingual/bicultural and multicultural education programs in our schools. (I)

9030 Advanced Seminar in Bilingual/Bicultural Education. Cr. 2-4 (Max. 12)

Advanced seminar for doctoral students in the bilingual, multicultural education program. Topics to be announced in Schedule of Classes. (I)

Career and Technical Education Courses (CTE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5401 Instructional Practices for the Career and Technical Education Classroom– Module 1. Cr. 1

This is Module One of a six (6) module series. In this series, instructional practices for competency-based, occupational education settings are addressed, including an examination and the application of teaching techniques, basic assessment and evaluation. (B)

5402 Instructional Practices for the Career and Technical Education Classroom– Module 2. Cr. 1

This is Module Two of a six (6) module series. In this series, instructional practices for competency-based, occupational education settings are addressed, including an examination and the application of teaching techniques, basic assessment and evaluation. (B)

5403 Instructional Practices for the Career and Technical Education Classroom– Module 3. Cr. 1

This is Module Three of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews mastery-learning, performance-based and project-based instructional strategies in the CTE classroom. (T)

5404 Instructional Practices for the Career and Technical Education Classroom– Module 4. Cr. 1

This is Module Four of a six (6) module series. In this series, instructional practices for competency-based, occupational education settings are addressed, including an examination and the application of teaching techniques, basic assessment and evaluation. (B)

5405 Instructional Practices for the Career and Technical Education Classroom– Module 5. Cr. 1

This is Module five of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews Career Technical Student Organization (CTSO) and industry partner relationships. (T)

5406 Instructional Practices for the Career and Technical Education Classroom– Module 6. Cr. 1

This is Module six of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews strategies for remaining current with industry and teaching profession trends. (T)

5410 Teaching Methods for the Career and Technical Education Classroom I. Cr. 3

Strategies and materials for the teaching of career/technical education subjects in a competency-based education setting. Teaching

techniques, basic assessment, and evaluation as well as community and technological influences on teaching. (F)

5501 Instructional Practices for the Teacher Cadet Classroom— Module 1. Cr. 1

This is Module one of a six (6) module series. The series provides a review of teaching/learning concepts as required for the Teacher Cadet (VG) vocational endorsement. This module reviews early childhood concepts and related classroom and parent practices. (T)

5502 Instructional Practices for the Teacher Cadet Classroom— Module 2. Cr. 1

This is Module two of a six (6) module series. The series provides a review of teaching/learning concepts as required for the Teacher Cadet (VG) vocational endorsement. This module reviews education concepts for preschoolers and related classroom and parent practices. (T)

5503 Instructional Practices for the Teacher Cadet Classroom— Module 3. Cr. 1

This is Module three of a six (6) module series. The series provides a review of teaching/learning concepts as required for the Teacher Cadet (VG) vocational endorsement. This module reviews brain-based learning theory and its impact in the preschool classroom. (T)

5504 Instructional Practices for the Teacher Cadet Classroom— Module 4. Cr. 1

This is Module four of a six (6) module series. The series provides a review of teaching/learning concepts as required for the Teacher Cadet (VG) vocational endorsement. This module reviews education concepts for primary students and related classroom and parent practices. (T)

5505 Instructional Practices for the Teacher Cadet Classroom— Module 5. Cr. 1

This is Module five of a six (6) module series. The series provides a review of teaching/learning concepts as required for the Teacher Cadet (VG) vocational endorsement. This module reviews enhancing the instructional delivery system to accommodate special needs learners in the primary and early elementary classroom. (T)

5506 Instructional Practices for the Teacher Cadet Classroom— Module 6. Cr. 1

This is Module six of a six (6) module series. The series provides a review of teaching/learning concepts as required for the Teacher Cadet (VG) vocational endorsement. This module reviews family and parent involvement best practices in school settings. (T)

6010 History and Principles of Career and Technical Education. Cr. 3

Overview of organization and administration at the federal, state, and local levels. Recent developments and their significance for school reform and improvement; business and industry linkages. (Y)

6110 Fundamentals for the Teacher Cadet Classroom I. Cr. 3

Prereq: secondary teaching certification or occupational certification. Offered for graduate credit only. Review of history of the discipline and related curriculum trends; how social and cultural changes affect education; basic concepts of human growth. (T)

6120 Fundamentals for the Teacher Cadet Classroom II. Cr. 3

Prereq: secondary teaching certification and occupational certification. Offered for graduate credit only. Teacher Cadet instructors reflect upon various aspects of teaching in preparation to instruct secondary students enrolled in Teacher Cadet program. (T)

6993 Teaching Methods for the Career and Technical Education Classroom II. Cr. 3

Special workshops and short term seminars in career and technical education subjects. (W)

6999 Coordination of Cooperative Occupational Education. Cr. 3

Philosophy and objectives of educational programs that provide for work experience. Student selection, on-the-job and in-school instruction, placement, coordination, advisory committees, and administration of such programs. (F)

7820 Planning and Organizing Instruction in Career and Technical Education. Cr. 3

Planning and organizing instruction for a competency based program: justification, approaches for content, performance objectives, instructional resources, planning and evaluating units. Should be taken in first two semesters of admission to career and technical education master's program. (W)

8998 Current Issues and Trends. Cr. 3 (Max. 6, M.Ed. and M.A.T.; max. 9, other advanced degree programs)

Place, function, and evolving concepts of career and technical education. Economic, sociological, psychological, and technical factors. (S)

Elementary Education Courses (ELE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

6010 Family Centered Collaboration in Early Childhood Intervention and Special Education. (PSY 6010) (SW 6010) Cr. 3-4

Prereq: Level 2 admission to College of Education. Theories, concepts and practices of family centered intervention services for young children with special needs. Team-building and cross-disciplinary communication and collaboration with families. (F)

6030 Assessment of Young Children in Educational Settings. Cr. 3

Prereq: Level 2 admission to College of Education. Strategies for authentic assessments of young children in school and family educational settings. (Y)

6040 Role of Content Areas in Early Childhood Education. Cr. 2-8 (Max. 8)

Prereq: Level 2 admission to College of Education. Child growth and development as related to the content areas within the early childhood years (birth to eight years). Appropriate subject matter, field experience, reference materials, audio-visual resources in the lives of young children. Topics to be announced in Schedule of Classes. (S)

6050 Infant and Toddler Development to Inform Relationship-Based Curricula and Interventions. Cr. 3

Prereq: Level 1 admission to the College of Education. Children's growth and development from conception through 3-years of age; emphasis on ecological aspects of infancy and toddler years; pivotal foundations of children's developmental competencies within relationship-based interventions and curriculum. (W)

6060 Community Contacts: Working with Families in Urban Settings. Cr. 3

Prereq: Level 2 admission to College of Education. Programs and services within the community that assist families in improving educational services for the child. (Y)

6070 Family, Community and School Partnerships: Supporting Children's Learning. Cr. 3

Prereq: Level 2 admission to College of Education. Theory and practice in joining families, communities, and schools in promoting children's learning, development and success in school. Strengths and needs of families in a diverse, multicultural society, teachers' roles in concert with other disciplines in supporting families and building partnerships, and connection with community resources. (Y)

6080 Preprimary Goals and Practices. Cr. 3

Prereq: Level 2 admission to College of Education; coreq: TED 5790 or ED 5998. Topics related to development and learning of preschool child, role of teacher as facilitator, impact of family and community. (F,W)

6090 Introduction to Infant Mental Health Theory and Practice. Cr. 3

Prereq: Level 2 admission to College of Education. Concepts of infant mental health theory and practice as a developmental framework for the observation, assessment and understanding of infant-parent behaviors and interactions as indicators of strengths and risks in the security of the attachment relationship. (Y)

6100 Planning and Implementing Preschool Curriculum. Cr. 3

Prereq: Level 2 admission to College of Education. Planning, implementing, and evaluating all aspects of preschool curriculum: activities, routines, and working with staff and parents. (I)

6200 Children's Literature for Teachers. Cr. 3

Prereq: admission to Level 2 or M.A.T. degree program. Survey of literature for use with PS-8 children; literary and artistic aspects of children's literature and strategies for integrating literature into school curriculum. (T)

6290 Language Arts Instruction: P-8. Cr. 3

Prereq: admission to Level 2 or M.A.T. degree program. Relates theory and research to language arts instruction in elementary and middle schools; reading, writing, speaking, listening, viewing, and visually representing. Implications of multiculturalism, special needs, and English language learners. (F,W)

6310 Reading Instruction: P-8. Cr. 3

Prereq: admission Level 2 or M.A.T. degree program. Theoretical foundations for literacy, development of beginning reading and writing, and teaching strategies and materials. Evaluating literacy ability through formal and informal measures. Attention to multiculturalism, special needs, and English language learners. (F,W)

6340 Teaching Reading in Early Childhood Education. Cr. 3

Prereq: Level 2 admission to College of Education. Rationale for teaching reading and various reading skills to young children. Materials and methods for initial reading instruction. (Y)

6390 Mathematics Instruction: P-8. Cr. 3

Prereq: admission to Level 2 or to MAT degree program. Developing mathematics skills in elementary and middle schools. Students plan, implement and evaluate learning experience with children under professional guidance. (F,W)

6500 Science Curriculum: P-8. Cr. 3

Prereq: admission to Level 2 or MAT degree program. Role of learning in science in the curriculum. Objectives, plans of organization for learning, resources materials. Overview of balanced program. Experiences with appropriate experiments, field trips, reference materials, audio-visual resources. Material Fee As Indicated In The Schedule of Classes (Y)

6600 Social Studies Curriculum: P-8. Cr. 3

Prereq: admission to Level 2 or MAT degree program. Social studies program in elementary and middle schools emphasizing intellectual, social and affective development. Designing programs based on social priorities, modern socioeconomic, cultural, ethnic, political concepts. (T)

6610 Current Developments in Early Childhood General and Special Education. Cr. 1-6

Prereq: admission to teacher certification program. Topics on developments in research-based recommended practices on early childhood general and special education, covered through seminars and workshops; early intervention and educational implications for children from birth to eight years old. Topics to be announced in Schedule of Classes. (I)

7020 Issues in Early Childhood Education. Cr. 3

Current issues in early childhood care and education including theories, research, best practice, and historical philosophies. (Y)

7025 Infant Mental Health: Theory to Practice Across Early Childhood Settings. Cr. 2

Theories and research-based information on infant mental health practices applied to various early childhood settings. Emphasis on interdisciplinary, relationship-based interventions aimed to promote development and learning in infants and young children. (Y)

7035 Infant and Toddler Developmental Assessment for Intervention Planning. Cr. 3

Developmental assessment of infants and toddlers for early intervention planning and infant mental health services. Focus on standardized assessment and evaluation procedures across child developmental domains and interpretation of results to inform interventions within natural environments. (W)

7840 Educating Elementary/Middle School Students in Urban Communities. Cr. 3

Prereq: acceptance in M.Ed. program. Challenges and resources of teaching diverse populations in metropolitan schools. (I)

7850 Current Issues in Elementary Education. Cr. 1-9 (Max. 9)

Current developments and issues of concern and debate in education at the international, national, state and local level. (I)

English Education Courses (EED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5200 Methods of Teaching English: Grades 7-12. Cr. 3

Prereq: admission to College of Education. Introduction to the purposes and methods of teaching English composition and literature in grades seven through twelve. (T)

6120 English Composition in Secondary Schools. Cr. 3

Prereq: admission to College of Education. Analysis of modes of writing; relationship of grammar and composition; integration with literature and reading; approaches to group and individualized instruction; relation of composition to perception, cognition, critical thinking, motivation, and self-awareness. (F,W)

6210 Language, Literacy, and Learning. Cr. 3

Teaching of language, grammar, and usage in English language arts classrooms, based in sociocultural and sociolinguistic approaches to teaching literacy and language. (F,W)

6310 (EED 6310) Young Adult Literature. (LIS 6530) Cr. 3

Standards for evaluating young adult literature. Selection of literature for individual students in relation to interest and reading ability. Use of classroom collections. Techniques for helping students read poetry, drama and fiction. (T)

6330 Teaching Literature in Secondary Schools. Cr. 3

Prereq: admission to College of Education. Structure of poetry, fiction and drama in relation to aesthetic, social, and psychological needs of secondary school students. Relationship of teaching methods to curriculum patterns. (T)

Language Education Courses (LED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5300 Teaching Chinese as a Second Language. (CHI 5300) Cr. 1-3

Prereq: CHI 3100 or equiv. Introduction to basic teaching grammar and sound rules and general teaching methodology. (W)

5820 Teaching Foreign Languages: Productive Skills. (LED 7820) (LGL 7820)(LGL 5820) Cr. 3

Prereq: LED 5850. Current research on acquisition of speaking and writing skills in a foreign language. Difference between productive and receptive language use; how various methods of foreign language teaching treat the instruction of productive skills. (B)

5850 Assessment in the Foreign Language Classroom. (LED 7850) (LGL 7850)(LGL 5850) Cr. 3

Theoretical basis of second language teaching models; historical overview of methodologies; current trends in teaching of reading, writing, listening, speaking, and culture. Implications of methodology on materials, classroom techniques, and assessment. (B)

6500 Teaching World Languages in Elementary and Middle Schools: Methods III. Cr. 3

Approaches and techniques; review of theory and practice relevant to young learners. Students teach mini-lessons and prepare materials based on national standards and age-appropriate methodologies. (Y)

6510 Second Language Acquisition and the Teaching of Grammar. Cr. 3

Seminar and intensive review of major models of applied sociolinguistics and psycholinguistics; second language acquisition research and teaching of grammar in K-12 education. (Y)

6520 Teaching English as a Second Language/Foreign Language: Methods I. Cr. 3

Prereq: admission to College of Education. Methods and techniques; fundamental theory and practice; English as an international/intranational language. Students micro-teach lessons and prepare teaching materials which emphasize the listening and speaking language skills. (Y)

6530 Teaching English as a Second Language/Foreign Language: Methods II. Cr. 2-3

Prereq: admission to College of Education. Methods and techniques; English as an international/intranational language. Students micro-teach lessons and prepare teaching materials which emphasize the reading and writing language skills. (Y)

6555 Integration of Language and Content in Language Teaching. Cr. 1-3

Examination and evaluation of instructional strategies used to teach content and develop a second language in specific content/language area instruction. (Y)

6565 Assessment in Language Teaching. Cr. 1-3

Instruments, techniques, and strategies in the assessment, placement, and evaluation of second language instruction, including language learners in K-12 and post-secondary education. (Y)

6580 Culture as the Basis for Language Teaching. Cr. 2-4

Prereq: admission to College of Education. Culture examined in a multidisciplinary theoretical framework, to provide students with objective relativistic and holistic attitude about human diversity, enabling them to relate to pupils in urban areas. (B)

7210 Special Problems in Language Education. Cr. 3

An examination of current problems which inhibit foreign language teaching. Students identify particular problems and work individually or in groups to seek solutions. (Y)

7240 Advanced Seminar in Language Teaching. Cr. 2-4

Development, production, and evaluation of innovative techniques for first and second language teaching. (I)

7820 Teaching Foreign Languages: Productive Skills. (LED 5820) (LGL 7820)(LGL 5820) Cr. 3

Prereq: LED 7850. Current research on acquisition of speaking and writing skills in a foreign language. Difference between productive and receptive language use; how various methods of foreign language teaching treat the instruction of productive skills. (B)

7830 Technology in the Foreign Language Classroom. (LED 5830) (LGL 7830)(LGL 5830) Cr. 3

Prereq: LED 7850. Types of current technology; review of research on effectiveness of language classroom technologies; evaluation of technologies; development of activities for use in classroom. (B)

7850 Assessment in the Foreign Language Classroom. (LED 5850) (LGL 7850)(LGL 5850) Cr. 3

Theoretical basis of second language teaching models; historical overview of methodologies; current trends in teaching of reading, writing, listening, speaking, and culture. Implications of methodology on materials, classroom techniques, and assessment. (B)

Mathematics Education Courses (MAE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

- 5100 Geometry for Middle School Teachers. (MAT 5180) Cr. 3**
Prereq: MAT 1110 and 1120. No credit toward a major or minor for secondary mathematics teaching. MAE 5100 may be taken for graduate or undergraduate credit; MAT 5180 may be taken for undergraduate credit only. Development of Euclidean geometry as a mathematical system; related historical topics; introduction to other geometries; selected topics such as transformations and tessellations. (F,W)
- 5110 Number Theory for Middle School Teachers. (MAT 5190) Cr. 3**
No credit toward a major or minor for secondary mathematics teaching. MAE 5110 may be taken for graduate or undergraduate credit; MAT 5190 may be taken for undergraduate credit only. Prereq: MAT 1800, or former MAE 5060, or MAT 1120. Topics from elementary theory of numbers which underlie middle school mathematics; historical connections; role of abstraction and proof in mathematics. (F,W)
- 5120 Abstract Algebra for Middle School Teachers. (MAT 5120) Cr. 3**
Prereq: MAT 1120 or former MAE 5060, and MAT 1800. No credit towards major in mathematics or secondary mathematics. MAE 5120 may be taken for graduate or undergraduate credit; MAT 5120 may be taken for undergraduate credit only. Topics from elementary abstract algebra underpinning middle school mathematics curriculum; historical connections; role of abstraction and proof in mathematics. (F,W)
- 5130 Problem Solving for Middle School Teachers. (MAT 5130) Cr. 3**
Prereq: MAT 1120 or former MAE 5060, and MAT 1800. No credit towards a mathematics major or secondary mathematics education major. MAE 5130 may be taken for graduate or undergraduate credit; MAT 5130 may be taken for undergraduate credit only. Development of mathematical problem solving in middle grades mathematics education; study of non-routine problems; problem solving strategies; historical connections; connections to selected mathematics content and to topics in other disciplines. (F,W)
- 5150 Methods and Materials of Instruction: Secondary School Mathematics. Cr. 3**
Prereq: admission to College of Education; 19 credits toward secondary mathematics major or minor. To be elected before student teaching. Mathematics in secondary school; major concepts of secondary school mathematics; methods and instructional materials; classroom administration; modern trends. (Y)
- 6050 Teaching Mathematics in the Middle Grades. Cr. 3**
Prereq: admission to College of Education. Creative use of resources and materials for improving the mathematics competencies of middle school and junior high school students; organizing the mathematics

- classroom for effective instruction; promising trends; related research. (Y)
- 6150 Special Topics. Cr. 1-6 (Max. 12)**
Current issues and trends; areas of neglected content; curriculum proposals; related research. Topics to be announced in Schedule of Classes. (I)
- 6200 Teaching Arithmetic, Algebra and Functions from an Advanced Perspective. (MAT 6200) Cr. 3**
Prereq: MAT 5120, 6170, or 6180. Students gain profound understanding of K-12 mathematics. Concepts underlying topics and procedures; their connections to higher mathematics. Teaching with Simplify; application of mathematical understanding to teaching practices. (Y)
- 6210 Teaching Geometry, Probability and Statistics, and Discrete Mathematics from an Advanced Perspective. (MAT 6210) Cr. 3**
Prereq: completion of a major in mathematics or secondary mathematics education. Historical perspectives, common conceptions and misconceptions, applications, technology, and mathematical connections relative to teaching geometry (including trigonometry), probability and statistics, and discrete mathematics in secondary school. (Y)
- 6400 Elementary School: Mathematics Curriculum and Assessment. Cr. 3**
Prereq: admission to M.Ed. program. Developing competence in school mathematics programs: objectives, procedures, materials, organizational patterns, evaluation. (T)
- 7150 Advanced Studies in Teaching Discrete Mathematics. Cr. 3**
Open only to graduate students. Nature of discrete mathematics and its applications, incorporating discrete topics in school mathematics. (B)
- 7200 Advanced Studies in Teaching Statistics and Probability. Cr. 3**
Open only to graduate students. Techniques for teaching statistics and probability in grades K-12; promising materials and activities; research on the learning and teaching of statistics and probability; related resources; review of basic concepts. (B)
- 7250 Advanced Studies in Teaching Algebra. Cr. 3**
Open only to graduate students. Fundamental concepts of algebra for a modern secondary school mathematics program; current trends and experimental programs; related research; methods and materials of instruction. (B)
- 7300 Advanced Studies in Teaching Geometry. Cr. 3**
Open only to graduate students. Role of geometry and trigonometry in secondary school mathematics; selection of major concepts; development of postulational thinking; teaching procedures emphasizing modes of thinking in mathematics; modern trends. (B)
- 7400 Seminar in Mathematics Education. Cr. 3 (Max. 9)**
Open only to graduate students. Recent research in mathematics education; implications for learning and teaching, K-12. Topics to be announced in Schedule of Classes. (Y)
- 8400 Technology in Mathematics Learning and Teaching. Cr. 3**
Open only to doctoral students; open to master's students with written consent of advisor. Recent research on the use of technology in mathematics education; implications for learning and teaching mathematics, K-12. (B)
- 8550 Theoretical Perspectives on Learning Mathematics. Cr. 3**
Open only to doctoral students; open to master's students with written consent of advisor. Survey of various perspectives on the learning and teaching of mathematics; underlying psychological bases; implications for teaching. (B)

Reading, Language, and Literature Education Courses (RLL)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

6120 Developmental Reading I: Comprehension Preprimary-8. Cr. 3

Prereq: ELE 6310. Development of comprehension in literature and informational material. Instructional strategies and selection of material for instruction with emphasis on literacy across the curriculum. Evaluation of comprehension through formal and informal measures; reporting to parents and other professionals. Implications of multiculturalism, special needs, and English language learners. (T)

6121 Teaching Reading in the Content Areas: Grades 6-12. Cr. 3

Prereq: admission to Level 2 or to MAT degree program. Teaching reading across all content areas with particular attention to readers with special needs. (T)

6400 Practicum in Developmental Reading. Cr. 1-4 (Max. 4)

Identifying and solving field problems in developmental reading, management of reading instruction, the importance of reading in the content areas. (T)

6700 Second Language Literacy Development: K-12. Cr. 3

Prereq: LED 6520. Examination of theories, organizations and instructional strategies involved in second language literacy development, and their applications in the classroom. (F,S)

6801 Assessment and Differentiated Instruction for Diverse Learners: Pre-K-8. Cr. 3

Prereq: teacher holding provisional teaching certification at elementary level. Assessment of literacy competencies of diverse learners; use of assessments to plan and implement differentiated instruction in grades PreK-8. Implementation with students in field component; and evaluation. (T)

6802 Assessment and Differentiated Instruction for Diverse Learners: 6-12. Cr. 3

Prereq: teacher holding provisional teaching certification at secondary level. Assessment of literacy competencies of diverse learners; use of assessments to plan and implement differentiated instruction in grades 6-12. Implementation with students in field component; and evaluation. (T)

7100 Emergent Literacy. Cr. 3

Variety of theories, organization and instructional strategies involved in the beginning stages of literacy; their application to the classroom. (Y)

7200 Comprehension. Cr. 3

Prereq: RLL 7100. Models of comprehension, factors that affect comprehension, instructional methods, reading/writing connection, evaluation (pre-K to adult). (Y)

7300 Literacy Across the Curriculum. Cr. 3

Prereq: RLL 7100, RLL 7200. Theoretical bases for teaching literacy across the curriculum; strategies for organization and instruction. Action research as a tool for learning. (Y)

7350 Organization and Supervision of Literacy Programs. Cr. 3

Prereq: RLL 7100, 7200. Factors necessary to organize and supervise literacy programs. Topics include: curriculum development for a variety of needs, evaluation of programs, resources and material; staff development; communicating with parents, other professionals, and the public. (S)

7400 Practicum and Seminar in Evaluation and Instruction. Cr. 3 (Max. 6)

Prereq: RLL 7100, RLL 7200. Must be elected in consecutive Fall and Winter semesters; credit awarded only on completion of second semester. Evaluation and literacy competencies of learners, methods of instruction, use of portfolios and reports to document progress; applied during supervised tutoring. (Y)

7500 Theoretical Foundations for Literacy. Cr. 3

Prereq: RLL 7100, RLL 7200. Implications of theories from sociology, psychology, linguistics, semiotics and related fields, for the development of literacy. (Y)

7600 Current Developments in Literacy Education. Cr. 1-6 (Max. 6)

Topics of current interest; review of literature, discussion of educational implications. (Y)

7720 Survey and Analysis of Current Literature for Children: PS-Grade 3. (LIS 6510) Cr. 3

Intensive examination of books appropriate for preprimary and primary school children. Analysis of the literary and extra-literary factors that affect the young child's experiences with fiction, non-fiction, and poetry. (Y)

7740 Survey and Analysis of Literature for Older Children: Grades 4-8. (LIS 6520) Cr. 3

Intensive examination of books appropriate for children in grades four through eight. Analysis of literary and extra-literary factors affecting the older child's experiences with fiction, non-fiction, and poetry. (Y)

7750 Survey and Analysis of Current Children's Literature: Preschool - Grade 8 Cr. 3

Intensive examination of books for children in preschool through eighth grade. Analysis of literary and extra-literary factors affecting the child's experiences with fiction, non-fiction and poetry. (Y)

7780 Storytelling. (LIS 6550) Cr. 3

Selection of appropriate literature and materials for story performance; guided practice in selection and presentation of literature for oral communication by reading aloud, mediated storytelling and storytelling. (Y)

7800 Writing Development and Instruction. Cr. 3

Key theories on how students learn to write; key stages of the writing process, authoring cycle, and special challenges students encounter with different genres. Strategies for developing various aspects of the writing process and creation of different genres. (I)

7820 Responding to Texts: Theory and Practice. Cr. 3

Roles of reader, text, and teacher in connection with reader-response theories such as transmission, transaction and transformation theories; practical strategies for literary engagement and response. (I)

8200 Thought, Language, Social Interaction, and Learning. Cr. 3

Prereq: admission to doctoral program or education specialist program. Reading, writing and learning as psycho-social activities which reflect culture and community; interrelationships between thought, language, social interaction, and learning. (I)

8500 Literacy in a Socio-Political Culture. Cr. 3

Prereq: admission to doctoral program or education specialist program. Literacy issues within social, political, and cultural arena; actions that impact literacy and literacy instruction. (Y)

8600 Internship in Research and Teaching. Cr. 3-6 (Max. 6)

Prereq: admission to doctoral program; to be taken after minimum nine credits of course work in focus area. Experiences in college-level teaching and/or research through internships teaching college courses and/or collaborative research with experienced faculty. (T)

8700 Research Applications in Literacy. Cr. 3

Prereq: admission to doctoral program in RLL; completion of qualitative research; EER 7630, 7640. Research designs, analysis strategies, relevant statistics useful in conducting a wide variety of contemporary literacy-related research. (Y)

8800 Seminar in Research in Reading I: Basic Theory and Comprehension. Cr. 3

Seminal research and theories in literacy and related fields such as psychology, sociology, literary criticism, linguistics, and semiotics, that have shaped literacy theory and instruction, metacognition, and comprehension. (B)

8810 Seminar in Research in Reading II: Emergent Literacy and Socio-Cultural Factors. Cr. 3

Prereq: admission to education specialist or doctoral program. Current research and theories of emergent literacy and the social and cultural factors of literacy development. (B)

8830 Current Issues and Research in Literacy. Cr. 3

Prereq: admission to doctoral program or education specialist program. Research and theories in literacy and related fields; their potential to impact instruction, society, and further research. Students read, discuss, and critique current research and consider the implications for theory, literacy instruction, and further research. (B)

8840 Practicum in Supervision and Administration of Programs in Literacy Development. Cr. 3

Prereq: RLL 7400 or former RDG 7400 or equiv. Understanding the supervision and administration of literacy programs through investigation, experience supervising a literacy center in conjunction with faculty, and working with master's-level students who are tutors in that program. (T)

Science Education Courses (SCE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5010 Biological Sciences for Elementary and Middle School Teachers. Cr. 3

Significant biological principles, generalizations and understandings with relation to their use with children. Appropriate learning activities; experiments, field trips, text and reference materials, audio-visual resources, evaluation. Material Fee As Indicated In The Schedule of Classes (T)

5020 Physical Sciences for Elementary and Middle School Teachers. Cr. 3

Significant principles, generalizations and understandings in the physical sciences with relation to their use with children. Appropriate learning activities including experiments, field trips, reference materials, audio-visual resources. Material Fee As Indicated In The Schedule of Classes (T)

5030 Earth/Space Science for Elementary and Middle School Teachers. Cr. 3

Principles, generalizations and understandings related to teaching earth/space science to children. Learning activities, field trips, technology, and evaluation. Material Fee As Indicated In The Schedule of Classes (T)

5060 Methods and Materials of Instruction in Secondary School Science I. Cr. 3

Prereq: admission to College of Education. Role of science in the secondary curriculum. Problems and techniques of teaching science in the secondary schools; objectives, planning laboratory experiments, demonstrations, directed study, student projects, text and reference material, audio-visual resources, evaluation. Material Fee As Indicated In The Schedule of Classes (F)

5070 Methods and Materials of Instruction in Secondary School Science II. Cr. 3

Prereq: admission to College of Education; SCE 5060 recommended. Problems of selecting and organizing teaching-learning materials in secondary school science. Development of illustrative instructional units. Resources for professional growth of science teachers; professional literature and organizations. (W)

6010 Safety in the Science Classroom. Cr. 2

Principles of Laboratory safety in all K-12 science classrooms, including legal responsibilities related to the use, storage and disposal of chemicals and biological specimens as well as legal and ethical use of living organisms in the classroom. (W)

6030 Advanced Studies in Teaching Science in the Junior High and Middle School. Cr. 3

Prereq: admission to College of Education. Innovations and improvements in middle school and junior high school science teaching. Exploration of appropriate areas of study, development and selection

of learning activities and materials; laboratory experiences in selected areas. (B)

6040 Advanced Studies in Teaching Science in the High School. Cr. 3

Emphasis on methods of teaching biology and the physical sciences in the high school. Recent curriculum studies, research, and current problems. Laboratory experiments, equipment, textual and reference material, audio-visual resources, and evaluation procedures. Material Fee As Indicated In The Schedule of Classes (B)

6080 Teaching Environmental Studies. Cr. 3

Ecological concepts and environmental problems, possible solutions, and their implications for curriculum development and classroom teaching in K-12 educational settings. Science as a process is stressed throughout classroom activities, field trips, and assignments. Material Fee As Indicated In The Schedule of Classes. (B)

7010 Special Topics in Science Education. Cr. 1-3 (Max. 6)

Prereq: teaching or supervisory experience recommended. Current theories and issues related to science education: nature of science, equity, global education, interdisciplinary approaches, alternative forms of assessment and technology integration. Topics to be announced in Schedule of Classes. (B)

Social Studies Education Courses (SSE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

6710 Methods and Materials of Instruction in Secondary Social Studies. Cr. 3

Prereq: admission to College of Education. Foundations of social studies instruction and curriculum; methods of teaching in middle and senior high school, including the use of state standards in the design of instruction, teaching approaches for the various social studies disciplines, their interdisciplinary application, diversity and appreciation of other cultures. (F,W)

6720 Teaching the Interdisciplinary Knowledge of Social Studies. Cr. 3

Building interdisciplinary knowledge and pedagogical skills in the social studies, including media literacy. (S)

6730 New Perspectives in Social Studies Education. Cr. 3

Prereq: admission to College of Education. Development of curricular lesson plans, unit plans, and other teaching strategies utilizing current approaches in social studies education. (W,S)

7780 Readings in the Social Studies. Cr. 3

A reading seminar with emphasis on content and teaching strategies for social studies education. (F)

8740 Graduate Seminar in Social Studies Education. Cr. 3

Application of theories of social education to curricular designs and innovative instruction pertaining to Detroit's past and present, integrated with visits to cultural sites. (F)

Special Education Courses (SED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696. The department reserves the right to offer or cancel courses based on enrollment.

5030 Education of Exceptional Children. Cr. 3

Prerequisite or corequisite to all SED courses taken for major credit. General background and overview information concerning various classifications of exceptional children, youth and young adults, their role in society, and their education. (T)

5040 Language Acquisition and Educational Interventions for Students with Moderate to Severe Impairment. Cr. 2

Prereq. or coreq: SED 5030. Normal language-communication development and acquisition; how it may differ for persons with moderate to severe cognitive impairment. Emphasis on utilizing augmentative and alternative communication systems. (S)

5060 Developing Observation and Assessment Skills: Laboratory/Seminar. Cr. 3

Prereq. or coreq: SED 5030. Investigation and application of appropriate evaluative techniques for use with learners with mental impairments in an educational setting. (Y)

5090 Transitions for Students with Disabilities. Cr. 3

Prereq: SED 5030; admission to College of Education. Strategies for supporting students with disabilities and special needs making effective transition between schools and from school to adult life as engaged and effective community members. (Y)

5110 Introduction to Cognitive Impairment and Educational Interventions. Cr. 3

Prereq. or coreq: SED 5030; admission to College of Education Level 2. Characteristics, classifications, etiologies, evaluation and learning strategies for the improvement of the learning processes in learners with a cognitive impairment. (F,W)

5130 Curriculum and Instructional Strategies: Cognitive Impairments. Cr. 3

Prereq: SED 5030 and 5110; admission to College of Education. Specialized instructional approaches, evaluation, techniques, curriculum and instructional aids for educating children, youth, and young adults with cognitive impairments within the school and community. (Y)

5140 Behavior Management: Positive Behavior Support. Cr. 3

Prereq. or coreq: SED 5030 or equiv; admission to College of Education Level 2. Proactive approaches to dealing with behavioral challenges and social-emotional needs of children and youth; functional behavior analysis, behavior intervention plans. (Y)

5260 Effective Instructional Strategies for Exceptional Learners. Cr. 3

Prereq. or coreq: SED 5030. Effective instructional strategies for students with special needs; multi-level and differentiated instruction, scaffolding, multi-modal instruction. (F)

5600 Support and Collaboration for Inclusive Teaching. Cr. 3

Prereq: SED 5030, 5010, or 7050. Strategies for teaching students with a wide range of academic, social-emotional, and sensory-physical abilities together in general education classes. Emphasis on support, collaboration, and co-teaching. (I)

6010 Seminar in Special Education Teaching. Cr. 2

Prereq: admission to College of Education; coreq: student teaching in special education. Selected topics, problem solving, and reflection on experiences as a student teacher facilitating the learning of children with a mental and/or related disability. (F,W)

6021 Introduction to Autism Spectrum Disorder (ASD). Cr. 3

Historical and current research on etiology, identification, and characteristics of autism spectrum disorder (ASD), with professional and personal perspective. Focus on interventions and services, and quality of life outcomes for children, youth, and their families. (W)

6030 Autism Spectrum Disorder (ASD): Educational Interventions. Cr. 3

Research foundations for recommended instructional programs for children, youth, and adults with ASD. Focus on assessment and interventions designed for student achievement within the general curriculum, relationship-based transitions, and improved quality of life outcomes. (F)

6040 Introduction to Early Childhood Special Education. Cr. 3

History, philosophy, legislation, and "best practice" of early intervention and educational programs for young children, birth to eight years old, who have developmental delays or disabilities. (W)

6050 Language, Communication, Development, and Interventions. Cr. 3

Research foundations of language and communication development, as it applies to the developmental context of autism spectrum disorder for children, youth, and adults. Cross-disciplinary practices in assessment, design, implementation, and evaluation of relationship-based interventions. (F)

7030 Dynamic Assessment in Early Childhood Special Education. Cr. 3

Introduction to a variety of assessment tools and instruments and their administration for young children who have developmental delays or disabilities. Focus on linking assessment and intervention "best practices." (S)

7050 Inclusive Teaching. Cr. 2

Open only to non-majors. Strategies and techniques for teaching children and youth with differing academic, social-emotional, and sensory-physical abilities together in general education, using best instructional practices. (Y)

7760 Teaching Students with Learning Disabilities: K-12. Cr. 3

Methods, materials, and procedures for education of children with learning diversity as they relate to concerns in communication disorders and sciences. (F)

7770 Assessment and Evaluation of Students with Special Needs. Cr. 3

Methods, materials and procedures for education of adolescents with learning disabilities in school programs. (W)

7790 Language Basis of Learning Disabilities. Cr. 3

Normal language acquisition and development, language pathology including neurological process involved in speech reception and production, assessment of language disorders as they relate to children and adolescents with learning disabilities. (S)

7800 Practicum/Internship in Special Education. Cr. 1-24 (Max. 24)

Prereq: consent of instructor. Two-semester sequence. Education of students with disabilities in best practices; implementation of action research project. Focus on area of certification/endorsement. (S)

7820 Emotional and Behavioral Problems in Children and Adolescents. Cr. 3

Diagnosis, instruction, treatment, and support of children and youth classified as having emotional disturbance and behavior disorders. (I)

7830 Promoting Pro-Social Behavior and Resilience. Cr. 3

School- and classroom-based approaches for building resilience, promoting pro-social behavior, preventing emotional difficulties and violence. Emphasis on community-building in the classroom, peer support, understanding needs, and providing social-emotional learning opportunities. (I)

7840 Advanced Internship in Special Education. Cr. 3-6 (Max. 6)

Prereq: consent of instructor. Individualized internship developed in collaboration with faculty to focus on university teaching, research, leadership and other advanced professional experiences. (W)

8700 Advanced Seminar in Special Education. Cr. 3

Open only to educational specialist or doctoral students. Students collaborate with faculty to explore key issues of policy and practice related to education of students with disabilities and special needs. (T)

Theoretical and Behavioral Foundations

Interim Assistant Dean: JoAnne Holbert
Office: 361 Education Building; 313-577-1805
Website: <http://tbf.coe.wayne.edu>

Professors

Stephen B. Hillman, Barry S. Markman, John J. Pietrofesa, Shlomo Sawilowsky, Cheryl Somers

Associate Professors

Arnold Coven, JoAnne Holbert, Francesca Pernice-Duca

Assistant Professors

George Parris (Clinical), Ryoungsun Park, Jasmine Ulmer, Tami Wright (Clinical)

Senior Lecturers

Monte Piliawsky

Lecturers

Sameerah Davenport, Shirley Mack

Graduate Degrees

MASTER OF EDUCATION with majors in counseling, educational evaluation and research, and educational psychology

MASTER OF ARTS with majors in school and community psychology, counseling psychology, counseling, and rehabilitation counseling and community inclusion

DOCTOR OF EDUCATION with majors in educational evaluation and research, and counseling

DOCTOR OF PHILOSOPHY with majors in educational evaluation and research, educational psychology (with a concentration learning and instruction sciences), and counseling

EDUCATION SPECIALIST CERTIFICATE with a major in counseling

GRADUATE CERTIFICATES in advanced graduate studies in school psychology, and applied behavior analysis

The Division of Theoretical and Behavioral Foundations includes degree programs in educational evaluation and research, counseling, educational psychology, school and community psychology, counseling psychology, and rehabilitation counseling and community inclusion. The Division is designed to facilitate a realization of the following aims:

- 1) to integrate the educational experiences and course offerings;
- 2) to perform a service function in meeting the needs of those enrolled in other divisions within the College;
- 3) to provide degree and specialist programs for those who are majoring in a particular field of the division;
- 4) to provide students with an opportunity to study those aspects of educational thought and practice that are interdisciplinary as well as foundational;
- 5) to formulate programs looking toward the development of new combinations of specialties, as in (a) counseling-psychology, (b) pupil

personnel managers in school systems, (c) utilization of theoretical and behavioral foundations in teacher education, (d) underlying philosophical premises of educational programs and practices; and

6) to design interdisciplinary, cross disciplinary, and multidisciplinary experiences for and with students.

Counselor Education

The counselor education unit offers graduate counseling programs for those professionals committed to being effective counselors in elementary and secondary schools, colleges, universities, and private and public agencies. The unit offers degree programs appropriate for counseling work in K-12 school settings, community agencies, substance abuse treatment centers, sports and exercise facilities, corporate structures, medical institutions, nursing homes, rehabilitation agencies/centers and independent practice.

All applicants will be evaluated with respect to their potential for being effective counseling professionals. Admission decisions are based on a review of the application and a personal interview with the appropriate admission committee. Acceptance is dependent upon the applicant's professional potential, academic and professional background, and professional career goals.

The counselor education unit offers a Master of Arts program with a major in clinical mental health and school counseling. Additional training may be completed in art therapy, and rehabilitation counseling. A rehabilitation counseling major in the Master of Arts program includes training in disability management, disability leadership, career development, job placement supported employment, adjustment counseling and vocational evaluation.

All programs include a practicum and internship clinical experience and a terminal masters seminar and project.

Counseling Accreditation: The Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council on Postsecondary Accreditation (COPA), has conferred accreditation to the M.A. in Counseling with concentrations in Clinical Mental health and School Counseling, and the Ed.D and Ph.D programs in counselor education and supervision. In addition, the Council on Rehabilitation Education accredits the Rehabilitation Counseling major (CORE).

The Education Specialist Certificate program is intended for guidance professionals who want to improve their competence in counseling. Since this is a professional certificate program, persons considering applying should confirm that they have the prerequisite education and experience prior to making formal application. This certificate is not an entry level program, but builds on master's level preparation in counseling.

The Doctor of Philosophy is generally required for those intending to teach, conduct research, or provide counseling services in universities and colleges. In addition, those desiring counseling positions in governmental or community agencies, and the like, may be required to take advanced training in counseling theory and practice, consultation, scholarly research, and supervision of counselors.

The Doctor of Education program consists of advanced courses designed for those persons who wish to become directors of guidance or pupil personnel programs and coordinators or consultants in guidance and counseling programs in K-12 and intermediate school districts. The Ed.D. provides opportunities to improve skills and competencies as school counselors in counseling, program development, career development, consultation research, and supervision of counselors.

Time Limitation: Requirements for the Master of Arts or Master of Education degree must be completed within six years after completion of the first course applicable toward the degree. All degree requirements for the doctoral program must be completed within seven years from the time of official admission.

Writing Style: The counselor education unit has adopted the *Publication Manual of the American Psychological Association* as the style guide for preparation of all papers submitted in fulfillment of program requirements.

Class and Internship Scheduling: All counseling program courses are offered only in the evening hours (4:00 p.m. to 10:15 p.m.), permitting working students the opportunity to pursue their educational endeavors. Additionally, the counseling program will arrange with community settings (i.e., agencies, schools, institutions) whereby working students may complete the clinical portions of their programs as well as fulfill employment obligations elsewhere.

Licensure: Individuals in the counseling profession who practice in Michigan must seek professional licensure. Satisfactory completion of degree requirements in the counselor education master's and doctoral programs allows the student to apply for the Limited Licensed Professional Counselor (LLPC) credential in the State of Michigan. The Educational Specialist Certificate program does not meet Michigan eligibility requirements for the professional counselor licensure. Information on licensure may be obtained from the Michigan Department of Community Health, Board of Counseling, P.O. Box 30670, Lansing, Michigan 48909; telephone: 517-335-0918.

Effective with the passing of PA 288 (July 10, 2000) an amendment in Act 451 of the Public Acts of 1976 (the Revised School Code), individuals who complete the school counseling specialization (with or without a teaching certificate) may be employed as school counselors and recommended for the new School Counselor License (SCL). All applicants for the School Counselor License (SCL) must have received a passing score on the State of Michigan, Department of Education's Michigan Test for Teacher Certification (MTTC) Guidance Counselor Examination. MTTC examination scores must be furnished directly to Wayne State University by the MTTC testing agency, Evaluation Systems Group of Pearson. When registering for the MTTC, select "Wayne State University (31)" as a "College or University to Receive Scores."

Students whose examination scores were not released to Wayne State University should request an original score report from Evaluation Systems Group of Pearson. An original score report is required by the Michigan Department of Education for verification of test scores.

Counseling Accreditation: The Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council on Postsecondary Accreditation (COPA), has conferred accreditation to the following programs in the counselor education program: M.A. with various specializations and the Ed.D. and Ph.D. programs in counselor education and supervision. In addition, the Rehabilitation Counseling and Community Inclusion major is accredited by the Council on Rehabilitation Education (CORE).

Counseling (M.A. and M.Ed. Programs)

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Admission to the counselor education program requires a grade point average of 2.50 or above for the undergraduate course work. Program admission requirements include: a personal interview with an admission committee and a typewritten autobiographical statement reflecting the applicant's respective personal and professional history with a statement of rationale for seeking admittance to the program.

Admission to the specialization in Art Therapy also requires submission of a portfolio of original art work, to be evaluated by art therapy faculty, that demonstrates competence with art materials

DEGREE REQUIREMENTS: The various specializations in counseling require a set of core courses and individual requirements depending on the goals of the student. All specializations require a

foundation program of fifty-four credits under Plans A or C. Additional credits may be required for students completing more than one specialization area. Outlines of recommended minimum programs in the specialization area may be secured from the unit secretary. Cognate course work within and /or outside the College of Education supportive of a major in counselor education is required of all candidates. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Counseling (Education Specialist Certificate)

The Educational Specialist Certificate program in Counseling is intended for those who are presently counseling professionals who want to improve their competency in counseling and/or receive training in counselor clinical supervision. The Specialist Certificate does not meet eligibility requirements for the Professional Counselor License in the State of Michigan.

Admission: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. After admission to the College, program requirements also include a master's degree from an accredited graduate school in counseling, rehabilitation counseling, or a closely related field that includes entry-level curricular experiences and demonstrated knowledge and competency in each of eight common counseling areas required by CACREP: human growth and development, social and cultural foundations, helping relationships, groups, life and career development, appraisal, research and evaluation, and professional orientation. A minimum grade point average of 3.0 ('B' or above) on the master's degree is required for admission consideration. Additionally, applicants to the educational specialist certificate program must hold professional counselor licensure (LLPC or LPC) prior to admission.

Applicants are also required to conduct a single 45-minute counseling session in the College of Education Counseling and Testing Center. This session will be audio and/or video taped for evaluation by the Advanced Admissions Advisory Committee. An interview with the Advanced Admissions advisory Committee is also required.

CERTIFICATE REQUIREMENTS: A minimum of thirty credits is required for this certificate. Course requirements for the program are determined in consultation with an advisor. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Counseling (Ed.D. and Ph.D. Programs)

Admission: In addition to meeting the basic admission requirements of the graduate school (for requirements, see Admission, Graduate School, p. 17) and those of the College, a master's degree from an accredited graduate school is required. The master's program must be in counseling, school counseling, rehabilitation counseling, or a closely related field that includes entry-level curricular experiences and demonstrable knowledge and skill competency in each of the eight areas required by CACREP: human growth and development, social and cultural foundations, helping relationships, groups, life and career development, appraisal, research and evaluation, and professional orientation.

In addition to either a grade point average of 3.5 or above in the master's degree, or a grade point average of 3.35 or above in a master's degree and a grade point average of 3.75 in the Counseling Educational Specialist Certificate program, admission criteria include consideration of academic aptitude for doctoral work, previous

professional experience, demonstrated counseling skills, knowledge of counseling concepts, and potential for professional leadership.

A department-written examination is required. Doctoral program applicants are also required to take the Graduate Record Examination and have the results forwarded to the program area. In addition, a demonstration of counseling skills is required using the Counseling and Testing Center. A single 45-minute session is audio- and/or video-taped and reviewed by the Advanced Admission Committee.

Applicants must make up any deficits or remedial work as listed on their approved application for admission form before beginning advanced doctoral course work. Specifically, those persons who have master's degrees from closely-related fields (psychology, social work, nursing) must complete all academic and clinical prerequisites required before beginning advanced doctoral course work.

DEGREE REQUIREMENTS: The doctoral program is individually developed with a major advisor. Within the guidelines of the Graduate School and the college, students build a specialized curriculum. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively. All students complete:

1. two doctoral seminars from foundation areas;
2. a concentration in counselor education;
3. at least two doctoral level supervised internships;
4. course work aimed at developing competence in statistics and research methodologies;
5. course work selected by the student, major advisor and cognate advisor which supports an additional area of professional expertise;
6. and electives chosen from the major field or the cognate area

Additional requirements for the doctoral degrees are explained in greater detail in program materials available from the program area.

Educational Evaluation and Research Programs

Evaluation and Research offers concentrated programs for building careers and leadership positions in educational evaluation and statistics; computer applications; and research methodology.

Students who have already successfully achieved background, training, and experience in substantive disciplines of education and in non-education fields and who are interested in becoming more proficient in scientific inquiry, research strategies, evaluation and appraisal of studies, models and designs, and multivariate analysis, especially in conjunction with computer facilities, are afforded such opportunities in these programs. For optimum effective preparation, internships in research will be arranged upon request. The staff is available to students and faculty for consultation in research design and multivariate analysis.

Cooperative educational programs leading to training skills in Educational Evaluation and Research in Medical Education are also available. This specialized training is available in cooperation with selected faculty from the School of Medicine. Persons from the health sciences seeking educational research skills and persons from education backgrounds seeking health science education skills are brought together for their mutual growth

Educational Evaluation and Research (M.Ed. Program)

Admission: Students are admitted every semester and must meet the general admission requirements for the M.Ed. outlined under Admission, p. 102.

DEGREE REQUIREMENTS: A minimum of thirty credits is required for this degree under Plan A, B, or C. Required courses include ED 7999 if Plan B or C is elected, or ED 8999 for Plan A. In addition, a minimum of twelve credits in educational evaluation and research. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Educational Evaluation and Research (Ed.D. and Ph.D. Programs)

Admission: Applicants to doctoral programs in this area must meet the admission requirements stated under Admission to Graduate Programs, p. 104.

DEGREE REQUIREMENTS: Basic degree requirements for the Ph.D. and Ed.D. programs are stated at Doctor of Education Requirements, p. 104. All courses in the major are selected in consultation with an advisor. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Educational Psychology

The Master's Degree programs in Educational Psychology are primarily concerned with the preparation of individuals working in settings such as schools, behavioral mental health care settings, business and other fields, who wish to develop skills and knowledge in the application of psychology. At the doctoral level, our program is focused on research and university teaching contexts. The Applied Behavior Analysis training emphasized working in clinical settings with people with Autism.

There is one Master of Education (M.Ed.) program in Educational Psychology, geared toward those who want to apply psychology/educational psychology to their current professions (e.g., teaching). Two majors are offered for the Master of Arts (M.A.) degree: School and Community Psychology and Counseling Psychology. The School and Community psychology program offers two years of course work, plus a one-year internship. Satisfactory completion of the School and Community Psychology program allows the student to be certified as a school psychologist by the State of Michigan. It also allows the student to apply for a Limited License to Practice as a Psychologist (L.L.P.) in the State of Michigan. The major in Counseling Psychology has an emphasis in individual and marriage and family therapy and offers two years of course work plus one or two semesters of a clinical internship. Satisfactory completion of the Counseling Psychology program allows the student to qualify for the Limited License to Practice as a Psychologist in the State of Michigan and, with additional coursework, a State of Michigan license as a Marriage and Family Therapist. The Ph.D. in Educational Psychology has a concentration in Learning and Instruction science and is focused on educational psychology theory and research. Additionally, an Applied Behavior Analysis Graduate Certificate is offered for those who already hold a master's degree, or it can be accomplished as part of the M.Ed. in Educational Psychology. Through this training, students become eligible to sit for the Board Certified Behavior Analyst (BCBA) exam,

which is part of earning the BCBA credential. All of these programs are described in more detail below.

The prospective student should recognize that a grade point average of 3.0 with no more than one earned grade of 'C' plus is required to continue in all of these programs and to graduate. The majors of School and Community Psychology and Counseling Psychology involve, in addition to course requirements, clinical experience in school and/or agency settings. Due to the clinical nature of the courses and the internship, both majors require students to have active liability coverage throughout the program. Retention in the program, graduation, and recommendation for certification/licensing approval depend upon demonstrated clinical skill as well as on the student's academic achievement. The staff will try to arrange for psychological practicums and internships in either a school system or a community mental health facility in keeping with program requirements. The Applied Behavior Analysis training also involves intensive training working with children in clinical settings and thus requires successful demonstration of both clinical and academic skills.

In addition to completing all procedures for admission to the Graduate School, each applicant must complete an admissions form obtained from the Program Area website: <http://coe.wayne.edu/tbf/> for the program of interest, and follow those instructions carefully. Applicants are strongly encouraged to contact the program area secretary to ensure they have received complete and updated application and program information.

Applied Behavior Analysis (Graduate Certificate Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. A 2.75 minimum GPA is required for consideration for the program. In addition to the Graduate School application, the following must be mailed to the program: program area application, transcripts, GRE scores, and three letters of recommendation. On the program area application, applicants must specify whether they are seeking the Graduate Certificate in ABA only or they wish to take the ABA sequence as part of the M.Ed. program. If the latter, a university application must also be made to the Graduate School for the M.Ed. in Educational Psychology. For current admissions deadlines and procedures, see the departmental brochure at <http://coe.wayne.edu/tbf/edp/>.

Requirements: This program is calendar controlled in that all students begin and end together, taking the same courses as a cohort. Required courses are: EDP 7101, 7102, 7103, 7104, and 7105 (18 credits). Additional practicum experiences are offered that are not part of the actual degree or certificate requirements. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Counseling Psychology (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. A minimum of fifteen credits in psychology or related field approved by admissions committee and a minimum undergraduate point average of 3.0 are prerequisite to admission. A program application, Graduate Record Examination (GRE), three letters of recommendation, undergraduate/graduate transcripts, and a personal interview with the admissions committee are required. Applications are accepted after September 1 with a rolling deadline starting February 15 through March 15. Applicants are encouraged to apply early and will be interviewed by the Admissions Committee until a class of fifteen students is admitted. Students are admitted once each year and begin the program in the summer semester of the year for which

they are admitted. It is strongly suggested that applicants contact the department or the Counseling Psychology website (<http://coe.wayne.edu/tbf/edp/counseling-psychology/>) to obtain program and scholarship information and a program application. Application for graduate admissions must be made online.

Counseling Psychology Requirements

This program is calendar controlled in that all course work must be completed in semester sequences commencing with the Summer term. See current plans of work and course requirements online at <http://coe.wayne.edu/tbf/edp/counseling-psychology/>

A clinical 500-hour internship/practicum is required for licensure in the State of Michigan and must be conducted in a non-profit setting under the supervision of a licensed psychologist. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Programs, University, p. 15 and Academic Regulations for the College of Education, p. 102, respectively.

Educational Psychology (M.Ed. Program)

Admission: There is only a university Graduate School application for this program. A minimum undergraduate GPA of 2.75 is required. See Admission, Graduate School section in this bulletin.

DEGREE REQUIREMENTS: Basic degree requirements for the Master of Education degree are stated at Master of Education, p. 102. A minimum of thirty credits is required for this program and all courses are selected in consultation with an advisor. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Educational Psychology (Ph.D. Program)

Admission: Applicants to the doctor of philosophy program should refer to the admission requirements stated at Admission to Graduate Programs, p. 104. The Educational Psychology Doctor of Philosophy Program has a concentration in Learning and Instruction Sciences. Successful applicants seeking admission to the Learning and Instruction Sciences concentration should have a master's degree in Educational Psychology, or a closely related field. Application materials must be submitted to the chairperson of the Learning and Instruction Sciences concentration.

Applicants are strongly encouraged to contact the program secretary to ensure they have received complete and updated application and program information. For the most recent program description and admission requirements, please consult the College website at <http://coe.wayne.edu/tbf/edp/>

Learning and Instruction Sciences: The concentration in Learning and Instruction Sciences is a full-time program adhering to the scientist-practitioner model and prepares students in the systematic study of human learning and educational instruction. This concentration integrates interdisciplinary training in instructional technology and educational evaluation and research to prepare graduates to design, implement, and evaluate learning in various contexts. The Learning and Instruction Sciences concentration prepares students for research, service, and administrative careers, teaching in diverse educational settings, and consultation in the private sector. In addition to the departmental requirements for the doctoral degree, students take courses in ethics and professional standards, advanced theories of learning and development, instructional technology, and program evaluation. Students may also select a number of courses in the psychology department.

Full-time/Residence Requirement: The Doctor of Philosophy in Educational Psychology with a concentration in Learning and Instruction Sciences requires at least one year of full-time study

DEGREE REQUIREMENTS: The basic degree requirements for the doctoral degree are stated at Doctor of Philosophy Requirements, p. 105. Research course requirements include a minimum of fifteen credits in research and evaluation (EER). The remaining plan of work is arranged with an advisor depending on master's level training and future goals, and includes 30 dissertation credits, which is a requirement set by the university.

All doctoral students will complete a comprehensive examination at the end of coursework and a final report and defense after completion of the dissertation. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

School and Community Psychology (M.A. Program)

Admission: Admission to this program is contingent upon admission to the Graduate School; for requirements, Admission, Graduate School, p. 17. A minimum of fifteen credits in psychology or educational psychology is prerequisite to admission. A program area application, the verbal and quantitative sections of the Graduate Record Examination (GRE), three letters of recommendation and a personal interview are required for admissions consideration. Applications are accepted between September 1 and February 1 for school and community psychology students. Students are admitted once each year and must begin the program in the fall semester of the year for which they are admitted. It is strongly suggested that applicants contact the department in order to obtain program brochures, which contain additional items for submission on or before the above deadlines. As part of a full completion of the master's program, students move into a graduate certificate program that culminates at the end of year 3. Please refer to the School and Community Psychology website for additional information: <http://coe.wayne.edu/tbf/edp/school/>

School and Community Psychology Requirements:

Course work requirements include: EDP 7220, 7260, 7300, 7400, 7410, 7420, 7430, 7561, 7562, 7563, 7564, 7610, 8320, 8330, 8360, EER 7640, and ED 7999. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

School Psychology, Advanced Studies in (Graduate Certificate Program)

Admission to this program is only for students in the M.A. program in School & Community Psychology. Admission is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students must be in good academic standing in the School and Community Psychology M.A. program to apply and enroll in the Certificate program. Students will be admitted concurrently to the Certificate program for the Spring/Summer of second year of the Master's program.

CERTIFICATE REQUIREMENTS: The last fourteen credits of the above SCP program are the internships, which are the basis for this Graduate Certificate and are required for full completion of this program and for recommendation for state school psychology certification and state psychology limited licensing (LLP). Students are required to complete a professional portfolio, to attend supervision

meetings, and to conduct a comprehensive case study and presentation at the end of the Certificate program. Students are evaluated by both university faculty and field supervisors on both their professional skills and their professional behaviors and attitudes as outlined by the National Association of School Psychologists. During Spring/Summer of the second year, students will complete their Master's requirements by enrolling in EDP 8320 and 8330 for a total of eight credits and during this time period, students will be concurrently enrolled in the M.A. and Graduate Certificate program, and these credits will count toward both the Master's degree and the Certificate. Graduate School policy permits nine credits to be applied to fulfill the requirements of both a Certificate and a Master's degree. Students will complete the final six credits of the Certificate by enrolling in EDP 8360 during the third year of the program. The curriculum is outlined below.

EDP 8320 – Internship in Clinical Procedures I: Cr. 5

EDP 8330 – Practicum/Field Experience in School Psychology: Cr. 3

EDP 8360 – Internship in School Psychology: Cr. 6

All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

Rehabilitation Counseling and Community Inclusion

The counselor education program offers a Master of Arts degree in rehabilitation counseling and community inclusion that reflects current trends in psychosocial rehabilitation, career development and job placement, supported employment, psychiatric disabilities, trauma, and the support of individuals with disabilities.

The program's mission is to provide an effective model of graduate education in partnership with rehabilitation constituencies to promote quality rehabilitation services. It aims to prepare qualified, reflective, and innovative rehabilitation professionals who are able to competently work with individuals with disabilities and their families, regardless of the type or severity of disability, or of ethnic, racial or cultural background. The program seeks to promote the empowerment, self-determination, economic self-sufficiency, independence, and inclusion in community life of individuals with disabilities.

The master of arts program provides students with the opportunity to develop skills and abilities in disability adjustment counseling, career counseling, job development and placement, vocational and educational evaluation, psychosocial rehabilitation, trauma and mental illness. The degree requirements in this program are designed to develop the competencies necessary for students to apply for the Certified Rehabilitation Counselor (CRC) credential after completion of their course work. In addition, students are eligible to apply for the Limited Licensed Professional Counselor (LLPC) credential in the State of Michigan.

The prospective student should recognize that this program involves both course requirements and clinical experience in community rehabilitation settings. Retention in the program and recommendation for credentials depend upon demonstrated clinical skills as well as academic achievement. Requirements for the Master of Arts degree must be completed within six years after admission to the program.

Rehabilitation Counseling and Community Inclusion (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. To qualify for admission, applicants must have a bachelor's degree or its equivalent from an accredited college or university, adequate preparation and the ability to pursue graduate study in

the area of rehabilitation counseling. Regular admission may be recommended with a grade point average of 3.0 or above for undergraduate course work. Detailed information on admission can be obtained from the counseling program area.

DEGREE REQUIREMENTS: The Master of Arts degree in this discipline requires the completion of a minimum fifty-five credits. Course requirements include: RCI 7120, 7150, 7410, 7420, 7430, 7440, 7450, 7460, 7470, 7480, 7510; CED 6080, 7000, 7010, 7040, 7080, 7730; EDP 7490; EER 7640; and ED 7999. Students must complete a university-based practicum of at least 100 clock hours (RCI 7430) and an internship of a minimum of 600 clock hours (RCI 7460) in an approved community-based rehabilitation agency. In addition, all students must complete a terminal masters project (ED 7999) with an emphasis on Rehabilitation Counseling. All course work must be completed in accordance with the academic procedures of the College of Education and the Graduate School governing graduate scholarship and degrees; see sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Education, p. 102, respectively.

The above outlines of recommended minimum degree program requirements are consistent the Council on Rehabilitation Education (CORE), the Commission on Rehabilitation Counselor Certification (CRCC) and the state of Michigan licensure requirements.

Counselor Education Courses (CED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5030 Role of the Counselor in Substance Abuse. Cr. 2

Prereq: graduate standing. Offered for graduate credit only. An overview of counseling principles, procedures, and methods unique to substance abuse settings. Use of specific counseling strategies and treatment models with substance abusers. (F)

5090 Family Education and Counseling: Substance Abusers. Cr. 3

Prereq: CED 5030 or graduate standing. Analysis of the structure and functioning of family systems in which there is substance abuse; effective therapeutic strategies in working with chemically-abusive families. (I)

6070 Introduction to Counseling. Cr. 3

Prereq: admission to master's program in counseling. Overview of counseling profession, including: helping process, theories of counseling and consulting, training, credentialing, ethical and legal standards, professional organizations, history and trends of basic research. (T)

6080 Theories of Counseling. Cr. 3

Prereq: admission to master's program in counseling. Major theories of counseling: client-centered, rational-emotive, Gestalt, Adlerian, reality, psychoanalytic, behavioral, cognitive. Ethical, legal, multicultural factors in conceptualization and delivery of counseling services in school, rehabilitation and community agency settings. (T)

6700 The Role of the Teacher in Guidance. Cr. 2

Prereq: admission to College of Education. Introduction to guidance principles, techniques and roles, with stress on classroom application. Experiential laboratory sessions required to sensitize educators to the basic ideas and skills involved in being a helper. Primarily for school personnel other than counselors. (T)

6710 Professional Seminar: Contemporary Issues. Cr. 1-6

Principles, procedures and methods specific to a critical contemporary issue, such as: child abuse, sexual abuse, bereavement, stress management, infectious diseases, self-esteem, self-efficacy, conflict management, and trauma. (T)

6720 Workshop in Counseling. Cr. 2-4 (Max. 18)

For counselors, teachers, and pupil personnel workers. Consideration of counseling issues in school, agency and community settings. Counseling, consultation, and coordination dimensions of counseling in substance abuse, family groups, and human sexuality issues. (T)

7000 Introduction to Group Work. Cr. 2

Prereq: CED 6070 or CED 6080; coreq: CED 7010. Seminar in group counseling theories; basic elements of group process: stages of group development including group leadership styles, group dynamics, guidelines for multicultural and rehabilitation practice, ethical and professional issues in group practice, use of skills and techniques applicable to various counseling sessions. (T)

7010 Group Counseling Participation. Cr. 2

Prereq: admission to master's program in counseling; coreq: CED 7000. Offered for S and U grades only. Group counseling sessions to experience counseling from the client's perspective and to become familiar with procedures and methods of group counseling in community agency, school, and rehabilitation settings. (T)

7020 Counseling Internship. (AED 7890) (RCI 7460) Cr. 1-12 (Max. 12)

Prereq: students apply for admission to course through program faculty. Offered for S and U grades only. Supervised field experience (100 clock hours per credit hour enrolled) designed to give students orientation to the responsibilities of a counselor at a cooperating agency or institution. Students attend on-campus seminars to discuss professional counseling and supervision issues. (F,W)

7030 Counseling and Consulting Services in Community Agencies. Cr. 3

Prereq: CED 6070. Not open to students in school counseling specializations. Consultation theory and processes in agencies and post-secondary educational institutions. Roles and functions of counselors in program and proposal development; conflict management; organization; administration; and evaluation of services; public relations; knowledge of community referral resources and referral process. (Y)

7040 Techniques of Counseling. Cr. 4

Prereq: CED 6070 or CED 6080. Techniques, ethics and process of counseling. Facilitative relationships, case conceptualization, goal setting, intervention, and outcome evaluation. Development of counseling skills to facilitate growth or change with respect to psychological, vocational and social concerns through self-advocacy, cognitive, affective, and behavioral interventions. (T)

7055 School Counselor: Postsecondary Planning and College Counseling. Cr. 3

Role of the School Counselor in relation to postsecondary planning and college counseling. The Eight Components of College and Career Readiness approach will be used to educate school counselors to prepare and inspire students for college success and opportunity. (B)

7070 School Guidance, Counseling, and Consulting. Cr. 4

Prereq: CED 6070. Principles and practices of counseling, guidance, and consulting in the K-12 school setting. Focus on individual and group approaches that facilitate student development and adjustment; staff, parental, and community resources and referral procedures; program development, operation, and evaluation. (W)

7080 Career Development and Counseling. Cr. 3

Prereq: CED 6070; or prereq. or coreq: RCI 7410. Career development theories, career exploration and career preparation methods. Material fee as given in Schedule of Classes. (T)

7090 Advanced School Guidance, Counseling and Consulting. Cr. 3

Prereq: CED 7070; admission to CED School Counseling program or departmental approval. Advanced principles and practices of counseling and consultation in school settings. The focus is on the holistic approach to enhance and facilitate student growth, development, and self-awareness as it relates to the demands of the School Counselor. (Y)

7120 (RCI 7120) Assessment for Counselors and Rehabilitation. Cr. 3

Prereq: RCI 7410, RCI 7420, and RCI 7480; or CED 6070, and CED 6080. Overview of psychological, educational and vocational assessment techniques, including specific assessment applications such as clinical assessment, communicating assessment results, assessment with diverse populations, and ethical issues. Material Fee as indicated in Schedule of Classes. (W)

7150 Counseling Practicum. (AED 7380) (RCI 7430) Cr. 2-4

Only Art Therapy students registered for AED 7380 may register for 2 credits; counseling students must register for 4 credits. Prereq: consent of program faculty during semester prior to registration. Course includes client contact and supervision seminar. Material fee as given in Schedule of Classes. (F)

7730 Cultural and Diversity Issues in Mental Health Treatment Research. Cr. 3

Prereq: CED 6080; RCI 7410 or consent of instructor. Cognitive and experiential study of social and psychological variables that influence the cross-cultural counseling relationship. Emphasis on social identities of race, ethnicity, gender, age, ability, and sexual orientation. (F)

8000 Seminar in Group Counseling. Cr. 3

Prereq: CED 7000 or equiv. Students counsel groups which they have established. Tape and/or process recordings of counseling sessions analyzed to develop a theory and method of group counseling, group leadership, and techniques in the counseling of individuals in groups. (B)

8020 Advanced Practicum. Cr. 2-8 (Max. 8)

Prereq: admission to Ed.Spec. or doctoral program in special education. Supervised practice counseling in the counseling laboratory. Counseling competence evaluated. (F,W)

8030 Advanced Consultation Theory and Methods. Cr. 3

Advanced consultation theory and methods in agencies and educational institutions. Roles and functions of counselor educators and supervisors in program and proposal development; organization, administration, and evaluation of services; conflict management; third party intervention; legal and ethical issues; public relations. (B)

8040 Advanced Counseling Theory and Method. Cr. 3

Prereq: CED 6080 or equiv. Theories of personality and learning applied to case diagnosis and projected remediation. (B)

8080 Advanced Career Development and Counseling. Cr. 2-4 (Max. 8)

Prereq: CED 7080 or equiv. For advanced students in guidance and counseling and related areas. Current trends and changes in career guidance and career education; their implications for guidance and counseling programs. Consideration of related topics. (B)

9020 Internship in Counseling/Counselor Education. Cr. 1-6 (Max. 24)

Prereq: admission to counselor education, education specialist, or doctoral program. Offered for S and U grades only. Purposes, objectives, materials, techniques and practices in counselor education programs. Supervised experience in advanced counseling and in various phases of the counselor education program. (T)

9120 Seminar and Internship Supervising Counselors. Cr. 3

Prereq: admission to counselor education, education specialist, or doctoral program. Theory and practice of supervision. Students supervise practicum counselors under staff guidance. (F,W)

9510 Professional Issues in Rehabilitation Counselor Education. Cr. 3

Prereq: master of arts degree in rehabilitation counseling. Current trends, changes, and issues in the rehabilitation counseling profession; preparation, professionalization, and practice. (B)

9520 Advanced Research on Disability and Human Behavior. Cr. 3

Prereq: master of arts degree in rehabilitation counseling. Comprehensive knowledge in disability studies to inform research and teaching and to develop scholarly skills. (B)

Educational Evaluation and Research Courses (EER)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7610 Evaluation and Measurement. Cr. 2-3

Principles and practices of evaluation and measurement with special focus on behavioral goals. Informal and formal evaluational strategies. Problems of self-evaluation. Logical, philosophical, and linguistic problems of evaluational methods and devices. Metrical analyses and standards. Innovations in educational assessment and accountability. Teacher-made tests. (T)

7630 Fundamentals of Statistics. Cr. 3

Review of mathematics essential for statistics, sampling, computer use. Basic patterns of statistical inference, confidence estimation and significance testing regarding measures of averages, dispersion, correlation, and selected non-parametric statistics. One-way and two-way analysis of variance. (T)

7640 Fundamentals of Quantitative Research. Cr. 3

Basic skills in educational research; nomenclature, problem, theory, hypothesis formulation; bibliographical and documentary techniques; retrieval systems; development of data-gathering instrumentation; computer orientation and research uses; collection and organization of data; manuscript development; report writing; techniques, methodologies for descriptive and experimental inquiry. (T)

7650 Computer Use in Research. Cr. 3

Prereq: EER 7630. Introduction to computer use in educational research with emphasis on using statistical packages (MIDAS and SPSS, BASIC programming language); writing statistical programs. (T)

7870 Fundamentals of Qualitative Research. Cr. 3

Fundamentals of epistemological issues, educational perspectives of qualitative research and research design. Readings in qualitative research. Conducting the case study, personal history, and cognitive study. Overview of methods for analyzing talk, text, and interaction. (F,W)

7880 Fundamentals of Ethnographic Research. Cr. 3

Prereq: EER 7870 or consent of instructor. Collecting, analyzing, and writing up findings from ethnographic data (participant-observation field notes, interviews, and artifacts); issues of rigor in naturalistic research in education. (F,W)

8700 Advanced Qualitative Evaluation: Theory and Practice. Cr. 4

Prereq: EER 7870. Major paradigms of qualitative evaluation, strategies of inquiry, methods of collecting and analyzing materials, the art of interpretation, analysis of real data, including pattern coding, data displays, checklist matrices, transcription, explanation prediction within-case vs cross-case displays, ethical issues in evaluation. Computer use in qualitative evaluation. (W)

Educational History and Philosophy Courses (EHP)

8710 Advanced Ethnographic Research. Cr. 4

Prereq: EER 7880. Use of fieldwork to learn group interview, video collection and analysis, ethnographic survey, narrative and poetic analysis; deepening the understandings about culturally-sensitive research, rigor, and the politics of representation. (W)

8720 Advanced Quantitative Program Evaluation. Cr. 3

Prereq: EER 7630, EER 7640, EER 7650, or equiv. Educational and school program evaluation: alternative approaches; students propose theory-based designs and strategies. (W)

8760 Advanced Measurement I. Cr. 3

Prereq: EER 7610 or equiv. Classical measurement theory including scaling, measurement error, reliability, validity. Review of strong statistics versus weak measurement debate. Empirical methods of psychometric applications in education and educational psychology. (Y)

8800 Variance and Covariance Analysis. Cr. 4

Prereq: EER 7630 or equiv. Multiple, partial, canonical correlation: variance and covariance analysis; Models I and II. Statistical analysis in experimental designs; Random Blocks, Latin Squares, Greco-Latin Squares, simple and complex factorials, confounding, fractional and split-plot designs. Supporting topics and techniques; missing observations; adjustment of means; probing the homogeneity of means and variances; study of contrasts; orthogonal polynomials and computer usage. (Y)

8820 Multivariate Analysis. Cr. 4

Prereq: EER 8800 or equiv. Discriminant analysis, profile analysis; placement and classification problems; component and factor analysis. Supporting topics and techniques; transformation of variables, computer usage. (Y)

8840 Structural Equation Modeling. Cr. 4

Prereq: EER 8820. Application of structural equation methods to applied educational psychology research. Model specification, estimation, and fit. Confirmatory factor analysis and correlation. (Y)

8860 Nonparametric, Permutation, Exact, and Robust Methods. Cr. 4

Prereq: EER 7630, EER 8800, or equiv. Application of nonparametric, permutation, exact and robust methods to social and behavioral science data. Techniques of estimation, location, and association for discrete and continuous data. (F,W)

8880 Monte Carlo Methods. Cr. 1

Prereq: EER 7630 and 8800. FORTRAN 77/90/95 applied to Monte Carlo Methods for the development of new statistics and procedures and the comparison of existing methodologies. Solving data analysis problems via simulation techniques. (F,W)

8900 Qualitative Design for School Research. Cr. 3

Open only to EER majors. Prereq: EER 8700 or EER 8710. Field Placement. Integration of theory with practice for conducting, analyzing, and reporting qualitative research or evaluation in the schools. (F)

8910 Practicum in Evaluation. Cr. 2-6 (Max.6)

Open only to EER majors. Prereq: EER 8700, EER 8710, or equiv. Qualitative methods for action research in schools, including interviewing, field observation, life histories, visual records, and document analysis. (T)

8992 Research and Experimental Design. Cr. 3-4

Prereq: EER 7630 or equiv. Design of empirical research for students possessing basic knowledge of statistics. Topics include hypothesis construction, sampling theory, experimental and quasi-experimental designs, selection of statistical procedure, and construction of data gathering instruments. (F,W)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7600 Philosophy of Education. Cr. 2-3

Philosophic inquiry into educational theory and practice. For teachers, counselors, curriculum directors, administrators, and those in related professions. (T)

9600 Doctoral Seminar in Philosophy of Education. Cr. 3

Prereq: formal admission to a doctoral program in education. For doctoral students majoring in other areas only. Systematic study of the field of philosophy of education. (W)

Educational Psychology Courses (EDP)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5430 School Violence and Conflict Resolution. Cr. 3

Conflict resolution and school violence as they relate to child growth and development and school organization and policies. (F)

5450 Child Psychology. Cr. 2-3

Prereq: admission to College of Education. Basic concepts, research findings and problems regarding child, pre-adolescent and early adolescent developmental needs as they apply to school and home environments; includes study of exceptional children and those with cultural differences. (T)

5480 Adolescent Psychology. Cr. 2-3

Prereq: admission to College of Education. Basic concepts, research findings and problems regarding early adolescent and adolescent developmental needs as they apply to school and home environments; includes study of exceptional children and those with cultural differences. (T)

6210 Foundations of Educational Psychology. Cr. 3

Introduction to current issues in educational psychology. Topics include, but are not limited to: child and adolescent development, learning, motivation, information processing and evaluation. Includes study of the exceptional child and those with cultural differences. (F,W)

7101 Foundations of Applied Behavior Analysis. Cr. 4

Prereq: written consent of department/instructor. Principles and concepts of Applied Behavior Analysis (ABA); historical perspectives, fundamental vocabulary, philosophy, and methodology of the science of behavior management. (Y)

7102 Assessment Techniques in Applied Behavior Analysis. Cr. 4

Prereq: EDP 7101, written consent of instructor. Overview of assessment techniques used in behavioral intervention planning, functional assessments, functional assessment interview, descriptive and functional analysis, data collection and interpretation, preference assessment, and interpretation of evaluation tools. (Y)

7103 Applied Behavior Analysis Treatment Planning. Cr. 4

Prereq: EDP 7101, EDP 7102, written consent of department. Techniques used in behavioral intervention planning, data collection, interpretation of assessments, development of goals and objectives, overview and application of treatment interventions, management, supervision, and team planning. (Y)

7104 Research Methods in Applied Behavior Analysis. Cr. 3

Prereq: EDP 7101, EDP 7102, written consent of department. Overview of research method techniques, theoretical foundations of empirical research, principles of the scientific method, experimental designs, analysis of research designs, research protocol, and formation of research hypothesis. Primary focus on single-case designs. (Y)

7105 Ethical Practice in Applied Behavior Analysis. Cr. 3

Prereq: EDP 7101, EDP 7102, written consent of department. Responsibility, values, ethics, and practice principles of the field of behavior analysis. (Y)

7106 Field Experience in Applied Behavior Analysis. Cr. 1-3 (Max. 9)

Prereq: EDP 7101, written consent of department. Students spend supervised time in the field practicing skills learned in the Board Certified Behavior Analyst (BCBA) course sequence. Students work directly with multiple children using a variety of applied behavior analysis techniques. (Y)

7107 Field Experience in Applied Behavior Analysis I. Cr. 2

Coreq: EDP 7103. Students in the BCBA (Board Certified Behavior Analyst) courses will work directly with multiple clients using a variety of Applied Behavior Analysis techniques. Specific focus on supervised one on one behavioral intervention work with children. (S)

7108 Field Experience in Applied Behavior Analysis II. Cr. 2

Coreq: EDP 7104. Students in the BCBA (Board Certified Behavior Analyst) courses will work directly with multiple clients using a variety of Applied Behavior Analysis techniques. Specific focus on working in team consultative context to deliver comprehensive behavioral services. (F)

7109 Field Experience in Applied Behavior Analysis III. Cr. 2

Coreq: EDP 7105. Students in the BCBA (Board Certified Behavior Analyst) courses will work directly with multiple clients and staff using a variety of Applied Behavior Analysis techniques. Highest level of independent behavioral intervention work including managing all necessary assessment, treatment, case management, and intervention training and supervision of parents and technicians. (W)

7190 Couples Therapy. Cr. 3

Prereq: Admission to Counseling Psychology Program. An introduction to the research, theories, skills and assessments related to couples therapy. (F)

7200 Systemic Theories and Family Therapy. Cr. 3

Prereq: EDP 7190. Survey of systemic theories and family systems therapy. (W)

7220 Psychotherapy with Children and Adolescents. Cr. 4

Prereq: admission to school and community psychology, or counseling psychology program. Theory of psychotherapy, including stages of therapy, issues of therapy, and techniques of therapy with children and adolescents. (Y)

7240 Psychotherapy with Adults. Cr. 3

Prereq: admission to school and community psychology, or counseling psychology program. Theory of psychotherapy, including stages of therapy, issues of therapy, and techniques of therapy with adults. (W)

7260 School-Based Consultation and Intervention. Cr. 3

Prereq: EDP 7220. Open only to school and community psychology program students. Consultation; academic and psychotherapeutic interventions. Emphasis on practical skills needed to work directly or indirectly with individuals and groups in the school setting. (W)

7300 Ethics, Standards, and the Practice of Psychology. Cr. 4

Open only to students admitted to school and community psychology program. Legal, ethical, and professional issues confronting the practitioner. (F)

7310 Psychology of Learning Across Development. (HE 7310) Cr. 3

Course blends a selection of human development and learning theories and concepts; emphasizes application to various professional contexts, e.g., community, health, business, school, and other organizational settings; focus is on late adolescence (ages 18-22) and adulthood. (Y)

7350 The Learning Process. Cr. 2-3

Substantive issues involved in learning as they relate to school practice. (T)

7370 Adult Psychopathology. Cr. 3

Psychopathology of adulthood; mental disorders, treatment and diagnosis. (Y)

7400 Foundations of Social Psychology. Cr. 3

Systematic study of social psychology; implications for research and applied settings. (Y)

7410 Human Developmental Psychology. Cr. 3-4

Survey of research from psychoanalytic and learning viewpoints on human development from birth to adulthood. Emphasis on school environment and community psychology practice. (F,W)

7420 Introduction to Behavioral Psychology. Cr. 4

Basic principles and theories of behavioral psychology. Theoretical aspects of both operant and respondent conditioning. (F)

7430 Applications I: Behavioral Psychology and Social Learning. Cr. 4

Behavioral techniques used in dealing with the social behavior of both groups and individuals. (W)

7480 Psychological Tests and Measurement. Cr. 3

No credit after EDP 7490. Overview of psychometric theory and test construction. Methods of assessing various areas of psychological functioning including intelligence or cognitive abilities, achievement, aptitude, personality functioning and vocational interests. Material Fee announced in Schedule of Classes. (F,S)

7490 Psychological Evaluation I. Cr. 1-3

Open only to School and Community Psychology majors or Counseling Psychology majors. No credit after EDP 7480. History of testing, psychometric theory, and test construction concepts in depth. Students apply these concepts in administration, scoring, and interpretation of standardized measures of academic functioning. Material Fee As Indicated In The Schedule of Classes (T)

7520 Professional Ethics and Standards for Psychologists. Cr. 3

Prereq: admission to counseling psychology program or school and community psychology program. An overview of scientific and professional ethics and standards related to the practice of psychology. (W)

7561 Assessment of Cognitive Functioning. Cr. 4

Open only to students in school and community psychology, or counseling psychology program. Prereq: EDP 7490. Theory of intellectual development; administration, scoring and interpretation of cognitive processing; visual-motor integration and adaptive behavior assessments; data integration and report writing. Material fee as Indicated in the Schedule of Classes. (W)

7562 Assessment of Personality and Social-emotional Functioning Cr. 4

Open only to students in school and community psychology, or counseling psychology program. Prereq: EDP 7490. Theory of personality development; administration, scoring, and interpretation of personality and social-emotional assessments; data integration and report writing. Material fee as Indicated in the Schedule of Classes. (W)

7563 Assessment of Academic Achievement Cr. 3

Prereq: admission to School and Community Psychology program. Students will administer, score, and interpret various academic achievement measures, integrate data and write instruction-driven reports, and communicate test results verbally. (S)

7564 Assessment and Intervention for Academic Learning Difficulties Cr. 4

Open only to students in school and community psychology program. Prereq: written consent of department. Students will learn about typical development of academic skills, historical and current methods of Specific Learning Disabilities evaluation, and linking academic assessment data to academic interventions for all levels of learning difficulties; emphasis on reading. Material fee as Indicated in the Schedule of Classes. (F)

7610 Child and Adolescent Psychopathology. Cr. 3

Prereq: admission to school and community psychology, or counseling psychology program. Study of theories of psychopathology in children and adolescents and the application to these theories to practice. Differential diagnosis using currently acceptable classification systems. (W)

7996 Research in Educational Psychology. Cr. 1-8 (Max. 8)

(Y)

8210 Fundamental Studies in Educational Psychology I: Learning. Cr. 3

Prereq: admission to doctoral program in educational psychology. Issues and theories relevant to learning, perception, cognition, and motivation, as well as trends in research pertinent to the application of learning theory in education and in clinical practice. (F)

8230 Fundamental Studies in Educational Psychology II: Development. Cr. 3

Prereq: admission to doctoral program in educational psychology. Contemporary theories and research in developmental psychology pertaining to research and practice in clinical and educational settings. (F)

8250 Fundamental Studies in Educational Psychology IV. Cr. 3-9 (Max. 9)

Prereq: admission to doctoral program in educational psychology. Advanced study of a specific area in psychology with application to educational practice. Topics to be announced in Schedule of Classes. (W)

8319 Practicum in Psychotherapy. Cr. 1-2

Prereq: admission to counseling psychology program; coreq: EDP 7240. Opportunity to provide psychological services (e.g., psychotherapy) to clients under supervision of a Licensed Psychologist or educational psychology professor. (W)

8320 Internship in Clinical Procedures I. Cr. 1-6 (Max. 6)

Offered for S and U grades only. Open only to students in school and community psychology, or counseling psychology program. Internship in one of the organized health care settings cooperating with the University. Diagnostic testing and psychotherapy with supervision of not less than two hours per week by a licensed psychologist employed by the cooperating site. Conferences and seminars; internship experience will equal or exceed 500 hours. (T)

8330 Practicum/Field Experience in School Psychology. Cr. 1-8 (Max. 8)

Prereq: admission to school and community psychology program. Offered for S and U grades only. Practicum/field experience as a school psychologist in an approved school with school-age pupils. Interns under supervision of person holding Michigan School Psychologist Certificate. (T)

8340 Internship in Clinical Procedures II. Cr. 1-8

Prereq: admission to Ph.D. program in educational psychology and written consent of program coordinator. Offered for S and U grades only. Placement as a psychologist in appropriate organized health care setting under the supervision of a licensed psychologist. (T)

8350 Internship Supervision. Cr. 1-5

Prereq: EDP 8320 or 8330 or 8340; and written consent of instructor. Case presentation of selected psychology clients for group/individual supervision. (T)

8360 Internship in School Psychology. Cr. 1-8 (Max. 8)

Prereq: admission to school and community psychology program; EDP 8330. Offered for S and U grades only. Advanced internship as school psychologist for those holding a Preliminary School Psychologist Certificate. Internship in an approved school with school-age pupils; supervision by University faculty and person with Michigan School Psychologist Certificate. (T)

9310 Doctoral Seminar in Educational Psychology. Cr. 3

Prereq: formal admission to a doctoral program in education. For doctoral majors in other areas of concentration only. An examination of psychological concepts relevant to the development and carrying forward of the work of the schools. (Y)

Educational Sociology Courses (EDS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

9620 Doctoral Seminar in Educational Sociology. Cr. 3

Prereq: formal admission to a doctoral program in education. For doctoral majors in other areas of concentration only. Basic concepts of sociology applied to contemporary education. (Y)

Rehabilitation Counseling and Community Inclusion Courses (RCI)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7110 Techniques of Rehabilitation Counseling. Cr. 3

Open only to Rehabilitation Counseling and Community Inclusion students. Prereq: RCI 7410, RCI 7420, RCI 7450, RCI 7480; CED 6080, CED 7000, CED 7001, CED 7080. Techniques and process of counseling of counseling including: facilitative relationships, case conceptualization, goal setting, intervention, and outcome evaluation. Development of skills with respect to psychological, social, and vocational implications of disabilities on adjustment. (T)

7120 Assessment for Counselors and Rehabilitation. (CED 7120) Cr. 3

Prereq: RCI 7410, RCI 7420, RCI 7480; or CED 6070, CED 6080. Overview of psychological, educational and vocational assessment techniques, including specific assessment applications such as clinical assessment, communicating assessment results, assessment with diverse populations, and ethical issues. Material Fee as indicated in Schedule of Classes. (W)

7150 Rehabilitation Counseling Professional Roles. Cr. 3

Roles of rehabilitation professional as counselor, consultant, case manager and advocate. Case analysis, service applications and recording and reporting from perspectives of various professional rehabilitation counseling roles. (Y)

7410 Foundations of Rehabilitation Counseling. Cr. 3

Comprehensive introduction to rehabilitation counseling as a human service field. Values philosophy, history and legislation of rehabilitation; community inclusion and support; and professional issues. (F)

7420 Medical Aspects of Disability. Cr. 3

Prereq: RCI 7410. Types of disabilities, treatment strategies, impact of disability on physical and vocational functioning of persons with disabilities. (W)

7430 (CED 7150) Counseling Practicum. (AED 7380) Cr. 2-4

Prereq: consent of advisor and instructor during semester prior to registration. Supervised experience in individual and group interactions, assessment and appraisal, diagnosis and treatment planning, other professional counseling activities; use of variety of counseling and rehabilitation resources. Students attend seminars for supervision and discussion of professional issues in interdisciplinary context (minimum of 100 clock hours). (T)

7450 Employment for Persons with Disabilities. Cr. 3

Prereq: RCI 7100. Design and implementation of effective methods to help persons with disabilities obtain and maintain employment. Marketing and job placement skills, job-seeking skills training, job

clubs, job adaptation, supported and transitional employment, employer assistance and training, and follow-along services. (W)

7460 (CED 7020) Counseling Internship. (AED 7890) Cr. 1-6 (Max. 6)

Prereq: grade of B or above in RCI 7430, consent of advisor and instructor. Offered for S and U grades only. Supervised field experience providing counseling or rehabilitation services at a cooperating agency or institution under supervision of approved professional. Students complete a minimum of 600 clock hours. (Y)

7470 Family and Community Support for Inclusion. Cr. 3

Services that facilitate full participation of persons with disabilities in the life of their families and communities. Persons with disabilities in context of: families, family dynamics, cultural diversity, family structure, family support. Community support, supported independence, independent living centers, therapeutic recreation and related programs. (Y)

7480 Psychosocial Aspects of Disability. Cr. 3

Prereq: RCI 7410; RCI 7420; CED 6080 or consent of instructor. Psychological, social and cultural aspects of adjustment and adaptation to a variety of disabling conditions. Theoretical and practical issues relating to various types of physical, neurological, sensory, psychiatric disabilities. (W)

7510 Special Topics in Rehabilitation Counseling. Cr. 1-3 (Max. 9)

Emerging and contemporary issues of selected disabilities and intervention techniques aimed at improving the lives of people with disabilities. (Y)

7515 Rehabilitation Treatment Planning and Intervention for People with Psychiatric Disabilities. Cr. 2

Prereq: RCI 7410, RCI 7510. Knowledge and skills in treatment planning and intervention with people who have psychiatric disabilities. Rehabilitation assessment, rehabilitation plan development, employment strategies, and life care planning. (F)

Education Courses (ED)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5998 Field Studies. Cr. 1-8 (Max. 8)

Prereq: consent of advisor or instructor. Supervised professional study in field settings. (T)

7990 Directed Study. Cr. 1-8 (Max. 8)

Prereq: written consent of advisor and graduate officer on completed petition and authorization for Directed Study prior to registration. (T)

7996 Directed Research. Cr. 1-8 (Max. 16)

Prereq: written consent of advisor and Dean of Graduate Studies or Graduate Officer on Petition and Authorization for Directed Study prior to registration. Offered for S and U grades only. (T)

7998 Field Studies. Cr. 1-8 (Max. 16)

Prereq: consent of advisor or supervising instructor. Offered for S and U grades only. Supervised professional study in field situations. (T)

7999 Terminal Master's Seminar and Essay or Project. Cr. 3

Offered for S and U grades only. (T)

8999 Master's Thesis Research and Seminar. Cr. 1-8 (8 req.)

Offered for S and U grades only. (T)

9989 Doctoral Dissertation Research and Direction. Cr. 1-16 (Max. 30)

Prereq: consent of dissertation advisor, Ed.D. student. Offered for S and U grades only. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ED 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ED 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ED 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ED 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ED 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ED 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ED 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

College of Engineering

Dean: Farshad Fotouhi

Foreword to the College of Engineering

Graduate education is important to the engineer interested in keeping pace with rapid growth in science and technology and in preparing for changes in job responsibilities. In the midst of greater Detroit's large community of professional engineers, Wayne State University's College of Engineering has an important mission to provide opportunities for study in contemporary areas and the latest developments in technology.

The College of Engineering is a leading research institution in Michigan and the nation. This is reflected in its instructional programs, which are supported both by its own research and by that of other institutions, and in the suitability of its industrial/educational environment for advanced study. Engineering graduate students are drawn both from the upper ranks of graduating seniors in various disciplines and from established engineers interested in pursuing advanced degrees. Criteria for admission are restrictive, and a high standard of performance is expected of successful candidates. In short, the challenges are great, but the potential rewards are equally promising.

Graduate Engineering Programs

The College of Engineering offers the Master of Science and Doctor of Philosophy degrees in biomedical, chemical, civil, computer science, electrical, industrial, mechanical, and materials science and engineering. In addition, a Master of Science may be earned in alternative energy technology, electric-drive vehicle engineering, engineering management, engineering technology, and manufacturing engineering. Graduate certificate programs are also available in a number of areas for additional specialization after completion of an undergraduate or graduate engineering degree. These programs are described generally below and specifically in the subsequent, departmental sections.

The College provides support for the various instructional and research laboratories in the construction, modification, repair, calibration and installation of experimental equipment. In addition, the College offers sophisticated assistance in the design of electronic and instrumentation equipment and devices. Qualified students use these facilities under the supervision of trained professionals.

Excellent research programs are available in this college; graduate students can write a thesis or dissertation based on their participation in these programs to fulfill part of their degree requirements.

Many graduate students pursue their studies in the College while working full- or part-time in local industry, where they have available to them unique facilities not found within the University. Students in such situations are encouraged to pursue their graduate research at their places of employment, under the joint supervision of the faculty advisor and a company representative. Such research may be applicable as credit earned for directed study courses, master's theses, or doctoral dissertations. However, after completion of a Bachelor of Science degree and one or more years of on-the-job experience, additional training at the graduate level is often desirable without participation in a research program, and the College provides an optional master's degree program without a thesis research requirement.

Graduate Degrees and Certificates

MASTER OF SCIENCE in

Alternative Energy Technology
Biomedical Engineering
Chemical Engineering
Civil Engineering

Computer Engineering
Computer Science
Electrical Engineering
Electric-drive Vehicle Engineering
Engineering Management
Engineering Technology
Industrial Engineering
Manufacturing Engineering
Materials Science and Engineering
Mechanical Engineering

DOCTOR OF PHILOSOPHY in

Biomedical Engineering
Chemical Engineering
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Industrial Engineering
Materials Science and Engineering
Mechanical Engineering

POST-BACHELOR CERTIFICATE PROGRAMS in

Computer Science

GRADUATE CERTIFICATE PROGRAMS in

Alternative Energy Technology
Computer Science
Electric-drive Vehicle Engineering
Injury Biomechanics (Bridge Program)
Polymer Engineering
Sustainable Engineering
Systems Engineering (Bridge Program)

Directory of the College of Engineering

Website: <http://www.engineering.wayne.edu>

DEAN:

Farshad Fotouhi, Ph.D.
Room 1150, Engineering Building; 313-577-3775

ASSOCIATE DEAN-ACADEMIC AFFAIRS AND STUDENT SERVICES:

Room 1513, Engineering Building; 313-577-3040

ASSOCIATE DEAN-RESEARCH AND GRADUATE STUDIES:

Simon Ng, Ph.D.
Room 1166, Engineering Building; 313-577-3861

DIRECTOR OF ALUMNI AND CORPORATE RELATIONS:

Mark Roberts
Room 1150, Engineering Building; 313-577-8576

SENIOR DIRECTOR OF BUSINESS AFFAIRS:

Lara A. Trocchio
Room 1150.1, Engineering Building; 313-577-8293

DIRECTOR OF STUDENT SERVICES:

Sondra Auerbach
Room 1503, Engineering Building; 313-577-0248

CAREER PLANNING AND PLACEMENT:

Emily Rook, Career Services Consultant,
Room 1524, Engineering Building; 313-577-8336

ENGINEERING TECHNOLOGY:

C.P. Yeh, Ph.D, Chairperson
4855 Fourth Street; 313-577-0800

BIOMEDICAL ENGINEERING:

John Cavanaugh, Ph.D., Interim Chairperson
818 West Hancock; 313-577-1344

CHEMICAL ENGINEERING AND MATERIALS SCIENCE:

Guangzhao Mao, Ph.D., Chairperson
Room 1100, Engineering Building; 313-577-3800

CIVIL AND ENVIRONMENTAL ENGINEERING:

Joseph Hummer, Ph.D., Chairperson;
Room 2100, Engineering Building; 313-577-3789

COMPUTER SCIENCE:

Xuwen Chen, Ph.D., Chairperson
Room 3010, 5057 Woodward; 313-577-2477

ELECTRICAL AND COMPUTER ENGINEERING:

Cheng Zhong Xu, Ph.D., Interim Chairperson;
Room 3100, Engineering Building; 313-577-3920

GRADUATE CERTIFICATE PROGRAM IN ALTERNATIVE ENERGY TECHNOLOGY:

Gene Liao Ph.D., and C.P. Yeh, Ph.D., Co-Directors
Room 1158 Engineering Technology Building; 313-577-8078

GRADUATE CERTIFICATE PROGRAM IN POLYMER ENGINEERING:

Zhiqiang Cao, Ph.D., Director,
Room 1100, Engineering Building; 313-577-3121

INDUSTRIAL and MANUFACTURING ENGINEERING:

Leslie Monplaisir, Ph.D., Chairperson
Room 2143, Manufacturing Engineering Building; 313-577-3821

MECHANICAL ENGINEERING:

Nabil Chalhoub, Ph.D., Chairperson
Room 2111, Engineering Building; 313-577-3753

BIOENGINEERING CENTER:

King-Hay Yang, Ph.D., Director
818 W. Hancock; 313-577-1344

CENTER FOR AUTOMOTIVE RESEARCH:

Naiem Henein, Ph.D., Director
Room 2121, Engineering Building; 313-577-3887

College-Wide Faculty

James Anderson, Adjunct Professor of Engineering Ventures

CONNECT SERVICES

Room 2140, Engineering Building; 577-7555; Fax: 578-5645
(e-mail) help@eng.wayne.edu

MACHINE SHOP

Room 1410, Engineering Building; 577-3820; Fax: 577-5300
(e-mail) msanture@eng.wayne.edu

MAILING ADDRESS FOR ALL OFFICES:

College of Engineering,
Wayne State University,
5050 Anthony Wayne Drive,
Detroit, MI 48202-3902

Research Centers

Opportunities exist at both the graduate and advanced undergraduate levels for students to participate in the programs of the research centers.

BIOENGINEERING CENTER

The Bioengineering Center is an interdisciplinary group engaged in biomedical research, utilizing the principles of mechanical, chemical, electrical, and computer engineering. Faculty members from the College of Engineering collaborate with colleagues from the Wayne State Medical School in joint efforts to solve both basic and clinical problems. The principal area of research in the Center is injury bio-

mechanics, with major areas of research include trauma biomechanics, the mechanical basis for low back pain, human locomotion studies, and orthopedic biomechanics. Other activities include the development of advanced anthropometric test dummies and impact studies using horizontal accelerator test sleds.

CENTER FOR AUTOMOTIVE RESEARCH

The Center for Automotive Research coordinates a variety of programs in different automotive areas, such as combustion engines, dynamics, acoustics, vibrations, and electronic controls. The engine research deals with the basic processes of thermodynamics, heat transfer, mass transfer and chemical kinetics which affect the performance, fuel economy, startability and emissions of different types of engines. A fully-instrumented cold room is used for some of these studies. Research is also conducted on diesel engine combustion and alternate fuels. The research consists of extensive theoretical analysis, supported by experimental investigations. The Center combines expertise from the Departments of Mechanical, Chemical, and Electrical and Computer Engineering.

Facilities of the College

Wayne State University has been identified as a PACE Partner, a group of fifty universities world-wide who have been selected by the PACE (Partnership for the Advancement of Collaborative Engineering Education) consortium to offer educational programs that are centered around the concepts of product life cycle management and the design, analysis, and planning processes in the artifice of virtual worlds with relevance to real world situations. PACE provides Wayne State students with access to the same state-of-the-art computer software and tools that are used in industry. In addition, opportunities for collaborative project development exist within the College, with other PACE institutions in Michigan, and with universities across the globe. This provides College of Engineering students with an advantage when entering the workforce or when transitioning to new roles following their graduate education.

Stimulating productive research and teaching methods are the goals of the Engineering Computer Center. These goals are met by providing and supporting the latest technologies in computer hardware, software, and networking - including those associated with PACE. All curricula are designed to take advantage of these advancements and students feel the impact of these tools in their coursework. The latest in simulation, analysis, and design software are provided for students to use and master.

College of Engineering facilities include five separate buildings with over 330,000 square feet of classroom, office and laboratory space. The primary home of the College of Engineering is a three-story office building directly attached to a laboratory wing and connected to the Engineering Development Center. This has created a stimulating and productive research and teaching facility for the College. Among these facilities are multimedia classrooms, a comprehensive computer center, electronics and machine shops, dedicated teaching laboratories, and sophisticated research laboratories. The four multimedia classrooms support innovative course delivery techniques, including interactive distance learning with classrooms at a variety of sites within WSU, at other colleges and universities, and at industrial locations. The computer facilities include dedicated computer graphics, design, and personal computing hardware and software. The Marvin I. Danto Engineering Development Center, which opened in 2009, provides 80,000 square feet of space dedicated to advanced research and student collaborative projects. This includes the PACE Teaming Center, a classroom that is designed to support student team-based collaboration. The Division of Engineering Technology is housed in a separate building of approximately 24,000 square feet, located at 4855 Fourth Street. This recently remodeled facility houses labs and classrooms, including a teaching machine shop.

Research Facilities

The College oversees a wide range of undergraduate, graduate, and faculty research laboratories and excellent support facilities, housed in its five-building complex. The Bioengineering Center operates in close collaboration with Wayne's Medical School, employing unique equipment, in particular its own massive horizontal accelerator, to conduct impact studies emphasizing biomechanics. The College's Manufacturing Engineering Building (MEB) is home to the Department of Industrial and Systems Engineering. The most striking feature of MEB is its multi-story High Bay Lab, Wayne's largest research space, capable of accommodating full-scale production machinery. The MEB includes eighteen other labs currently in use by faculty from several departments. The Marvin I. Danto Engineering Development Center, which opened in 2009, provides significant new research space that focuses on interdisciplinary research and collaboration. EDC laboratories are focused on the urban infrastructure, alternative energy and advanced propulsion systems, nanotechnology, and smart sensors. The main Engineering Building, one of the largest structures on campus, houses specialized labs of many types. The Center for Automotive Research conducts interdisciplinary investigations of diesel and gasoline engines in a series of specialized test cells, including the engineering cold room - a fully-instrumented lab capable of reaching a temperature of minus-40 C. The College's anechoic chamber is a walk-in scale facility dedicated to advanced research on vibrations and noise, particularly in automobiles. Other labs house research on diesel and gasoline combustion, structures and earthquake systems (utilizing the two-story structures lab, capable of testing multi-ton building components), soil mechanics, pollution and remediation models, polymers and composite materials, environmental kinetics, electron microscopy, catalysis, surface science, biomedical sciences, high-performance computing, neural networks, communication and information systems, materials/fluids/metallurgy testing, solid-state electronics, robotics and computer-aided manufacturing, microprocessors, optical computing, and molecular beams and laser light scattering. Of particular note is the nano-fabrication (n-Fab) Laboratory, along with a Class 10 clean room, built with a \$7.0 million equipment grant from Delphi Automotive and a \$3.0 million investment by Wayne State University for infrastructure development. This investment provides the College of Engineering with one of the nation's leading nano-fabrication research laboratories. The College's research equipment is maintained, modified, and, in many cases, constructed by its in-house electronics shop and machine shop.

Accreditation

All of the undergraduate curricula of the Division of Engineering leading to a Bachelor of Science degree in engineering are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) (415 North Charles Street, Baltimore, MD 21201, 410-347-7700). Electrical/Electronic Engineering Technology and Mechanical Engineering Technology programs are accredited by the Technology Accreditation Commission (TAC) of ABET (1415 North Charles Street, Baltimore, MD 21201, 410-347-7700). Details of these programs are provided in the Undergraduate Bulletin. Curriculum accreditation is based upon careful periodic appraisal of the faculty, educational program, and facilities of the College. This approval provides assurance of an up-to-date, high quality education pertinent to the engineering profession. Such accreditation is recognized by other universities, prospective employers, and state professional licensing agencies.

Academic Regulations for the College of Engineering

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the College of Engineering.

Matriculation

After receiving credentials from the Office of Admissions, and before registration, a student should contact the graduate advisor in his/her major department (see the following list) for details of program planning and to discuss requirements and course work.

Advisors, Graduate

ALTERNATIVE ENERGY TECHNOLOGY

Dr. Gene Liao; 313-577-8078

(Email) geneliao@wayne.edu

Dr. C.P. Yeh; 313-577-8073

(Email) yeh@eng.wayne.edu

BIOMEDICAL ENGINEERING

Namrata Murthy; 313-577-1345

(Email) bme@eng.wayne.edu

CHEMICAL ENGINEERING:

Dr. Yinlun Huang; 313-577-3771

(Email) yhuang@wayne.edu

CIVIL AND ENVIRONMENTAL ENGINEERING

Dr. Shawn McElmurry 313-577-3876

(Email) s.mcelmurry@wayne.edu

COMPUTER SCIENCE

see dept. website: <http://www.cs.wayne.edu>

go to: Academic Programs to Graduate Advising

313-577-2477

ELECTRICAL AND COMPUTER ENGINEERING

Dr. Syed Mahud; 313-577-3855

(Email) smahud@eng.wayne.edu

ELECTRIC-DRIVE VEHICLE ENGINEERING

Dr. Gene Liao; 313-577-8078

(Email) geneliao@wayne.edu

Dr. C.P. Yeh; 313-577-8073

(Email) yeh@eng.wayne.edu

ENGINEERING MANAGEMENT

Dr. Leslie Monplaisir; 313-577-1645

(Email) monpla@eng.wayne.edu

ENGINEERING TECHNOLOGY

Dr. C.P. Yeh; 313-577-0800

(Email) yeh@eng.wayne.edu

INDUSTRIAL AND SYSTEMS ENGINEERING (Ph.D.)

Dr. Ratna Chinnam; 313-577-3821

(Email) rchinnam@mie.eng.wayne.edu

INDUSTRIAL AND SYSTEMS ENGINEERING (M.S.)

Dr. Kyoung-Yun Kim; 313-577-4396

(Email) rchinnam@mie.eng.wayne.edu

MATERIALS SCIENCE AND ENGINEERING

Dr. Yinlun Huang; 313-577-3771

(Email) yhuang@wayne.edu

MECHANICAL ENGINEERING
Dr. Raouf Ibrahim; 313-577-3885
(Email) ibrahim@eng.wayne.edu

POLYMER ENGINEERING
Dr. Zhiqiang Cao; 313-577-3121
(Email) zcao@wayne.edu

Scholarships, Assistantships and Fellowships

A variety of financial resources are available to support full-time study, including graduate research and teaching assistantships and various fellowships. For general sources of graduate financial aid, see the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26. Requests for such support should be included with the Graduate Application.

Scholarship, Academic

A graduate degree is evidence of scholarly achievement, academic excellence, critical and creative abilities, the capacity to apply and interpret what has been learned, and proper use of the work of others. Continuance in graduate status is contingent on satisfactory scholarship with grades of 'B' or better. Every effort is made to assist the student whose work suffers as a result of conditions beyond his/her control.

Graduate students are required to earn a g.p.a. of 3.0 ('B' average) or better in all graduate-level subjects taken at WSU in order to satisfy degree requirements. Students whose cumulative g.p.a. falls below 3.0 are placed on probation, and the performance of these students is closely monitored by the departmental graduate committee. Students who fail to remediate this probationary status within eight credits after being placed on probation are subject to termination from the graduate program.

Any grade lower than 'B-minus' in a core course MUST be repeated. (The Industrial and Systems Engineering Department requires students to repeat core courses in which they have received a grade of 'B-minus' or lower. The Biomedical Engineering Department will not count any course with a grade lower than a 'B-minus' towards degree requirements.) No more than two courses may be repeated in a graduate program (the Electrical and Computer Engineering and the Mechanical Engineering Departments permit the repetition of only one course), and a student must have the appropriate approvals BEFORE the repeat registration takes place. These two repeats may consist of a second attempt of two separate courses or two repeat attempts of a single course. Per University policy, any course in which a mark appears on the student's transcript (including WN, WP, or WF) counts as an attempt to earn credit in that course. These attempts are therefore factored into the assessment of allowed repeats unless an exception is granted during the semester of the withdrawal (see below). 'F' grades earned while in the College of Engineering may be the basis for immediate termination. Consult each department for additional requirements.

All course work must be completed in accordance with the academic procedures of the College of Engineering and the Graduate School governing graduate scholarship and degrees; see section beginning under Academic Regulations, Graduate, p. 32. University rules require an overall g.p.a. of 3.0 or higher for graduation, in all graduate work completed at Wayne State.

Withdrawal from Courses

General rules and procedures governing withdrawal from courses may be found under Dropping and Adding Courses, p. 29. Engineering students are expected to assess early in the semester if they have appropriate time and background to successfully complete a course. Therefore, following University policy, all courses for which a grade or mark (including WN, WP, and WF) appears on the transcript will count as an attempt at a course. Students may drop a course

within the first four weeks of the semester without a notation appearing on the transcript (please refer to the Academic Calendar for deadlines, see Calendar, Academic 2016 - 2018, p. 5). Starting with the fifth week of the semester, a withdrawal will be noted on a student's transcript. If a student feels that extenuating circumstances beyond his or her control justify the withdrawal and support its not being counted as an attempt at the course, a petition must be submitted for consideration to the Associate Dean for Academic Affairs during the semester in which the course is taken. If the petition is approved, the withdrawal mark will remain on the transcript but a notation will be made in the student's advising record to not count it as an attempt for assessment of allowed repeats.

Plan of Work

Students who have been admitted into a graduate program in the College of Engineering are required to meet with their graduate program advisor before registering for their first term, and then to enroll in those courses mutually decided upon. During the first semester of their graduate program, in consultation with their graduate advisor, all graduate students must develop a Plan of Work that determines their anticipated schedule for each term.

Students who fail to meet with their graduate advisor before registration or who do not have an approved Plan of Work may be administratively withdrawn from their classes if, in the opinion of the graduate program advisor, they are not taking classes appropriate to their program.

If a student has been admitted to one graduate program and decides not to pursue that program, the student MUST obtain admission to another graduate program, or he/she must withdraw from the University. To obtain admission into another program, the student must meet all the admission requirements for that program and must provide the required admission documents. Approval of the transfer of program by the original admitting program is required. International students on a student visa must also amend their I-20 form at the University Office of International Students and Scholars to reflect the change in program.

Directed Study

Independent study may be authorized and applied to completion of degree requirements provided the area of interest is an integral part of the student's graduate program and is not covered by scheduled courses. Students who elect a directed study are required to submit a Directed Study Authorization Form, which includes a description of the proposed directed study, with the necessary signatures, prior to registration.

Program Requirements (M.S. and Certificate Programs)

M.S. Requirements, College

ALTERNATIVE ENERGY TECHNOLOGY: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

BIOMEDICAL ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. (thesis), 34 Cr. (non-thesis) min. for M.S.; thesis/project min. 8 credits

CHEMICAL ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

CIVIL ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

COMPUTER ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

COMPUTER SCIENCE: min. 3.0 g.p.a. for admission; 33 Cr. min. for M.S.; thesis/project min. 8 credits

ELECTRICAL ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

ELECTRIC-DRIVE VEHICLE ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

ENGINEERING MANAGEMENT: min. 3.0 g.p.a. for admission; 42 Cr. min. for M.S.; (Plan B. only)

ENGINEERING TECHNOLOGY: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 4 credits

INDUSTRIAL ENGINEERING: min. 2.8 g.p.a. for admission; 32-40 Cr. min. for M.S.; thesis/project min. 8 credits

MANUFACTURING ENGINEERING: min. 2.8 g.p.a. for admission; 32-40 Cr. min. for M.S.; thesis/project min. 8 credits

MATERIALS SCIENCE and ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

MECHANICAL ENGINEERING: min. 3.0 g.p.a. for admission; 32 Cr. min. for M.S.; thesis/project min. 8 credits

Certificate Program Requirements, College

ALTERNATIVE ENERGY TECHNOLOGY: min. 2.8 g.p.a. for admission; 12 Cr. min.

ELECTRIC-DRIVE VEHICLE ENGINEERING: min. 2.8 g.p.a. for admission; 12 Cr. min.

INJURY BIOMECHANICS: min 3.0 g.p.a. for admission; 16 Cr. min.

POLYMER ENGINEERING: min. 3.0 g.p.a. for admission; 12 Cr. min.

SCIENTIFIC COMPUTING: min. 3.0 g.p.a. for admission; 12 Cr. min.

SUSTAINABLE ENGINEERING: min 3.0 g.p.a. for admission; 12 Cr. min

SYSTEMS ENGINEERING: min. 3.0 g.p.a. for admission; 12 Cr. min

Master of Science Programs

The Master of Science is offered in alternative energy technology, biomedical, chemical, civil, computer, and electrical engineering; engineering management, engineering technology; industrial, manufacturing, and mechanical engineering; and materials science and engineering.

Admission to these programs is contingent upon admission to the Graduate School, for requirements, see Admission, Graduate School, p. 17. Applicants to the engineering master's degree programs must also satisfy the following criteria.

In addition to the minimum requirement for admission of an overall grade point average of 2.8 from an institution accredited by the Accreditation Board for Engineering and Technology (ABET), a minimum grade point average of 2.8 in all junior and senior year (upper division) courses is required. Applicants from abroad will be judged on the basis of their academic record and on the credentials of the school from which they graduated. Individual departments and interdisciplinary programs may require a higher minimum upper division or cumulative g.p.a.; please refer to the departmental sections of the Graduate Bulletin. Regular admission may also be granted to applicants with undergraduate degrees from regionally (non-ABET) accredited institutions in engineering, physics, chemistry, mathematics and computer science who meet the equivalent of the above minimum standards. Additional course work will generally be required of such applicants.

Degree Requirements (M.S. Programs)

The University's minimum requirement for the master's degree is thirty-two credits. Some programs in Engineering require more than this minimum. Master of Science degrees are offered under the following degree plans approved by the College:

Plan A: A minimum of twenty-four to twenty-six credits in course work, a minimum of eight credits of thesis, and a seminar or an oral presentation on the thesis research.

Plan B: A minimum of thirty-two to forty-two credits, including a four to six credit project. (Engineering Management and Engineering Technology ONLY.)

Plan C: A minimum of thirty-two to forty credits in course work. A thesis is not required.

Credits, Major

Credits earned in the student's major field are designated as major credits. Of the minimum of thirty-two credits required for the master's degree, at least one-half of the course work, exclusive of thesis credit, must be in the major field. At least six credits in the major must be in upper level graduate courses, as designated by the graduate program.

Thesis Degree Plan

Students who elect the thesis degree plan (Plan A) are required to file a *Thesis Outline Approval Form* for approval by the advisor and the program's Graduate Officer before writing the thesis. Information about the thesis style, format and number of copies required can be found in the Graduate School section of this bulletin: Theses, Master's, p. 37. Final recommendation of approval for the thesis requires an oral defense of the thesis material in the presence of a departmental faculty committee of at least three persons, including the advisor and one faculty member from outside the department.

Transfer Credits

Every Wayne State student pursuing the M.S. degree must complete at least twenty-four credits in residence. As a privilege, a student may file a Petition for Transfer of Graduate Credit, provided that the credits were earned in residence at another accredited graduate school, are certified as graduate credit with grades of 'B' or better on an official transcript, and are certified by the advisor to be acceptable in the student's degree program. Courses transferred may NOT have been used as applicable credit toward any other degree. In order to transfer grades from another institution, that institution has to be listed on the student's WSU Admissions Application, or specifically mentioned in correspondence to the College prior to matriculation. Special documentation is necessary to transfer credits earned outside of North America. A student whose Petition to transfer credits is denied may still receive credit by examination (see Examination, Credit by, p. 33).

All transcripts supporting the transfer of credits must be for credits earned prior to the student's first semester at WSU. While enrolled in a degree program in the College of Engineering, graduate-level courses taken at another institution may not be applicable to the College of Engineering degree without approval prior to registration for any such courses. A Transfer of Credit request should not be submitted before the completion of eight credits in residence at Wayne State. All credits transferred must conform to the six-year time limitation for completion of requirements (see Time Limitation, Ph.D., p. 42).

Since twenty-four credits of any M. S. program must be earned at WSU, the number of transfer credits from a related, uncompleted graduate program at another institution are limited to eight credits for a thirty-two credit M.S. program and twelve credits for a thirty-six credit M.S. program. Exceptions to this limit are made only for identified collaborative programs with partner universities.

Cross-Registration Opportunities

Students are encouraged to consider incorporating into their course of study up to two courses elected in any of three exchange arrangements: the Michigan Intercollegiate Graduate Studies Program (MIGS) (see Michigan Intercollegiate Graduate Studies (MIGS) Program, p. 19), the Wayne State — University of Windsor Exchange (see Windsor, University of — WSU, Exchange Program Agreement, p. 19), and Dual Enrollment at the University of Michigan (see Dual Enrollment with the University of Michigan, p. 33). The latter enrollment may be utilized at both the Ann Arbor and Dearborn campuses. Consult the graduate advisor and the Dean's Office for information and application forms applicable to these programs.

Engineering (Ph.D. Programs)

The Doctor of Philosophy (Ph.D.) degree is offered by the College of Engineering in the major areas of: biomedical engineering, chemical engineering, civil engineering, computer engineering, computer science, electrical engineering, industrial engineering, materials science and engineering, and mechanical engineering.

Admission to the doctoral programs of the College is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. For admission into a Ph.D. engineering program, the student's overall grade point average must be 3.2 or better, with a 3.5 in the last two years as an undergraduate student if being admitted directly from a bachelor's program. Students who do not satisfy these minimum standards will not be considered for admission to the program until they have completed a master's degree and have earned a grade point average in courses taken for graduate credit that is not less than 3.5. Individual departments may have higher admission requirements.

Generally, students applying for admission to the Ph.D. program should have first achieved an M.S. degree. Students completing their M.S. degree programs who wish to enter the Ph.D. program must have a minimum grade point average of 3.5 at the graduate level.

DEGREE REQUIREMENTS

A minimum of ninety credits beyond the bachelor's degree is required for the Ph.D. program, including thirty credits for the dissertation. The thirty credit dissertation registration requirement is fulfilled by registering for the courses 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively) offered under various subject area codes, in consecutive academic year semesters. For specific course requirements, students should consult the departmental sections of this bulletin, which follow.

There are no general foreign language requirements for the Ph.D. degree. Specific requirements can be made by the Ph.D. advisory committee and are designed to suit individual Ph.D. applicants.

If the student fails to meet the Ph.D. requirements, he/she may transfer appropriate credits toward the Master of Science degree program in the discipline in which credits were accrued.

Handbook for Doctoral Students and Advisors

Specific details pertaining to Ph.D. course work and other requirements are given in the *Handbook for Doctoral Students and Advisors*. This document, available from the Graduate School, should be carefully reviewed by all doctoral students.

Programs Offered by the College of Engineering

Alternative Energy Technology Programs

Office: 1158 Engineering Technology Building; 313-577-8078

Co-Directors: Gene Liao, Ph.D., and C.P. Yeh, Ph.D.

Website: <http://www.eng.wayne.edu/aet/>

GRADUATE CERTIFICATE in Alternative Energy Technology

MASTER OF SCIENCE in Alternative Energy Technology

The Alternative Energy Technology (AET) programs are interdisciplinary, involving faculty from the Departments of Chemical Engineering and Materials Science, Civil and Environmental Engineering, Electrical and Computer Engineering, Industrial and Systems Engineering, and Mechanical Engineering. These programs were established in 2005, and developed in close cooperation with governmental agencies, industry, and Next-Energy. The mission of the AET program is to educate and prepare the technical and scientific workforce for emerging alternative energy technologies; to promote and mobilize/align available resources to develop interdisciplinary research programs; and to disseminate technical information and raise public awareness on emerging AETs.

Alternative Energy Technology (Graduate Certificate Program)

This program is designed to prepare the scientific and technological workforce for the emerging alternative energy technologies. It offers an efficient way to obtain a certified level of training, especially for working engineers and researchers. It may be taken as a free-standing program or concurrently with a master's degree program.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The program will be open to students with a Bachelor's degree in engineering, chemistry, and physics, and in other mathematics-based sciences in exceptional cases.

CERTIFICATE REQUIREMENTS

The Alternative Energy Technology Graduate Certificate requires a minimum of twelve credits. The core course, AET 5120, is required, and a maximum of four credits is allowed in Research or Directed Studies. Certification procedures in place in WSU's Graduate School will be followed and students must earn a cumulative g.p.a. of at least a 3.0. Should a student become interested later in pursuing the master's degree after completing the graduate certificate, up to nine of the twelve certificate credits can be transferred toward the master's degree. For courses specifically associated with this program see Alternative Energy Technology Courses (AET), p. 171. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Alternative Energy Technology (M.S. Program)

The Master of Science program is open to students with a bachelor's degree in engineering, and in other mathematics-based sciences in exceptional cases. Admission to this program is contingent upon admission to the Graduate School. Grade Point Average for regular admission to M.S. Degree Program is 3.0 or above. Qualified admission (2.50-3.0) is possible if applicant has significant professional

experience. No other specific admission requirements are needed, however, letters of recommendation, statement of objectives, and Graduate Record Examination (GRE) scores are encouraged to aid the admission evaluation process.

DEGREE REQUIREMENTS

This Master of Science degree is offered under the following options:

Plan A: Thirty-two credits, including an eight-credit thesis.

Plan C: Thirty-two credits of course work in an approved AET Plan of Work.

Requirements for both options include at least twenty-four credits in Alternative Energy Technology courses and at least eight credits of 7000-level course work. The 7000-level course requirements can be satisfied through directed study, directed research, or thesis credits or approved classes from other engineering departments. Both options require two core courses: AET 5110 and AET 5120. Students pursuing Plan A are excluded from Research (AET 8996) and Directed Study (AET 7990) credits. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

For courses specifically associated with this program see Alternative Energy Technology Courses (AET), p. 171.

Electric-drive Vehicle Engineering Programs

Office: 1158 Engineering Technology Building; 313-577-8078
Co-Directors: Gene Liao, Ph.D., and C.P. Yeh, Ph.D.
Website: <http://www.eng.wayne.edu/eve>

GRADUATE CERTIFICATE in Electric-drive Vehicle Engineering

MASTER OF SCIENCE in Electric-drive Vehicle Engineering

The Electric-drive Vehicle Engineering (EVE) programs are interdisciplinary, involving faculty from the Departments of Chemical Engineering and Materials Science, Electrical and Computer Engineering, Industrial and Systems Engineering, and Mechanical Engineering. These programs were established in 2009, and developed in close cooperation with governmental agencies, industry, and the U.S. Department of Energy. The mission of the EVE program is to educate and prepare the technical and scientific workforce for the emerging electric-drive vehicle industry; to promote and mobilize/align available resources to develop interdisciplinary research programs; and to disseminate technical information and raise public awareness on the emerging electric-drive vehicle technology.

Electric-drive Vehicle Engineering (Graduate Certificate Program)

This program is designed to prepare the scientific and technological workforce for the emerging electric-drive vehicle engineering field. It offers an efficient way to obtain a certified level of training, especially for working engineers and researchers. It may be taken as a free-standing program or concurrently with a master's degree program.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The program will be open to students with a Bachelor's degree in engineering, chemistry, and physics, and in other mathematics-based sciences in exceptional cases.

CERTIFICATE REQUIREMENTS

The Electric-drive Vehicle Engineering Graduate Certificate will require a minimum of twelve credits. The core course EVE 5110 is required, and a maximum of four credits is allowed in Research or Directed Studied. All course work must be completed in accordance

with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. Should a student become interested later in pursuing the proposed master's degree after completing the graduate certificate, eight of the twelve certificate credits can be transferred toward the master's degree. For courses specifically associated with this program see Electric Vehicle Engineering Courses (EVE), p. 172.

Electric-drive Vehicle Engineering (M.S. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see 18. Additionally, the Grade Point Average required for regular admission to M.S. degree program is 3.0 or above. Qualified admission (2.5 - 3.0) is possible if an applicant has significant relevant professional experience. The program will admit students with Bachelor's degrees or the equivalent in engineering from an accredited college or university. Students with mathematics-based science degrees will be considered for admission on a case-by-case basis. No other specific admission requirements are needed, however, letters of recommendation, a statement of objectives, and Graduate Record Examination (GRE) scores are encouraged to aid the admission evaluation process.

DEGREE REQUIREMENTS

This Master of Science degree is offered under the following options:

Plan A: Thirty-two credits, including an eight-credit thesis.

Plan C: Thirty-two credits of course work in an approved EVE Plan of Work.

Requirements for both options include at least twenty-four credits in Electric-drive Vehicle Engineering courses and at least eight credits of 7000-level or higher course work. The 7000-level or higher course requirements can be satisfied through EVE courses, directed studies (EVE 7990), directed research (EVE 8996), or thesis credits (EVE 8999) of EVE-related projects, or approved 7000-level or higher classes from other departments. Both options require two core courses: EVE 5110 and EVE 5120. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166. For courses specifically associated with this program see Electric Vehicle Engineering Courses (EVE), p. 172.

Sustainable Engineering (Graduate Certificate Program)

This certificate program provides specialized formal courses for current students and working engineers. Those enrolled in the program will learn the fundamentals of sustainable engineering, extend their knowledge in the application of sustainable engineering principles, and maintain their technical competitiveness by broadening their sustainability expertise.

Admission to this program is contingent upon admission to the Graduate School, for requirements, see Admission, Graduate School, p. 17. Students currently enrolled in a graduate program in the College of Engineering, or students who have already completed a Bachelor's degree in engineering can be admitted to the program. Admission into the graduate program requires a minimum grade point average of 3.0.

CERTIFICATE REQUIREMENTS

Students must complete fifteen credits of sustainable engineering courses consisting of seven credits of required courses and eight credits of electives. A maximum of eight credits may be counted

towards both this certificate program and a related M.S. or Ph.D. program. All requirements must be completed within three years with a minimum 3.0 g.p.a. required in the certificate coursework. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. For courses specifically associated with this program see Sustainable Engineering Courses (STE), p. 174.

REQUIRED COURSES

- STE 6100 – Introduction to Sustainable Engineering (CHE 6100): Cr. 3
- STE 6270 – (CECE 6270) Env. Mgt. and Sustainable Development: Cr. 4

ELECTIVE COURSES

- CE 5410 – Hydrogen Economy and Hydrogen Infrastructure Needs: Cr. 4
- CE 5995 – Special Topics in Civil Engineering I: Cr. 4
- CE 6130 – Open Channel Hydraulics: Cr. 4
- CE 6150 – Hydrologic Analysis and Design: Cr. 4
- CE 7995 – Special Topics in Civil Engineering II: Cr. 4
- CHE 5110 – Fundamental Fuel Cell Systems: Cr. 4
- CHE 5700 – Process and Materials Safety for Alt. Energy Technology: Cr. 4
- CHE 6570 – Safety in Chemical Process Industry: Cr. 3
- CHE 6610 – Risk Assessment: Cr. 3
- CHE 6810 – Chemical Engineering Research Project: Cr. 4
- IE 6310 – Lean Operations and Manufacturing: Cr. 2
- IE 6405 – Integrated Product Development (EVE 5600)(AET 5600): Cr. 4
- IE 7325 – Supply Chain Management: Cr. 4
- ME 5120 – Fundamentals of Alt. Energy Technology: Cr. 4
- ME 5330 – Adv. Thermal Fluid Syst. Design: Cr. 4
- ME 5820 – Thermal Environmental Engineering: Cr. 4

For additional information, contact:

Professor Yinlun Huang: yhuang@wayne.edu, or
Professor Carol Miller: cmiller@eng.wayne.edu.

Alternative Energy Technology Courses (AET)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5110 (EVE 5130) Fundamental Fuel Cell Systems. (ME 5110) (CHE 5110) Cr. 4

Prereq: graduate standing in engineering. Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. (F)

5120 Fundamentals of Alternative Energy Technology. Cr. 4

Prereq: graduate standing engineering. Cover engineering fundamentals and basic design of electric-drive vehicle powertrains by understanding and analyzing the relevant multi-physics and applying the associated equations and simple models. (W)

5150 (EVE 5150) Advanced Energy Storages. Cr. 4

Open only to engineering graduate students and undergraduates with senior standing. Fundamentals of all major energy storage methods, including storage of energy as heat, in phase transitions and reversible chemical reactions, and in organic fuels and hydrogen; principles of energy storage in mechanical, electrostatic and magnetic systems. (F,W)

5310 (EVE 5120) Fundamentals of Battery Systems for Electric and Hybrid Vehicles. (ME 5215) (CHE 5120) Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing; AET 5310, ME 5315, CHE 5120. Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. (W)

5325 (ECE 5325) Smart Sensors and Fuel Cells. Cr. 4

Prereq: senior standing in science or engineering discipline. Signal conditioning circuits, AD/DA conversions, and decision-making circuits suitable for custom integrated circuit solutions to create a smart fuel cell. Introduction of smart sensors for monitoring hydrogen, oxygen, and other gases in a fuel cell system. (F)

5330 (EVE 5430) Modeling and Control of Power Electronics and Electric Vehicle Powertrains. (ECE 5330) Cr. 4

Prereq: senior standing in science or engineering discipline. Basic methodologies for modeling, control system design, system coordination, and optimization of renewable power sources and power electronics systems. (B)

5420 (CE 5420) Transportation Energy Choices. (ME 5870) Cr. 4

Prereq: senior standing in science or engineering discipline. Technological innovations and barriers impacting energy production, storage, and conversion in transportation applications. Fuel life cycle case studies (bioethanol, syncrude, etc.). (W)

5510 Introduction to Photovoltaics. Cr. 4

Prereq: enrollment in AET graduate program or senior standing in engineering. Basic theories of semiconductor materials and solar cells. Several types of solar cell materials and their structures. Vacuum deposition techniques and PV systems. (F)

5600 (IE 6405) Alternative Energy Product Realization System. (EVE 5600) Cr. 4

Prereq: senior standing in science or engineering discipline. Identification of a strategy for application of technology in the marketplace; application development, integration into vehicle production, concurrent engineering manufacturing issues, quality and testing in manufacturing. (F)

5640 Energy and the Environment. (EVE 5640) Cr. 4

Prereq: senior standing in engineering or math-based science program. Sustainability problems of our present energy systems and of potential solution in utility and transportation sectors. Energy evolution and decarbonization process from fossil fuels. Impacts of greenhouse gas emissions. Principles of renewable energy systems. (F)

5700 (CHE 5700) Process and Materials Safety for Alternative Energy Technology. Cr. 4

Prereq: senior standing in science or engineering discipline. Fundamentals concerning fires and explosions, control strategies to prevent accidents, fault tree analysis to optimize control strategies, and risk analysis. Regulations and standards relevant to the design, manufacture, and operation of fuel cell and reforming processes. (W)

5810 (EVE 5810) Power Management for Advanced Energy Storage Systems and its Applications. Cr. 4

Prereq: ECE 4470. Operating principles and modeling of energy storage techniques; control and power management, power electronic converters, electric machines, and power systems; power management strategies of hybrid energy systems including HEV and alternative energy systems. (F,W)

7410 Alternative Fuels: Properties, Processing, and Characterization. (CHE 7410) Cr. 4

Prereq: written consent of advisor and AET Program Director. Exploration of the latest alternative fuels: their physical and chemical properties, production technologies, and standardization characterization tests. (F)

7990 Directed Study. Cr. 1-4

Prereq: written consent of instructor. Independent projects on subjects of interest in advanced energy technology. (T)

7991 Internship in Industry. Cr. 1-4

Prereq: written consent of advisor and AET program director. Offered for S and U grades only. Industrial internship in alternative energy technology. (T)

7995 Special Topics in Alternative Energy Technology. Cr. 1-4

Special topics which support the AET Program. (B)

8996 Directed Research. Cr. 1-4

Prereq: written consent of instructor. Independent research projects. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

Electric Vehicle Engineering Courses (EVE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5110 Fundamentals of Electric-drive Vehicle Engineering. (ME 5115) Cr. 4

Prereq: graduate standing in engineering. Cover engineering fundamentals and basic design of electric-drive vehicle powertrains by understanding and analyzing the relevant multi-physics and applying the associated equations and simple models. (F)

5120 Fundamentals of Battery Systems for Electric and Hybrid Vehicles. (AET 5310) (ME 5215) (CHE 5120) Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing. Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. (W)

5130 Fundamentals of Fuel-cell Powered Systems for Transportation. (AET 5110) (CHE 5110) (ME 5110) Cr. 4

Prereq: graduate standing in engineering. Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. (F)

5150 Advanced Energy Storages. (AET 5150) Cr. 4

Open only to engineering graduate students and undergraduates with senior standing. Fundamentals of all major energy storage methods, including storage of energy as heat, in phase transitions and reversible chemical reactions, and in organic fuels and hydrogen; principles of energy storage in mechanical, electrostatic and magnetic systems. (F,W)

5410 ECE 5410 Power Electronics and Control. Cr. 4

Prereq: ECE 4330 or equivalent; open only to Engineering graduate students and undergraduates with senior standing. Control of electric energy using solid-state devices, diodes, thyristors, triacs; mathematical analysis of circuits containing these devices; power converters and control; solid-state drives for motor control. Applications to electric-drive vehicles. (S)

5430 Modeling and Control of Electric-drive Powertrains. (AET 5330) (ECE 5330) Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing. Dynamic modeling and control of electric-drive powertrains, including electronics, charging structure, battery systems, motors, engines, transmission, and power regeneration. Powertrain subsystem models and their integration and control method will be developed. (F)

5450 Control and Optimization for Integrated Electric-drive Vehicle Systems. (ECE 5450) Cr. 4

Prereq: EVE 5430; open only to Engineering graduate students and undergraduates with senior standing. Understanding of how to con-

trol a system using modern control theory, how to optimize the performance of a system using various optimization technologies, and how to apply the control and optimization technologies to EDV systems. (W)

5600 (IE 6405) Electric-drive Vehicle Product and Infrastructure Development. (AET 5600) Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing. Integration of design, development, and deployment processes, efficient operation of heterogeneous and complex design considerations, and proactive risk identification and management caused by technology and infrastructure uncertainties. (F)

5620 Energy Economics and Policy. (CHE 5620) Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing. Demand for energy, energy supply, energy markets, and public policies affecting energy markets. Coal, oil, natural gas, electricity, and nuclear power sectors and examines energy tax, price regulation, deregulation, energy efficiency and emission control policies. (W)

5640 (AET 5640) Energy and the Environment. Cr. 4

Prereq: senior standing in engineering or math-based science program. Sustainability problems of our present energy systems and of potential solution in utility and transportation sectors. Energy evolution and decarbonization process from fossil fuels. Impacts of greenhouse gas emissions. Principles of renewable energy systems. (F)

5700 Electric-drive Vehicle Capstone Design. Cr. 4

Prereq: EVE 5110, and EVE 5310 or EVE 5430; open only to Engineering graduate students and undergraduates with senior standing. The class is divided into teams competing on same or similar Electric-Drive Vehicle (EDV) system design project on contemporary EDV issues with relevant vehicle powertrain and energy system contents, involving energy, environmental, safety and economic analyses. (W)

5810 Power Management for Advanced Energy Storage Systems and its Applications. (AET 5810) Cr. 4

Operating principles and modeling of energy storage techniques; control and power management, power electronic converters, electric machines, and power systems; power management strategies of hybrid energy systems including HEV and alternative energy systems. (F,W)

5995 Special Topics in Electric-drive Vehicle Engineering. Cr. 4 (Max. 16)

Maximum accumulated credits in Special Topics will be determined by program director. Special subject matter; topics announced in Schedule of Classes. (T)

7110 Materials Science Aspects of Lithium Ion Batteries. (CHE 7110) Cr. 4

Prereq: B.S. degree in an engineering or math-based science program. Fundamental understanding of the role of advances in materials science and engineering to the development of these high energy batteries. Details on the novel synthesis of these new materials together with their physical and electrochemical characterization. (S)

7310 Electric-drive Vehicle Modeling and Simulation. (ME 7315) Cr. 4

Prereq: graduate standing in engineering. Cover modeling, simulation and control of electric-drive vehicle powertrain including plant modeling, controls model development, and in-the-loop controls testing. Proficiency in MATLAB/Simulink is required. (W)

7410 Hydrogen Production and Storage for Vehicles. (CHE 7415) Cr. 4

Prereq: B.S. degree in an engineering or math-based science program. Focus on the engineering of hydrogen production technologies including reformation of hydrocarbons, electrolysis, photoelectrochemistry, and the thermal decomposition of water. Background in

hydrogen storage technologies including high pressure compressed gas, liquid hydrogen, metal hydrides, and chemical hydrides. (W)

7450 Embedded Systems for Vehicles. (ECE 7455) Cr. 4

Prereq: EVE 5430; B.S. degree in an engineering or math-based science program. Advanced embedded processors and operating systems, power modules, auxiliary execution engine, display interface, memory controller, USB controller, DMA, I/O, initialization and configuration, programmable serial controller, serial audio interface, and video input. (F)

7990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: written consent of instructor; Open only to Engineering graduate students. Independent projects on subjects of interest in electric-drive vehicle engineering. (T)

7995 Special Topics in Electric-drive Vehicle Engineering. Cr. 1-4 (Max. 4)

Prereq: maximum accumulated credits in Special Topics determined by program director. A consideration of special subject matter in electric-drive vehicle engineering. Topics to be announced in Schedule of Classes. (T)

7996 Directed Research. Cr. 1-4 (Max. 4)

Prereq: written consent of instructor. Open only to Engineering graduate students. Independent research projects. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor; admission to the EVE Master of Science program. (T)

Engineering: Special Topics Courses (EGR)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5995 Special Topics in Engineering. Cr. 1-4

Prereq: graduate standing in engineering; or upper division undergraduate professional program status. State of the art research, development and practice topics from across the fields of engineering; emphasis on interdisciplinary topics. (T)

7995 Special Topics in Engineering. Cr. 1-4

Prereq: graduate standing in engineering. State of the art research, development and practice topics from across the fields of engineering; emphasis on interdisciplinary topics. (T)

7999 Elements of Graduate Research. Cr. 2

Prereq: Ph.D. pre-candidate status. Key elements of graduate research. Topics covered include developing research ideas and library search skills, constructing a research proposal/prospectus, identifying research funding and fellowship opportunities, interdisciplinary research, and research ethics. (W)

Sustainable Engineering Courses (STE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6100 Introduction to Sustainable Engineering. (CHE 6100) Cr. 3

Economic, environmental, social, and technological perspectives relevant to the design, operation and management of engineering activities. Multiple perspectives addressed from a system sustainability view point. (Y)

6270 (CE 6270) Environmental Management and Sustainable Development. Cr. 4

Prereq: CE 4210. Engineering design and development within sustainability constraints; theoretical, regulatory, and practical implications; Detroit and global applications. (Y)

Biomedical Engineering

Office: 818 W. Hancock; 313-577-1861

Chairperson: John M. Cavanaugh

Associate Chairpersons: Mahendra Kavdia (COE), E. Mark Haacke (SOM)

Website: <http://www.bme.wayne.edu>

Professors

John M. Cavanaugh, Juri G. Gelovani, Albert I. King, King-Hay Yang

Associate Professors

Michele Grimm, Mahendra Kavdia, Weiping Ren

Assistant Professors

Zhifeng Kou, Mai T. Lam, Mohammad Mehrmohammadi, Mohammad Nasirivanaki, Harini Sundararaghavan,

Research Faculty

Paul Begeman, Chaoyang Chen, Srinivasu Kallakuri, Aleksandr Shavrin, Liying Zhang

Lecturers

Andrei Borisov, Richard Genik, Brian Mundo

Secondary Faculty

Gregory W. Auner Amar Basu, Randall Benson, Bruce Berkowitz, Mark Cheng, Norman Cheng, Cliff Chou, R. Darin Ellis, Scott Gruber, E. Mark Haacke, Carolyn Harris, Guangzhao Mao, David Markel, Howard Mathew, Sandeep Mittal, Golam Newaz, Jaladhar Nelavalli, Abhilash Pandya, Vani Sabesan, Steve Salley, Sean Seaman, Jeffrey Stanley, Richard Young,

Adjunct Faculty

Matthew Allen, Cynthia Bir, Carolyn Harris, Hsieh Li, Roman Maev, Jeffrey Pike, Priya Prasad, Naftali Raz, Steve Rouhana, Christopher Van Ec, David Viano

Part-time Faculty

Therese Bou-Akl, Jack Ridenour, Mike Tanner, Peter Wawrow

Graduate Degrees

BRIDGE GRADUATE CERTIFICATE in Injury Biomechanics

MASTER OF SCIENCE in Biomedical Engineering

DOCTOR OF PHILOSOPHY with a major in Biomedical Engineering

DOCTOR OF PHILOSOPHY with a major in Biomedical Engineering and a dual-title in Biomedical Imaging

The field of biomedical engineering applies engineering science and design to the solution of problems related to human physiology and pathophysiology. Working at the interface of engineering and medicine, biomedical engineers work to prevent injury, diagnose disease, and treat illnesses or injuries that occur. Built on a strong research foundation that stretches back more than seventy years, the biomedical engineering program at Wayne State provides coursework and research opportunities in a broad range of areas in biomechanics, tissue engineering and biomaterials, biomedical imaging, and biomedical sensors and neurophysiology.

Biomechanics, Injury (Bridge Graduate Certificate)

This bridge graduate certificate program aims to provide specialized skills and training engineers will need to address impact biomechanics and motor vehicle trauma in the automotive and defense industries as well as blast-induced injury biomechanics and counter measures. Those enrolled in the program will take a core program in physiology and impact biomechanics, with additional electives to broaden the educational program.

As a Bridge Graduate Certificate, students who complete this program have the option to continue into the M.S. program in Biomedical Engineering. Credits earned as part of the Bridge Graduate Certificate in Injury Biomechanics can be applied towards the M.S. degree requirements as long as they were completed with at least a 'B' (3.0 g.p.a.) and within six years of the completion date for the M.S.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. A minimum grade point average for regular admission to Graduate Certificate Program is 3.0. However, those with g.p.a. of 2.70 can be admitted conditionally requiring that they maintain a 3.0 average g.p.a. for the first two consecutive semesters. Applicants should have a Bachelor of Science degree in engineering. Applicants with degrees in chemistry, physics, or life sciences who wish to be considered for admission must have completed the undergraduate engineering calculus sequence and the calculus-based undergraduate physics sequence. They are also advised to take BME 5040 before starting the Certificate Program.

CERTIFICATE REQUIREMENTS

Students must complete sixteen credits in BME courses related to injury biomechanics, including three required courses: BME 5010, 7100 and 7160. A fourth elective course must be chosen from the following list of options:

BME 6480 – Biomedical Instrumentation (ECE 6180) (IE 6180) (ME 6180): Cr. 4

BME 7120 – Applied Finite Element Methods in Biomechanical Analysis: Cr. 4

BME 7150 – Biomechanics of Blast-Related Injuries: Cr. 3

BME 7170 – Experimental Methods in Impact Biomechanics: Cr. 4

All requirements must be completed within a three-year period. The minimum cumulative g.p.a. must be 3.0 at the time of graduation. No grade lower than a B-minus will be accepted for credit towards certificate requirements. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

For additional information, interested students should contact:

Professor King Yang (king.yang@wayne.edu) or

Professor Albert King (king@rrb.eng.wayne.edu)

Biomedical Engineering (M.S. Program)

Program specialization in this master's degree may be under-taken in these areas: injury biomechanics, bioinstrumentation, biomedical imaging, tissue engineering and biomaterials, systems biology and computational biology, and medicine career. These specializations are available to both part-time and full-time students, in either research or non-research degree programs.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, the minimum requirements for admission into the M.S. Program in Biomedical Engineering are:

1. Official transcripts from an accredited institution showing completion of an engineering baccalaureate degree. Students with a baccalaureate degree from a non-engineering discipline will be considered

for admission to the program if they have the prerequisite course-work in Calculus (1, 2 and Differential Equations) and Physics (1 and 2). Students without subsequent mathematical application course work (e.g. life science) must have passed these courses with a grade of 'B' or better. 2. A Grade Point Average (g.p.a.) of 3.0 or higher on a 4.0 scale will be considered for Regular Admission and g.p.a. between 2.8 and 3.0 will be considered for Qualified Admission.

2. A Grade Point Average (g.p.a.) of 3.0 or higher on a 4.0 scale will be considered for Regular Admission and g.p.a. between 2.8 and 3.0 will be considered for Qualified Admission.

3. Submission of a one-page statement of purpose describing their interest in graduate degree in biomedical engineering.

4. Applicants must also submit Graduate Record Examination (GRE) scores if applying for financial support.

DEGREE REQUIREMENTS

This Master of Science degree in Biomedical Engineering is offered under the following options:

Plan A: A minimum of thirty-two credits in course work including an eight credit thesis.

Plan C: A minimum of thirty-four credits in course work.

For either plan, students must complete the following Core Requirements: BME 5010, 5020, and 8070. Students with non-engineering backgrounds also need to take BME 5040.

Additional courses will be chosen from the curriculum outlined for each specialization. A list of curricula can be found in the *Handbook for Graduate Students in Biomedical Engineering*, available at our Website: <http://www.bme.wayne.edu>. Students must take a minimum of six credits at the 7000-level or above if they are enrolled in Plan A, and a minimum of nine credits at the 7000-level or above (with six credits in BME or from the approved course list) if they are enrolled in Plan C. Directed study and directed research courses (BME 7990 and 7996) cannot be counted toward the satisfaction of the 7000-level course requirement. A maximum of four credits in directed study or directed research (BME 5990, 7990, and 7996) may be applied towards the degree. Thesis credits are earned through satisfactory completion of BME 8999. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Students enrolled in the master's degree program are required to file a Plan of Work with the Graduate Officer of the program by the time eight graduate credits have been earned. Following this, the applicant will petition his/her advisor to advance his/her rank to 'candidate.' Candidate status must be authorized by the time twelve graduate credits have been earned, or else subsequent registration will be denied. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. Courses to be applied to the degree requirements must be completed with a grade of 'B' minus or higher.

All students should refer to the *Handbook for Graduate Students in Biomedical Engineering* for current departmental policies and requirements.

Biomedical Engineering (Ph.D. Program)

Program specialization in this Ph.D. degree may be under-taken in these areas: injury biomechanics, bioinstrumentation, biomedical imaging, tissue engineering and biomaterials, systems biology and computational biology, and medicine career. These specializations

are available to both part-time and full-time students, in either research or non-research degree programs.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, the minimum requirements for admission into the Doctoral Program in Biomedical Engineering are:

1. A student seeking admission to the doctoral program must have a Bachelor's or Master's degree in Biomedical Engineering, or other closely related field from an accredited institution.

2. A g.p.a. of at least 3.5/4.0 in the applicant's Bachelor's degree or a g.p.a. of at least 3.3/4.0 in the applicant's Master's degree is required.

3. All applicants must submit Graduate Record Examination (GRE) scores.

4. Three letters of recommendation.

5. A statement of research interests and goals.

DEGREE REQUIREMENTS

Completion of a minimum of ninety credits beyond the baccalaureate degree is required for the Ph.D. program. These credits are distributed as follows:

1. *Core Courses (twenty to twenty-one credits):* BME 5010, 5020, 7010, 8070, 8080; and an approved graduate level Statistics course (BIO 5040 or FPH 7015). Students with non-engineering backgrounds also need to take BME 5040.

2. *Dissertation (thirty credits).*

3. *General Courses (thirty-nine to forty credits):* Students must complete these credits in graduate coursework, in addition to the core courses and including the satisfaction of the minor in life sciences. The life sciences minor may be satisfied by the completion of six credits of course work in graduate-level life science beyond the core curriculum. The student is required to seek approval of his/her selection of courses from their doctoral advisor. At least twelve credits in general courses must be chosen from those offered by the Biomedical Engineering Program. At least thirty credits of relevant courses must be at the 7000-level or above. Up to twelve credits in directed study and research can be applied towards the degree.

An approved Plan of Work should be filed with the Office for Graduate Studies as early in the graduate program as possible. The student must have filed the Plan of Work before being recommended for candidacy status. (Consult Doctor of Philosophy Degrees (Ph.D.), p. 38 of this Bulletin for Graduate School regulations governing doctoral study.) Courses to be applied to the degree requirements must be completed with a grade of 'B' minus or higher.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Examinations: All Ph.D. students must pass the examinations outlined below. After successful completion of the written qualifying examination, a student may be admitted to the status of doctoral candidate.

1. Written Qualifying Examination: Students must take the written qualifying examination after completing sixteen credits in course work towards the Ph.D. All Ph.D. students are required to attempt the written qualifying examination before completion of forty-eight credits after their baccalaureate degree. Each student has two chances to pass the examination; if the exam is not passed by the second attempt, the student will be dismissed from the program (the option of obtaining a terminal master's degree will apply). The examination is offered once a year in the Winter Semester.

2. Proposal Defense (Oral Qualifying Examination): This examination shall be a presentation of the student's proposal for dissertation research, and will be administered by the student's Doctoral Dissertation Committee. The Oral Examination must be satisfactorily completed at least twelve months prior to the Dissertation Defense.

Dissertation requirements are satisfied by the successful completion of thirty credits of dissertation research. The thirty credit dissertation registration requirement is fulfilled by registering for the courses BME 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. All Ph.D. students must pass the written qualifying examination and apply for doctoral candidacy before election of dissertation credits. All Ph.D. students must register for dissertation credits or doctoral candidacy maintenance status (BME 9995) for any semester in which they utilize campus facilities or consult with faculty, even though they may not be enrolled in a formal lecture course. The dissertation defense will be publicized by public notice to the academic community; at this session the candidate presents his/her doctoral research for final approval by the Doctoral Dissertation Committee.

All students should refer to the Handbook for Graduate Students in Biomedical Engineering for current departmental policies and requirements. A minimum of one first author peer reviewed journal publication is required before defending the Doctoral Dissertation.

Biomedical Imaging (dual-title program)

The objective of this program is to prepare students who are currently enrolled in any biomedical related Ph.D. program or in an M.D./Ph.D. program to become strong imaging researchers. With an excellent imaging background, they have the potential to obtain positions in either industry or academia and tackle problems in engineering and science with new insights and new equipment.

Admission. Biomedical Engineering Ph.D. students by the end of the first year of their program may submit a written request to the Biomedical Engineering Graduate Program Director to add the Biomedical Engineering dual-title program to their plan of study.

PROGRAM REQUIREMENTS

Core Courses (16-18 credits): Students should select 16 to 18 credits (5 or 6 courses) from the course list (please see the program director for an updated course list). Note that these courses can be counted as part of the Ph.D. requirements.

Seminar Courses (0-1 credits): Doctoral seminar series related to imaging can be taken by the student and counted toward 1 credit for the dual title program (i.e. BME 8710: Seminars in Biomedical Imaging, etc...)

Special Laboratory Rotation (2-3 credits): The student will be expected to gain at least one semester's experience in an imaging laboratory, different from their advisor's laboratory, to broaden their imaging experience.

Biomedical Engineering Courses (BME)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Quantitative Physiology. (CHE 5100) (ECE 5100) (IE 5100) (ME 5100) Cr. 4

Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models where feasible. (F,W)

5020 Computer and Mathematical Applications in Biomedical Engineering. Cr. 4

Prereq: proficiency in at least one programming language. Application of numerical methods in biomedical engineering. Data acquisition, reduction, and analysis using numerical methods and computer programming for such tasks. (F,W)

5030 Introduction to Molecular Biology for Engineers. Cr. 3

Prereq: BME 5010 (former BME 5005), BMS 6550 or former BMS 5550, or college-level cell biology course. Introduction to cell biology and molecular biology for engineers interested in biomedical engineering. (F,S)

5040 Fundamentals of Engineering Analysis. Cr. 2

Intended to train biomedical engineering students, who have no engineering background, with fundamental principles of engineering and basics of an engineering programming language. It includes Matlab programming language and basics of engineering statics, dynamics, strength of materials, and electrical circuits. (I)

5070 Engineering Anatomy. Cr. 4

Prereq: BME 2070 or Graduate Standing. A cadaver based anatomy course for undergraduate students and MS-level students in biomedical engineering. This hands-on course is intended to give the students directed experience of the study of human anatomy in relation to engineering principles. The histological study of tissues in relation to mechanical function of the organism is included in this study. Material Fee as indicated in Schedule of Classes. (W)

5130 Vehicle Safety Engineering. Cr. 4

Role of vehicle in road safety, occupation and pedestrian injury mechanisms, measures of vehicle safety performance, driver behavior and vehicle interface. Use of new technology to improve vehicle safety. (I)

5210 Musculoskeletal Biomechanics. (ME 5160) Cr. 4

Prereq: BME 5010 or BMS 6550 or former BMS 5550. Structure and properties of the major tissue components of the musculoskeletal system and evaluation of how tissues combine to provide support and motion to the body. (F)

5310 Device and Drug Approval and the FDA. Cr. 3

Prereq: BME 5010. Government regulations and industrial procedures that lead to device/drug approval. (S)

5370 Introduction to Biomaterials. (ME 5180) (MSE 5180) Cr. 4
Prereq: BE 1300, BME 5010 or BMS 6550. Introduction to study of both biological materials (bone, muscle, etc.) and materials for medical applications. Topics include tissue properties and effects of pathology, biocompatibility, and design considerations. (W)

5380 Biocompatibility. (MSE 5385) Cr. 4
Prereq: BME 5010 or BMS 6550. Wound healing and the tissue response to foreign materials. The organization, activation, and mechanisms of the immune system. Bioactive materials and the molecular basis for surface recognition and masking. (I)

5390 Experimental Methods for Biomaterials. (MSE 5390) Cr. 2
Hands-on and demonstration exposure to laboratory techniques for the assessment of biological tissues and artificial biomaterials. (I)

5510 Introduction to Clinical Engineering and Technology. Cr. 2
Prereq: BME 5010. Fundamental topics, including evolution of clinical engineering, medical technology, risk management, patient safety, medical equipment planning. (W)

5530 (ECE 5370) Mechatronic System Design I. Cr. 4
Prereq: ECE 4600 or equiv.; written consent of instructor. Students work in small groups to design and build "smart" devices or systems, which will integrate sensors, digital logic and/or microprocessors, and user interfacing; products will be requested by "clients" and the student will work in a cross-disciplinary team. (F)

5540 (ECE 5380) Mechatronic System Design II. Cr. 4
Prereq: ECE 4600 or equiv.; written consent of instructor. Continuation of BME 5530. (W)

5730 Application Techniques in Biomedical Image Processing. Cr. 3
Prereq: BME 5010. Basic techniques associated with segmentation, registration, and co-registration of CT and MR images to extract critical information needed for advanced data analysis. (I)

5990 Directed Study. Cr. 1-4
Prereq: senior standing and written consent of program director. Independent projects on subjects in the field of biomedical engineering. (T)

5995 Special Topics in Biomedical Engineering I. Cr. 1-4
Topics as announced in Schedule of Classes. (I)

6130 Accident Reconstruction. Cr. 3
Prereq: BME 5040 or equiv. Passenger car and light truck behavior in collisions; recognition of roadway markings and vehicle damage used to analyze vehicle accidents and to use that evidence to reconstruct driver, vehicle and occupant dynamics at the time of the collision. (S)

6470 (ECE 6570) Smart Sensor Technology I: Design. (PHY 6570) Cr. 4
Prereq: B.S. degree in engineering or science. Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. (F)

6480 Biomedical Instrumentation. (ECE 6180) (IE 6180) (ME 6180) Cr. 4
Prereq: ECE 3300, BME 5010 or BMS 6550 (or former BMS 5550), and BME 5020. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (W)

6500 (ECE 6100) Enabling Technology. Cr. 3-4
Prereq: written consent of instructor. Principles of application of enabling technology: across life stages, for differing ethnic and cultural backgrounds, for individuals with varying functional abilities. (I)

6991 Internship in Industry. Cr. 1-4
Prereq: written consent of graduate advisor. Industrial internship in biomedical engineering. (T)

7010 Functional Anatomy. Cr. 4
Open only to BME doctoral students. Prereq: BME 5010. Gross dissection-based course designed to introduce students to the anatomical structures associated with major physiological functions important to biomedical engineering. Material Fee As Indicated In The Schedule of Classes (S)

7020 Cardiovascular Systems Modeling. Cr. 4
Prereq: MAT 2150 or MAT 2350 or equiv. Application of engineering principals and mathematical and computational techniques to cardiovascular systems. Partial differential equations, signal transduction pathway and biotransport modeling, and introduction to systems biology approaches. (W)

7030 Mechanisms and Models of Cellular Regulation for Engineering. Cr. 3
Open only to graduate students. Prereq: BME 5030. Basic concepts of intracellular signaling pathways in response to environmental stimuli such as biomaterials and mechanical forces. (W)

7100 Mathematical Modeling in Impact Biomechanics. (ECE 7100) (IE 7100) (ME 7100) Cr. 4
Prereq: ME 3400, and BME 5010 or BMS 6550 or former BMS 5550. Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. (W)

7120 Applied Finite Element Methods in Biomechanical Analysis. Cr. 4
Prereq: ME 5040. Structural, stress, and strain analysis of the human body and/or artificial implants, using realistic biomechanical data for relevant tissues and material. Theoretical background and applied analysis. (I)

7130 Computational Methods in Biology. Cr. 3
Prereq: familiarity with programming language. Theory and computational methods for modeling the dynamic and thermodynamic properties of biomolecular systems. Methods for modeling biological systems involving biofluid dynamics. (I)

7150 Biomechanics of Blast-Related Injuries. Cr. 3
Prereq: BME 7100 or (BME 7160 and ME 3400). This course covers new and old information developed by military researchers on injuries sustained by military personnel due to explosions or blasts caused by a variety of weapon systems. Injuries to body regions from head to foot are discussed. Particular emphasis is placed on injuries to the spine and lower extremities for the mounted soldier and on brain injury for both the mounted and dismounted soldier. The course includes the modeling of blast and blast-related effects on selected body regions. (F)

7160 Impact Biomechanics. (ECE 7160) (ME 7160) Cr. 4
Prereq: BME 5010 or BMS 6550 or former BMS 5550. Biomechanical response of the body regions and the whole body to impact. Mechanisms of injury in blunt impact. Effects of restraints on injury reduction. Development of test surrogates such as dummies. (F)

7170 Experimental Methods in Impact Biomechanics. Cr. 4
Prereq: BME 6480, BME 7160. Lecture and laboratory combined; principles of impact testing; hands-on experience in use of impact-test equipment, including sled, pendulum, other types of impactors, and drop-test techniques. Material Fee As Indicated In The Schedule of Classes (B:W)

7210 Tissue Biomechanics. (ME 7195) Cr. 4
Prereq: BME 5010 or BMS 6550 or former BMS 5550; BME 5020, BME 5210. Tissue-level mechanical properties. Analytical models of hard and soft tissue mechanics. Soft tissue viscoelasticity, quasilin-

ear viscoelasticity and biphasic theory. Wolff's law and bone remodeling, bone fatigue and microfracture. Form and function relationships from microstructure to macrostructure. Application of theoretical models to experimental data sets. (B:W)

7300 Advanced Topics in Biomaterials and Tissue Biomechanics. (ME 7180) (MSE 7180) Cr. 4

Prereq: BME 5210 or 5370. Seminar format: advanced topics presented to the class; lectures by the instructor and by the participants based on literature reviews. Topics determined by student interest. (B:F)

7370 Biomaterial Interfaces. (CHE 7370) Cr. 4

Prereq: BME 5370. Effects of topography and texture on the performance of biomaterials. Self-organization of biomembranes and supramolecular systems. (W)

7390 (CHE 7390) Tissue Engineering and Hybrid Systems. Cr. 4

Prereq: BME 5370, and CHE 7100 or BME 5020. Seminar and project based approach to the design, development, analysis and application of organ and tissue replacement systems which incorporate processed materials and living cells. (F)

7400 (ECE 7400) Medical Robotics and Systems. Cr. 4

Prereq: ECE 5020 or MAT 2250. Technology that interfaces computer engineering and electronics with surgery; introduction of key concepts in the field, including medical robotics, image-guided surgery, segmentation/3D modeling, medical simulation, and medical sensors. (W)

7470 (ECE 7570) Smart Sensor Technology II: Characterization and Fabrication. (PHY 7580) Cr. 4

Prereq: ECE 6570. Integration of ongoing research in integrated technology of smart sensors. Design of smart sensor devices using computer simulation. Fabrication of smart sensor. Material Fee as given in Schedule of Classes. (W)

7670 Experimental Methods in Physiology. Cr. 3

Prereq: BME 5010. Basic principles and techniques for monitoring and reading EMGs, EEGs, ECGs, respiratory cycle, pulmonary function, galvanic skin response and polygraph, human acceleration response. Designing and carrying out a project involving human body acceleration measures and EMG responses; a second project will be designed and carried out using measurement techniques chosen by the students. Material Fee As Indicated In The Schedule of Classes (S)

7710 Magnetic Resonance Imaging. Cr. 4

Prereq: MAT 2150, ECE 3570, ECE 3580, BME 5020. Science and engineering of magnetic resonance imaging; relaxation times, signal concepts, Fourier imaging, sampling, filtering, and sequence design. (B:W)

7720 (PYC 7320) MR Imaging of Neurovascular Disease. Cr. 3

Open only to graduate students. Prereq: BME 5010, written consent of instructor. Recent advances in MRI technology applied to human brain vascular diseases. Methods include: 3D anatomical imaging, diffusion tensor imaging, functional brain imaging, perfusion hanging, and susceptibility weighted imaging. (B:W)

7990 Directed Study. Cr. 1-4

Prereq: written consent of instructor. Independent projects on subjects of interest in the field of biomedical engineering. (T)

7995 Special Topics in Biomedical Engineering II. Cr. 1-4

Prereq: written consent of program director. Topics as announced in Schedule of Classes. (I)

7996 Research. Cr. 1-4

Prereq: written consent of chairperson and advisor. Combined experimental and analytical study of a problem in the field of biomedical engineering. (T)

8070 Seminar in Biomedical Engineering. Cr. 1

Offered for S and U grades only. Lectures on biomedical engineering and related fields by guest speakers, faculty, and students. M. S. and Ph.D. students are required to take one semester. (F,W)

8080 Doctoral Seminar in Biomedical Engineering. Cr. 1

Prereq: doctoral candidate standing. Offered for S and U grades only. Seminar and research discussion based on research projects of BME doctoral students. (T)

8470 (ECE 8570) Smart Sensor Technology Seminar. (PHY 8570) Cr. 1

Prereq: ECE 6570, 7570. Technological advances. Interaction of research experience in smart sensors and integrated devices. (W)

8710 Seminar in Biomedical Imaging. Cr. 1

Prereq: BME 7710; graduate standing. Exploration of areas in Magnetic Resonance Imaging: technical aspects to clinical applications. Diseases such as multiple sclerosis, trauma, stroke, and cancer will be considered. Students make at least one presentation of a specialized topic, and participate in associated weekly discussions. (I)

8999 Master's Thesis Research and Direction. Cr. 1-8

Prereq: written consent of advisor; written consent of MDR Program. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: BME 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following BME 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: BME 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following BME 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: BME 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following BME 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in BME 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Chemical Engineering and Materials Science

Office: 1100 W. Engineering Building; 313-577-3800
Chairperson: Guangzhao Mao
website: <http://www.eng.wayne.edu/che/>

Professors

Y. Huang, C.W. Manke, G. Mao, H.W.T Matthew, S. Ng, J. Potoff, S.K. Putatunda, S. O. Salley, Y. Zhu

Associate Professors

G. Shreve

Assistant Professors

Z. Cao, D. Deng, H. Liu, E. Nikolla, K. Torabi

Graduate Degrees and Certificates

GRADUATE CERTIFICATE in Polymer Engineering

MASTER OF SCIENCE in Chemical Engineering

MASTER OF SCIENCE in Materials Science and Engineering

*DOCTOR OF PHILOSOPHY with a major in
Chemical Engineering*

*DOCTOR OF PHILOSOPHY with a major in Materials Science
and Engineering*

Chemical Engineering

The field of chemical engineering embraces those industries in which matter is treated to effect a change of state, energy content, or composition, and in which the chemical engineer may be concerned with either the processes or the process equipment used for them. Examples of such industries are: fuels and petroleum processing; heavy, fine and pharmaceutical chemicals; textiles and fibers; food processing and products; natural and synthetic rubbers and plastics; explosives; pulp and paper; surface coatings; disposal of chemical plant wastes; atomic energy processes; environmental control and medical systems; and the general fields of biotechnology.

Areas of specialized research and support for graduate students include thermodynamics and transport properties of polymer solutions and melts, processing, rheology and separations of polymers, heterogeneous catalysis, surface science of catalytic and polymeric materials, laser-based imaging of chemical species and reactions, environmental transport and management of hazardous waste, process design, control, and manufacturing based on sustainability principles, biocatalysis in multiphase systems, bioremediation for waste treatment, tissue engineering, and pharmacokinetics.

Materials Science and Engineering

Materials problems constitute an important area of research and development in the complex technology of our industrial society. The use of advanced materials, such as thermoplastic and thermoset polymers, intermetallic alloys, reinforced plastic or metal composites, ceramics and electronic materials, in the manufacturing of durable goods and devices has presented challenges to the profession of materials science and engineering. Materials engineers must understand the behavior of advanced materials, their chemical, mechanical, optical, thermal, and electrical properties, and the atomic or molecular structure that determines these properties. They can then

apply their knowledge to the synthesis and processing of materials into useful products by controlling and improving their properties.

Areas of specialized research and support for graduate students include processing and rheology of polymers, thermodynamics and transport properties of polymer solutions and melts, computer simulation of polymeric and microporous materials, deformation and fracture of materials at elevated temperatures, effects of processing on mechanical properties of intermetallic alloys, influences of microstructure on fatigue, fracture toughness, stress cracking and corrosion in metals, nondestructive mechanical testing of composites, surface science of catalytic and polymeric materials, laser-based imaging of chemical species and reactions, electronic materials and sensors for automotive applications.

Polymer Engineering (Graduate Certificate Program)

This program provides specialized formal education for working engineers and scientists. Those enrolled in the program will learn the fundamentals of polymer science and engineering, extend their knowledge of current polymer research topics, and maintain technical competitiveness by broadening their polymer expertise.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants must have a Bachelor of Science degree in engineering, chemistry, or physics.

CERTIFICATE REQUIREMENTS

Students must complete twelve credits, including six credits in required courses: CHE 5350 and 5360; and six credits in electives. The minimum grade point average must be 3.0. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. For additional information and advice about electives, contact Dr. Z. Cao (e-mail address: zcao@che.eng.wayne.edu); telephone: 313-577-3121.

Chemical Engineering (M.S. Program)

The Master of Science program is open to students with a bachelor's degree in engineering, and other mathematics-based sciences. The program is designed to accommodate those students employed in local industries, as well as full-time students, by offering a majority of its courses in the evening.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Regular admission requires a 3.0 grade point average or the equivalent as determined by the Department Graduate Officer.

This Master of Science degree is offered under the following options:

Plan A: Thirty-two credits including an eight credit thesis.

Plan C: Thirty-two credits of course work.

DEGREE REQUIREMENTS

Both options require the following core courses: CHE 7100, 7200, 7300, and 7400. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Chemical Engineering (Combined B.S. / M.S. for Students with a B.S. in Chemistry)

Admission: This program is designed for individuals who have earned a baccalaureate in chemistry from an accredited United States institution with a minimum grade point average of 3.0. Students are first admitted into the undergraduate program and are then eligible to earn both the B.S. in Chemical Engineering and, once admitted to the Graduate School, the M.S. degree. Evaluation of prerequisite requirements and applicable transfer credit will be determined by the Departmental advisor.

DEGREE REQUIREMENTS

A combined total of sixty-six credits is required: a minimum of thirty-four credits for the second baccalaureate and thirty-two credits for the master's degree. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

For additional information regarding specific course requirements, contact the Departmental Advisor: 313-577-3716.

Materials Science and Engineering (M.S. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

The Master of Science in Materials Science and Engineering program is open to students with a bachelor's degree in engineering or the physical sciences. Admission requires a 3.0 grade point average, or the equivalent as determined by the Department Graduate Officer. Applicants whose baccalaureate degrees are not in materials or metallurgical engineering, or whose undergraduate preparation is evaluated as insufficient, may be required to elect additional courses prior to admission.

DEGREE REQUIREMENTS

The master's degree is offered by this department under the following options:

Plan A: thirty-two credits in course work, including an eight credit thesis.

Plan C: thirty-two credits in course work.

Requirements for both options include at least twenty-six credits in materials science and engineering courses, including the core courses: MSE 5650, MSE 7300, MSE 7400, and PHY 6450. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Chemical Engineering (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Regular admission requires a 3.5 grade point average in a Master of Science program, or a Bachelor of Science program from an accredited U.S. institution. Evaluation of admission prerequisites will be determined by the Department Graduate Officer.

DEGREE REQUIREMENTS

Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate, including thirty credits of dissertation direction. The thirty credit dissertation registration requirement is fulfilled

by registering for the courses CHE 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Credit distribution must also include at least thirty credits in graduate courses numbered 7000 and above, including the core courses: CHE 7100, 7200, 7300 and 7400. The program requires a qualifying examination (written and oral, taken after the equivalent of one year of course work), an approved dissertation outline and prospectus, and a final oral examination after completion of the doctoral dissertation. Students should consult Doctor of Philosophy Degrees (Ph.D.), p. 38 for Graduate School regulations governing doctoral study.

Materials Science and Engineering (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Regular admission requires a 3.5 grade point average in the Master of Science degree or in the Bachelor of Science degree, from an accredited U.S. institution, and the written approval of the student's advisor (selected from the departmental faculty). Evaluation of admission credits is determined by the Department Graduate Officer.

DEGREE REQUIREMENTS

A minimum of ninety credits beyond the Bachelor of Science degree is required in the Doctor of Philosophy program, including thirty credits in dissertation direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses MSE 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Credit distribution must also include at least thirty credits in graduate courses numbered 7000 and above, including the core courses: MSE 5650, MSE 7100, MSE 7300, MSE 7400, and PHY 6450. Also required are: a qualifying examination, taken after the equivalent of one academic year of course work; an approved dissertation outline and prospectus; and a final oral examination, taken after the completion of the Ph.D. dissertation. Students should consult Doctor of Philosophy Degrees (Ph.D.), p. 38 for Graduate School regulations governing doctoral study.

Chemical Engineering Courses (CHE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5050 Statistics and Design of Experiments. Cr. 3

Prereq: BE 2100, BE 2550. Application of modern statistical experimental design methods to improve effectiveness and success in experimental projects, in chemical industry manufacturing, and research and design. (W)

5100 (BME 5010) Quantitative Physiology. (ECE 5100) (IE 5100) (ME 5100) Cr. 4

Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models where feasible. (F,W)

5110 (EVE 5130) Fundamental Fuel Cell Systems. (AET 5110) (ME 5110) Cr. 4

Prereq: graduate standing in engineering. Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. (F)

5120 (EVE 5120) Fundamentals of Battery Systems for Electric and Hybrid Vehicles. (ME 5215) Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing. Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. (W)

5350 Polymer Science. (MSE 5350) Cr. 3

Prereq. or coreq: MAT 2150. Fundamental relationships between chemical structure and physical properties of high polymers. Basic structures, states and transitions of polymers. Polymerization reactions and processes. Molecular weight, viscous flow and mechanical properties of polymers. Material Fee As Indicated In The Schedule of Classes (F)

5360 Polymer Processing. (MSE 5360) Cr. 3

Prereq: CHE 3200 or equivalent undergraduate fluid mechanics. A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, coating and injection molding. Material Fee As Indicated In The Schedule of Classes (W)

5450 Nanocarrier-based Drug Delivery Systems. Cr. 3

Open only to students with Junior, Senior, or graduate standing. Fundamental concepts in nanotechnology as it relates to drug delivery, and some of the applications and breakthroughs in this area as it applies to medicine. (F)

5600 (MSE 5600) Composite Materials. Cr. 3

Coreq: CHE 5350. Introductory course emphasizing a physical understanding of composites: fiber and polymer matrix properties, interfacial adhesion, manufacturing, elastic and strength properties of unidirectional and random laminae. Other topics include various performance properties and plastic design applications. (F)

5620 (EVE 5620) Energy Economics and Policy. Cr. 4

Prereq: Open only to Engineering graduate students and undergraduates with senior standing. Demand for energy, energy supply, energy markets, and public policies affecting energy markets. Coal, oil, natural gas, electricity, and nuclear power sectors and examines energy tax, price regulation, deregulation, energy efficiency and emission control policies. (W)

5700 Process and Materials Safety for Alternative Energy Technology. (AET 5700) Cr. 4

Prereq: senior standing in science or engineering discipline. Fundamentals concerning fires and explosions, control strategies to prevent accidents, fault tree analysis to optimize control strategies, and risk analysis. Regulations and standards relevant to the design, manufacture, and operation of fuel cell and reforming processes. (W)

5811 Research Preparation II. Cr. 1

Prereq: CHE 5809, and written consent of advisor (or CHE 3200, CHE 3300). Preparation for Senior Research Project, CHE 6810. (T)

5995 Special Topics in Chemical Engineering I. Cr. 1-4 (Max. 8)

Prereq: senior standing. Maximum of eight credits in Special Topics in any one degree program. A consideration of special subject matter in chemical engineering. Topics to be announced in Schedule of Classes. (T)

5996 Chemical Engineering Research. Cr. 1-6

Prereq: written consent of advisor. Open only to students enrolled in professional engineering programs. Research project. (T)

6100 (STE 6100) Introduction to Sustainable Engineering. Cr. 3

Economic, environmental, social, and technological perspectives relevant to the design, operation and management of engineering activities. Multiple perspectives addressed from a system sustainability view point. (Y)

6450 Biochemical Engineering. Cr. 3

Prereq: CHE 3400, 3800. An introductory study of the principles of chemical engineering, biochemistry and biology which are essential for the design of industrial systems involving biological transformations. (I)

6570 Safety in the Chemical Process Industry. Cr. 3

Prereq: CHE 3400, 3800. Fundamental and practical experience necessary for safe operation of a chemical process plant. Actual industrial case studies conducted under industry supervision. (W)

6610 Risk Assessment. Cr. 3

Prereq: MAT 2030, CHM 1240, BE 2100. Introduction to risk assessment in environmental hazard management with emphasis on the chemical industry, including hazard identification, exposure analysis and risk characterization. (F)

6810 (WI) Chemical Engineering Research Project. Cr. 4

Prereq: CHE 4200, CHE 5710, and written consent of advisor. Application of engineering and science background to the completion of a senior research project. Methods of research and analysis and interpretation of data. Preparation of a written research paper; oral presentation of research results. (W)

7100 Advanced Engineering Mathematics. (MSE 7100) Cr. 3

Prereq: MAT 2150 or equiv. Presentation, evaluation and use of mathematical methods within the framework of engineering problems; including ordinary and partial differential equations, transforms and vector operations. (F)

7110 (EVE 7110) Materials Science Aspects of Lithium Ion Batteries. Cr. 4

Prereq: B.S. degree in an engineering or math-based science program. Fundamental understanding of the role of advances in materials science and engineering to the development of these high energy

batteries. Details on the novel synthesis of these new materials together with their physical and electrochemical characterization. (S)

7200 Advanced Transport Phenomena. Cr. 4

Prereq: CHE 7100 and 5200, or equiv. Basic properties of heat, mass and momentum transfer systems; fundamental equations, transforms and vector operations; includes independent study project. (W)

7300 Advanced Thermodynamics. (MSE 7300) Cr. 3

Prereq: CHE 3300 or CHM 5420. Advanced presentation of the principles of thermodynamics; application to open systems, phase diagrams and chemical equilibria. (F)

7330 Polymer Rheology. (MSE 7330) Cr. 3

Prereq: CHE 5200 or 7200 or graduate fluid mechanics background. Flow properties of polymer solutions; methods of measuring fundamental rheological parameters using viscometric devices; prediction of material properties from theoretical principles. Correlation between theoretical and experimental results. (B)

7350 Polymer Solutions. (MSE 7350) Cr. 3

Prereq: CHE 5350. Solubility of polymers, configuration of chain molecules, colligative properties of dilute polymer solutions, spectroscopy, optical activity, light and x-ray scattering of polymer solutions, frictional properties of dissolved polymers, solution properties of polyelectrolytes. (B)

7390 Tissue Engineering and Hybrid Systems. (BME 7390) Cr. 4

Prereq: BME 5370, and CHE 7100 or BME 5020. Seminar and project based approach to the design, development, analysis and application of organ and tissue replacement systems which incorporate processed materials and living cells. (B)

7400 Advanced Kinetics and Reactor Design. Cr. 4

Prereq: CHE 2800, 3400. Basic properties of reacting systems including the steady state approximation, the relationship of thermodynamics to kinetics, the treatment of coupled reaction problems and design of chemical reactors; includes independent study project. Material Fee As Indicated In The Schedule of Classes (W)

7410 (AET 7410) Alternative Fuels: Properties, Processing, and Characterization. Cr. 4

Prereq: written consent of advisor and AET Program Director. Exploration of the latest alternative fuels: their physical and chemical properties, production technologies, and standardization characterization tests. (F)

7415 (EVE 7410) Hydrogen Production and Storage for Vehicles. Cr. 4

Prereq: B.S. degree in an engineering or math-based science program. Focus on the engineering of hydrogen production technologies including reformation of hydrocarbons, electrolysis, photoelectrochemistry, and the thermal decomposition of water. Background in hydrogen storage technologies including high pressure compressed gas, liquid hydrogen, metal hydrides, and chemical hydrides. (W)

7990 Directed Study. Cr. 1-9

Prereq: written consent of advisor, chairperson and engineering graduate officer for master's students; written consent of advisor, chairperson and Dean of Graduate Studies for Ph.D. students. Library investigation of an approved project in chemical engineering. Independent study, conferences with supervisor and preparation of a comprehensive written and oral report. (T)

7995 Special Topics in Chemical Engineering II. Cr. 1-4

Prereq: CHE 3800, 3400. Maximum of six credits in Special Topics in any one degree program. A consideration of special subject matter in chemical engineering. Topics to be announced in Schedule of Classes. (F,W)

8510 Graduate Co-op Experience. Cr. 1-3

Offered for S and U grades only. Presentation of oral and written reports to peer group describing co-op experience. (T)

8996 Research. Cr. 1-9 (Max. 30)

Prereq: written consent of advisor. Library and laboratory investigation of an approved proposal for advanced research project. Conferences and periodic oral progress reports. Comprehensive report of entire project upon completion. (T)

8997 Chemical Engineering Graduate Seminar. Cr. .5

Prereq: CHE 7400 and 7200. Normally requires more than one semester; deferred grade accepted. Advanced concepts in chemical engineering; presentation of research results. Must attend and present evidence of attending 30 hours of seminar over two-year period, and present one seminar. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: CHE 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following CHE 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: CHE 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following CHE 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: CHE 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following CHE 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in CHE 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Materials Science and Engineering Courses (MSE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5180 (BME 5370) Introduction to Biomaterials. (ME 5180) Cr. 4
Prereq: BE 1300, BME 5010 or BMS 6550 or former BMS 5550. Introduction to study of both biological materials (bone, muscle, etc.) and materials for medical applications. Topics include tissue properties and effects of pathology, biocompatibility, and design considerations. (Y)

5350 (CHE 5350) Polymer Science. Cr. 3
Prereq. or coreq: MAT 2150. Fundamental relationships between chemical structure and physical properties of high polymers. Basic structures, states, and transitions of polymers. Polymerization reactions and processes. Molecular weight, viscous flow and mechanical properties of polymers. (F)

5360 (CHE 5360) Polymer Processing. Cr. 3
Prereq: CHE 3200 or equivalent undergraduate fluid mechanics. A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, coating and injection molding. Material Fee As Indicated In The Schedule of Classes (W)

5385 (BME 5380) Biocompatibility. Cr. 4
Prereq: BME 5010 or BMS 6550 or former BMS 5550. Wound healing and the tissue response to foreign materials. The organization activation, and mechanisms of the immune system. Bioactive materials and the molecular basis for surface recognition Y masking. Biocompatibility testing. (B)

5390 (BME 5390) Experimental Methods for Biomaterials. Cr. 2
Hands-on and demonstration exposure to laboratory techniques for the assessment of biological tissues and artificial biomaterials. Material Fee As Indicated In The Schedule of Classes (W)

5600 Composite Materials. (CHE 5600) Cr. 3
Coreq: MSE 5350. Introductory course emphasizing a physical understanding of composites: fiber and polymer matrix properties, interfacial adhesion, manufacturing, elastic and strength properties of unidirectional and random laminae. Other topics include various performance properties and plastic design applications. (F)

5650 Surface Science. Cr. 3
Prereq: BE 1300, CHM 5440. An introduction to the science and technology of surface phenomena, including surface structure, surface energy, surface diffusion, crystal growth and selected applications of technological importance. (I)

7100 (CHE 7100) Advanced Engineering Mathematics. Cr. 3
Prereq: MAT 2150 or equiv. Presentation, evaluation and use of mathematical methods within the framework of engineering problems, including ordinary and partial differential equations, transforms and vector operations. (F)

7180 (BME 7300) Advanced Topics in Biomaterials and Tissue Biomechanics. (ME 7180) Cr. 4

Prereq: BME 5210 or 5370. Seminar format: advanced topics presented to the class; lectures by the instructor and by the participants based on literature reviews. Topics determined by student interest. (B)

7300 (CHE 7300) Advanced Thermodynamics. Cr. 3
Prereq: CHE 3300 or CHM 5420. Advanced presentation of the principles of thermodynamics; application to open systems, phase diagrams and chemical equilibria. (F)

7350 (CHE 7350) Polymer Solutions. Cr. 3
Prereq: CHE 5350. Solubility of polymers, configuration of chain molecules, colligative properties of dilute polymer solutions, spectroscopy, optical activity, light and x-ray scattering of polymer solutions, frictional properties of dissolved polymers, solution properties of polyelectrolytes. (B)

7400 Mechanical Behavior of Materials. Cr. 3
Analysis of elastic and plastic deformation of single crystals and polycrystalline materials, emphasizing the relations between metallurgical microstructure and material properties. (I)

7990 Directed Study. Cr. 1-6
Prereq: written consent of advisor. Library investigation of an approved project in materials science and engineering. Independent study, conferences with supervisor and preparation of a comprehensive report. (T)

7995 Special Topics in Materials Science II. Cr. 1-4
Maximum of twelve credits in Special Topics may be elected in any one degree program. A consideration of special subject matter in materials science. Topics to be announced in Schedule of Classes. (I)

8996 Research. Cr. 1-10
Prereq: consent of advisor. Library and laboratory investigation of an approved proposal for advanced research project. Conferences and periodic oral progress reports. Comprehensive report of entire project upon completion. (T)

8997 Seminar. Cr. .5
Prereq: consent of advisor. (F,W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)
Prereq: consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 10)
Prereq: consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5
Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5
Prereq: MSE 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following MSE 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5
Prereq: MSE 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following MSE 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: MSE 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following MSE 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in MSE 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Civil and Environmental Engineering

Office: 2100 E. Engineering Building; 313-577-3789

Chairperson: Joseph Hummer

Website: <http://www.cee.eng.wayne.edu>

Professors

T.K. Datta, J.E. Hummer, C.J. Miller, M.A. Usmen

Associate Professors

C.D. Eamon, S. McElmurry, H.C. Wu

Assistant Professors

Y. Zhang

Lecturers

E.E. Kazan

Adjunct Faculty

M. Baskaran, J. Gruber, J. Selegean

Graduate Degrees

MASTER OF SCIENCE in Civil Engineering

DOCTOR OF PHILOSOPHY with a major in Civil Engineering

The urban crisis in America has brought into sharp focus the profession of civil engineering and the responsibilities of its practitioners. The civil engineer is a leader in such diverse areas of concern as the design of structural systems; water resources planning; the treatment and ultimate disposal of noxious solid and liquid wastes; design of building systems which will provide adequate housing for urban dwellers, commerce and industry; the development of adequate transportation systems; construction methods and management; and the implementation and management of public works infrastructure projects designed to improve the urban environment. The responsibilities of the civil engineer directly involve the health, safety and welfare of the public.

The Department of Civil and Environmental Engineering offers graduate degree programs in which students may specialize in the following areas: structures, geotechnical engineering (M.S. only), environmental engineering, transportation, and construction management.

Civil Engineering (M.S. Program)

The civil engineering graduate program at Wayne State University is designed to accommodate the needs of both full-time on-campus students and part-time students concurrently employed by local industry or government. To this end, a majority of graduate classes are held in the evening. Full-time students have the opportunity to participate in research and experimental work with the faculty, while pursuing their graduate courses.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, all applicants must satisfy the following:

1. The student must have an undergraduate engineering degree from an institution accredited by the Accrediting Board for Engineering and Technology (ABET) or from a comparable foreign institution. In the event that the degree is in some field other than civil engineering,

the student may be required to complete a set of prerequisite undergraduate courses before graduate degree credit may be accrued

2. The student must have an overall grade point average (g.p.a.) of 3.0 for regular admission. Qualified or probationary admission may be granted to students with a lower g.p.a. Conditions of such admissions are specifically mandated and applicants should contact the Department for details.

DEGREE REQUIREMENTS

The Master of Science is offered by this department under the following options:

Plan A: Thirty-two credits including an eight credit thesis.

Plan C: Thirty-two credits of course work.

For either plan, credits must be distributed as follows: at least twenty credits must be taken in the major (CE courses). There must be two courses numbered 7000-8999, and a cluster of courses which will constitute a core, to be selected from one of the following areas: Environmental Engineering, Geotechnical Engineering, Structures, Transportation, and Construction Management.

For specific departmental requirements, students should consult the current issue of the *Civil and Environmental Engineering Graduate Student Handbook*.

Students must maintain a grade of 'B' or better in all core courses. The credit distribution requirements do not include thesis credit for Plan A candidates.

Within the first eight to twelve credits in graduate work, the student should file an advisor-approved Plan of Work. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Civil Engineering (Ph.D. Program)

The Department offers doctoral programs in all the major areas listed as core specializations under the Master of Science degree (see above).

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. For admission to the Ph.D. program, the student's overall grade point average must be 3.2 or better, and 3.4 in the last two years as an undergraduate student. Students who do not satisfy these minimum standards will not be considered for admission to the program until they have completed an M.S. degree and have earned a grade point average in courses taken for graduate credit which is not less than 3.5.

DEGREE REQUIREMENTS

Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate, including thirty credits of dissertation direction, and sixty credits of course work and directed study. The thirty credit dissertation registration requirement is fulfilled by registering for the courses CE 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. All doctoral students are required to submit a Plan of Work indicating their course work (with major/minor designation), and developed in consultation with an advisor. Additionally, students should consult Doctor of Philosophy Degrees (Ph.D.), p. 38 for Graduate School regulations governing doctoral study.

For specific departmental requirements, students should consult the current issue of the *Civil and Environmental Engineering Graduate Student Handbook*.

Civil Engineering Courses (CE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5220 Environmental Chemistry. Cr. 3

Prereq: CHM 1220/1225, CHM 1240, PHY 2140/2175, and MAT 2020; or CE 4210; or senior standing as a major in a science or engineering discipline. Fundamentals of aqueous chemistry for environmental engineers and scientists. Basic chemistry, equilibria, kinetics and thermodynamics; includes acid/base reactions, precipitation/dissolution, oxidation/reduction reactions and partitioning. Material Fee As Indicated In The Schedule of Classes (B)

5230 Water Supply and Wastewater Engineering. Cr. 4

Prereq: CE 4210. Analysis and design of water supply and wastewater treatment systems; water distribution systems; treatment of municipal water supplies, including sedimentation, softening, filtration and disinfection; design of sanitary and storm sewers; primary, secondary and tertiary treatment plant design; sludge handling. Material Fee As Indicated In The Schedule of Classes (Y)

5350 Introduction to Structural Dynamics. Cr. 4

Prereq: ME 3400, CE 4400. Dynamic properties of structures. Modeling of dynamic loads. Structural response to dynamic loading. Structural design requirements for dynamic loads. Fundamental techniques of dynamic system analysis. (W)

5370 Finite Element Analysis Fundamentals. Cr. 4

Prereq: CE 4400 or ME 5600. Matrix structural analysis, discretization of continuous structural systems, stress analysis. Commercial finite element software preprocessing for developing finite element models; post-processing for evaluating analysis results. (F)

5420 Transportation Energy Choices. (AET 5420) (ME 5870) Cr. 4

Prereq: senior standing in science or engineering discipline. Technological innovations and barriers impacting energy production, storage, and conversion in transportation applications. Fuel life cycle case studies (bioethanol, syncrude, etc.). (W)

5510 Geotechnical Engineering I. Cr. 4

Prereq: CE 4510. Site investigation, site improvement, bearing capacity and settlement of shallow foundations, axial capacity and lateral deflection of deep foundations, design of conventional earth retaining walls, and basics of slope stability analyses. (F)

5520 Geotechnical Engineering II. Cr. 4

Prereq: CE 4510. Lateral earth pressure theories, design of conventional earth-retaining walls and of reinforced earth walls, anchored sheet-pile walls and cofferdams, fundamentals of soft-ground tunneling, two- and three-dimensional slope stability analyses, and static design of earth dams. (B)

5610 Highway Design. Cr. 4

Prereq: CE 4640. Application of standards, theory and practice in design of streets and highways. Design of streets and highways

including cross section elements, shoulder and roadside features. Pavement design and rehabilitation work. (Y)

5810 Legal Aspects of Engineering and Construction. Cr. 3

Open only to seniors and graduate students. Business of contracting, construction, liabilities of owner, architect, engineer and contractor. Rights in land, boundaries and foundations. Case studies. Material Fee As Indicated In The Schedule of Classes (F)

5830 Business of Engineering. Cr. 3

Prereq: CE 4850. Defining the engineering company, creating the organization, support services, business development, project management, scheduling, budgeting and profitability, operations, financial management and risk management. (T)

5995 Special Topics in Civil Engineering I. Cr. 0-4

Prereq: written consent of chairperson. Topics to be announced in Schedule of Classes. (I)

6010 Introduction to Construction Management. Cr. 3

Prereq: CE 4850. An introduction to the organization and management of design and construction firms. Organizational and managerial theories. Problems of organization management, operation and control of engineering systems, case studies. Material Fee As Indicated In The Schedule of Classes (W)

6050 Construction Cost Estimating. Cr. 3

Prereq: CE 4850. Estimating construction costs of engineering projects including materials, man-hours, equipment and overhead. Emphasis on construction equipment, including productivity and planning. Bidding and bid documents. (B)

6060 Construction Techniques and Methods. Cr. 3

Prereq: CE 4450. Construction techniques and methods for excavation, foundations, concrete, wood, steel, masonry, heavy construction, wastewater treatment plants, highways and roads, high rise structures, bridges, and tunnelling projects. (B)

6130 Open Channel Hydraulics. Cr. 4

Prereq: CE 3250 or equiv. Theoretical development of equations governing flow in open channels. Application to real-world engineering problems involving water surface profiles, flood studies, and river. (W)

6150 Hydrologic Analysis and Design. Cr. 4

Prereq: CE 6130. Principles of surface water hydrology and their application for evaluation of floods and the design of surface runoff control system; watershed characteristics; design storms and SCS methods; unit hydrographs; hydrologic models; application of computer methods. (B)

6190 Groundwater. Cr. 4

Prereq: CE 3250. Historical background, aquifers and aquitards, saturated and unsaturated flow, sources of ground water contamination, artificial recharge of ground water, development of ground water basins and efficient use of ground water resources. (Y)

6270 Environmental Management and Sustainable Development. (STE 6270) Cr. 4

Prereq: CE 4210. Engineering design and development within sustainability constraints; theoretical, regulatory, and practical implications; Detroit and global applications. (Y)

6330 Advanced Structural Analysis. Cr. 4

Prereq: CE 4410. Effect of axial loads on stiffness of flexural members. Buckling of trusses and rigid frames. Matrix method of analysis. Complex structures. Computer applications. (F)

6340 Bridge Design and Evaluation. Cr. 4

Prereq: CE 4420. Concepts, procedures, methods of design and condition evaluation for modern highway bridges, according to current specifications. Entire system is covered, including superstructure, substructure, and their connections. (B)

6370 Advanced Reinforced Concrete Design. Cr. 4

Prereq: CE 4420. Theory and design of two-way slabs, footings, retaining walls, shear walls, and composite beams using ultimate strength design. Precast and prestressed concrete fundamentals. (W)

6410 Advanced Steel Design. Cr. 4

Prereq: CE 4420. Advanced topics of structural steel design: thin walled rolled and built-up members, beam columns, lateral torsional buckling, steel fatigue design, connection details. Steel design project. (W)

6580 Geoenvironmental Engineering I. Cr. 4

Prereq: CE 4510. Properties and test methods for natural and synthetic materials used in landfills; analysis of chemical interactions, flow mechanisms, stability and settlement for the design of landfill components. (Y)

6660 Pavement Management Systems: Principles and Practices. Cr. 4

Prereq: CE 4640. Principles and practices of pavement management at the network and project level: serviceability, pavement design models, economic analysis, and priority programming. (Y)

6880 Building Information Modeling (BIM). Cr. 3

Prereq: CE 3010 or equiv. Lectures, hands-on demonstrations and lab exercises to familiarize students with concepts and tools in Revit Architecture 2010 software; how software integrates 3D and 2D modeling. (B)

6910 (PSC 6910) Pharmaceutical Waste: Environmental Impact and Management. Cr. 2-3

Prereq: graduate student in engineering; or advanced standing in Pharmacy program or in College of Pharmacy and Health Sciences. Course designed for advanced professional and graduate students with sufficient chemistry and/or biological sciences background who are interested in the environmental impact, management, and regulation of waste pharmaceuticals as emerging issues. (S)

6991 Internship in Industry. Cr. 1-4

Offered for S and U grades only. Prereq: written consent of department and supervisor prior to internship assignment. Written report describing internship experience. (T)

7020 Construction Safety. Cr. 4

Prereq: CE 6010. Safety problems in the construction industry and their technical and managerial solutions, construction accident and failure analysis and control. Safety program design and implementation with TQM integration. (Y)

7070 Risk and Reliability in Civil Engineering. Cr. 4

Prereq: BE 2100, CE 4995, or equiv. Uncertainty in civil engineering practice (e.g., loads, traffic, water demand, construction quality). Reliability theory based on probabilistic and statistical methods. Reliability-based engineering design and decision making. (B)

7080 Civil Engineering Research Methods. Cr. 4

Methods of data collecting and statistical analysis in context of civil engineering. Applications of advanced statistical analysis techniques, theory, discussion of methodological limitations. (B)

7190 Groundwater Modeling. Cr. 4

Prereq: CE 6190. Analytical and numerical models of groundwater hydraulics and contaminant transport. Application of theoretical material developed in C E 6190. Case studies of model applications to real field problems. (Y)

7200 Environmental Engineering Operations and Processes. Cr. 4

Prereq: CE 4210. Theoretical aspects and applications of various operations and processes of importance in pollution and control including sedimentation, flotation, coagulation, softening and filtration through granular media. Material Fee As Indicated In The Schedule of Classes (B)

7220 Industrial Waste Treatment. Cr. 4

Prereq: CE 4200. A study of the sources of specific industrial waste waters and their treatability by physical, chemical and biological processes, including the industries' obligation in the prevention of stream pollution. Problems and solutions involved in combined treatment of industrial and domestic waste waters. Material Fee As Indicated In The Schedule of Classes (B)

7260 Surface Water-Quality Modeling and Management. Cr. 4

Prereq: CE 4210. Principles and mechanisms governing the rate and transport of conventional and toxic pollutants in natural water; mathematical modeling of water quality in surface water systems; model applications for managing waste loads in lakes and rivers. (I)

7300 Advanced Structural Mechanics. Cr. 4

Prereq: CE 6330. Theory of bending and torsion of bars, beams on elastic foundations. Introduction to theory of thin plates. Linear elastic fracture mechanics, application to brittle solids. (F)

7460 Advanced Composite Materials for Civil Infrastructure. Cr. 4

Prereq: CE 4450. Infrastructure problems. Advanced fiber reinforced plastics, including applications in primary/secondary and marine structures, and in rehabilitation. High performance fiber reinforced concrete. Controlled composite properties via composite design. Review of composite analysis and failure criteria based on micromechanics and laminate theory. (B)

7500 Engineering Properties of Soils. Cr. 4

Prereq: CE 5510, 5520. Overview of experimental methods in geotechnical engineering, instrumentation and data acquisition methods, statistical analysis of test data, tests and theories for settlement predictions, tests and theories for hydraulic conductivity determination, tests and theories for static and cyclic stress-strain-volume change behavior of soils. (B)

7530 Advanced Soil Mechanics. Cr. 4

Prereq: CE 4510. Stress-strain and volume-change behavior of sands and clays for both drained and undrained loading conditions, to gain insight in mechanical behavior of foundation soils. Material Fee As Indicated In The Schedule of Classes (B)

7550 Geosynthetics Engineering. Cr. 4

Prereq: CE 4510. Fundamental principles for testing, design, and construction of geosynthetics in civil engineering applications. (B)

7580 Environmental Remediation. Cr. 4

Prereq: C E 4510. Site assessment; soil and groundwater investigation for remediation; application of remediation technologies; legislation related to remediation. (Y)

7600 Highway Safety and Risk Management. Cr. 4

Prereq: CE 4640. Safety aspects of streets and highways; planning, design, implementation and evaluation of highway safety improvement projects and programs. Highway risk analysis and risk management systems. Material Fee As Indicated In The Schedule of Classes (B)

7620 Traffic Engineering Control and Operation. Cr. 4

Prereq: CE 4640. Traffic flow theories, macroscopic and microscopic models of traffic control, statistical analysis; design and application of intelligent transportation systems on traffic flow characteristics; evaluation. Material Fee As Indicated In The Schedule of Classes (Y)

7630 Urban Transportation Planning. Cr. 4

Prereq: CE 4600. Planning and analysis of urban transportation, travel demand models, land use planning and public transportation; household and origin-destination survey techniques; and demand elasticities multi-criteria evaluation. Material Fee As Indicated In The Schedule of Classes (F)

7640 Economic Analysis in Transportation Systems. (IE 7640) Cr. 4

Prereq: CE 4850 or IE 5870. Application of engineering economy and price theory in optimization of transportation systems; analysis of congestion costs, externalities, primary and secondary costs and benefits; evaluation of alternatives and completed projects and programs. Material Fee As Indicated In The Schedule of Classes (Y)

7670 Advanced Traffic Signal Systems. Cr. 4

Prereq: CE 7620. Analysis and design of traffic signal systems. Hardware, communication and detection systems associated with micro-computer-based signal systems. Coordinated signal systems. (B)

7830 Construction Planning and Scheduling. Cr. 3

Prereq: CE 6010. Planning and scheduling of construction projects, project networks and critical path methods, resource leveling, use of Primavera software. (Y)

7840 Facilities Management. Cr. 3

Prereq: CE 6010. Buildings and grounds operations and maintenance, planning design and construction, facilities economics and financing, real estate administration, environmental health and safety, health issues. (W)

7850 Construction Contract Administration. Cr. 3

Prereq: CE 6010. Project documentation; project setup and contract directory development; adding new contracts; purchase orders; recording materials deliveries; producing daily reports; preparing minutes of meetings; log submittals and handling correspondence; tracking contracts and costs, setup and preparing progress payment requisitions, managing claims and change orders. (B)

7860 Construction Accounting and Financial Management. Cr. 3

Prereq: CE 6010. Construction financial management, construction accounting systems, analysis of financial statements, monitoring and controlling construction costs, managing overhead costs, markup, profit center analysis, cash flows for construction projects, financing, making financial decisions. (B)

7890 Integrated Construction Project Management. Cr. 3

Prereq: CE 7830. Construction project management framework, construction project integration, project scope management, time management, cost management, quality management, procurement management, risk management, communication management. (B)

7990 Directed Study. Cr. 1-4 (Max. 6)

Prereq: written consent of advisor, chairperson and engineering graduate officer for master's students; written consent of advisor, chairperson and Dean of Graduate Studies for Ph.D. students. (T)

7995 Special Topics in Civil Engineering II. Cr. 1-4

Prereq: written consent of instructor. A consideration of special subject matter in civil engineering. Topics to be announced in Schedule of Classes. (I)

7996 Research. Cr. 1-4 (Max. 6)

Prereq: written consent of advisor and chairperson. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: CE 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following CE 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: CE 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following CE 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: CE 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following CE 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in CE 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Computer Science

Office: 5057 Woodward, Suite 3010; 313-577-2477

Chairperson: Loren Schwiebert

E-mail: loren@wayne.edu

Website: <http://engineering.wayne.edu/cs>

Professors

Xuewen Chen, Sorin Draghici, Farshad Fotouhi, Narendra Goel, Jing Hua, Vaclav Rajlich, Robert G. Reynolds, Weisong Shi

Associate Professors

Monica Brockmeyer, Ming Dong, Nathan Fisher, Daniel Grosu, Shiyong Lu, Chandan Reddy, Loren Schwiebert, Lihao Xu, Hongwei Zhang, Dongxiao Zhu

Assistant Professors

Marwan Abi-Antoun, Alexander Kotov, Zaki Malik, Fengwei Zhang, Zichun Zhong

Lecturers

Khayyam Hashmi, Thaer Jayyousi, Thair Judch, Yuehua Wang

Graduate Degrees

MASTER OF SCIENCE with a major in Computer Science

DOCTOR OF PHILOSOPHY with a major in Computer Science; a concentration in Bioinformatics and Computational Biology is available

The mission of the Department of Computer Science at Wayne State University is to provide excellence in teaching, research, public service, and leadership in the computer science profession and the community. The Department provides a high-quality, innovative, baccalaureate and graduate education that emphasizes the fundamentals of computer science as well as the most recent technological innovations, preparing students for employment and advanced studies. Students are encouraged to become involved in research programs in order to enhance their education and their employment opportunities. Through the use of our state-of-the-art laboratory facilities, students can conduct basic and applied research of high quality, influence, visibility, and potential community impact. The Department continues to develop cooperative research relationships within and outside the computer science discipline, as well as with industry, government and alumni, and local community organizations. This worldwide interaction with professional organizations provides our students with the highest standards, goals, and professional practices.

Computer Science (M.S. Program)

The Department of Computer Science awards the degree of Master of Science with a major in computer science under two plans (see below). The two plans are distinguished on the basis of the breadth and depth of the material covered. The Master of Science degree under the Plan A option is granted to students who pursue a more concentrated set of topics culminating in a master's thesis. The Master of Science degree under the Plan C option offers students experience in many areas of computer science.

The great variety of subjects that are part of computer science, together with the immense diversity of their applications, makes it imperative that students in the master's program maintain close contact with their advisors in order to achieve a coherent plan of study directed toward a specific goal. In particular, elections of courses

should be made after consultation with and the approval of the student's advisor.

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants are expected to have attained a level of scholarship in the baccalaureate program equal to a grade point average of 3.0 or better, including adequate preparation in computer science and supporting courses in mathematics. Normally, the entering student will be expected to have fulfilled the equivalent of the requirements for the Bachelor of Science degree at Wayne State University and to have satisfied any deficiencies by successfully completing necessary prerequisite course work, before becoming an applicant for an advanced degree. The Graduate Record Examination (GRE) is required for admission to the Master of Science program.

Applicants must submit official transcripts from each college or university attended, three letters of recommendation, Graduate Record Examination scores, a statement of approximately 300 words describing the applicant's academic and professional goals, and the Computer Science Graduate Admission Evaluation Form. In order to apply, please use the online application system, which can be found at <http://gradadmissions.wayne.edu/apply.php>

Students planning to pursue some of the more theoretical courses may find it necessary to have additional preparation in mathematics and/or computer science. The student should make a careful examination of the prerequisites for advanced courses in his/her areas of special interest before seeking admission. Prerequisite course work which is required as a condition of admission must be completed prior to electing graduate courses.

Upon admission, each student is assigned an advisor for guidance and direction in meeting degree requirements and academic goals. As the student's interests in computer science become more focused, a change in advisor may be necessary; forms for this purpose are available from the Department office. Such a change must be done prior to submitting the Plan of Work.

Candidacy: By the time twelve credits have been earned, a Plan of Work must be developed with the student's advisor and submitted to the Chairperson of the Computer Science Graduate Committee. In the Plan of Work the student indicates his/her choice of master's program, either Plan A or C (see below). Upon approval of the Plan of Work by the Graduate Committee, the student is considered a degree candidate. The student is not permitted to take more than twelve credits in the master's program unless candidacy has been established. If the student has not graduated after two years as a candidate, the Plan of Work will be reviewed for possible adjustment.

Scholarship/Academic Probation: Students must maintain a minimum overall 3.0 grade point average. Failure to do so for one semester places the student on academic probation. Failure to do so for two semesters will result in the student's dismissal from the graduate program. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166. The above requirements are those in force as of the publication date of this bulletin; however, students should keep in mind that the degree requirements for any particular student are those in force at the time of his/her admission.

Areas of Research

SYSTEMS & NETWORKING: Networking & Distributed Systems, Computer Security, Parallel & Cloud Computing, Real-Time Systems, Service Computing.

DATA SCIENCE & ANALYTICS: Databases, Machine Learning, Computer Graphics & Visualization

ARTIFICIAL INTELLIGENCE

PATTERN RECOGNITION & COMPUTER VISION

SOFTWARE ENGINEERING

BIOINFORMATICS & HEALTH INFORMATICS

DEGREE REQUIREMENTS

The Master of Science degree is offered under either Plan A or Plan C. Plan A requires thirty-three credits and includes eight credits for the completion of a thesis. A thesis is a technical paper describing the original creative work of the author. The master's thesis work is directed by the student's advisor together with a committee of at least two additional faculty members. All committee members must read and approve the thesis, after which time it must be presented at a public session prior to final acceptance. Students should see Master's Degrees, p. 37 and consult the Graduate School for specifics on the format and presentation of the thesis. Plan C requires thirty-three credits in course work. There is no thesis required for the Plan C Master's degree.

Course Requirements and Restrictions for Plan A:

1. CSC 6500 and CSC 6580.
2. CSC 8990 – Graduate Seminar: Cr. 1.
3. At least one course must be taken at or above the 7000 level. (CSC 7990 does not satisfy the 7000 level requirement).
4. No more than three credits of CSC 7990, Directed Study, can be used to satisfy the degree requirements.
5. A student must have prior written consent of their advisor and the Graduate Committee Chair before registering for any course outside of the department.
6. At least twenty-five credits must be taken in residence.
7. CSC 8999 – Master's Thesis Research and Direction: Cr. 8.

Course Requirements and Restrictions for Plan C:

1. CSC 6500 and CSC 6580.
2. CSC 8990 – Graduate Seminar: Cr. 1.
3. At least one course must be taken at or above the 7000 level. (CSC 7990 does not satisfy the 7000 level requirement).
4. CSC 7990 – Directed Study, cannot be used to satisfy the Master of Science degree requirement.
5. All credits must be taken from CSC designated courses.
6. At least twenty-five credits must be taken in residence.

All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Computer Science (Ph.D. Program)

The Doctor of Philosophy degree is conferred upon individuals who have demonstrated the ability to make original contributions to the knowledge in the field of computer science.

The Ph.D. program develops experts and professionals who will continue in academic work, industry, or government. It encourages the attainment of excellence in research and scholarship necessary to catalyze the advancement of computer science. The fulfillment of the doctoral degree requirements is monitored primarily through the proficiency, qualifying, and prospectus examinations, and the presentation of the dissertation.

The doctoral program emphasizes research and the Department encourages prospective Ph.D. candidates to involve themselves in faculty projects at their earliest possible opportunity.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate

School, p. 17. The successful applicant should possess a bachelor's or master's degree with a major in computer science or related field. In addition, applicants are expected to have attained a level of scholarship equal to a 3.3 grade point average or better in their most recent degree, along with adequate preparation in the computer science field and supporting courses in mathematics. Normally, the admitted student will be expected to have fulfilled the equivalent requirements for the Bachelor of Science in Computer Science, and to have satisfied any deficiencies in course content by successfully completing the pre-requisite course work prior to becoming an applicant for the advanced degree.

Applicants must submit to the Department official transcripts from each college or university that they have attended, three letters of recommendation, Graduate Record Examination scores, a statement of approximately 300 words describing the applicant's academic and professional goals, and the Computer Science Graduate Evaluation Form. To apply, please use the online application system, which can be found at <http://gradadmissions.wayne.edu/apply.php>

DEGREE REQUIREMENTS

The Doctor of Philosophy degree requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses CSC 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166.

The computer science doctoral program is designed to be flexible, in order to meet the individual student's interests and to reflect the dynamic nature of the field. It is comprised of seven major stages:

1. Advisor/Program Selection: The first stage is devoted to the selection of a faculty advisor, taking course work, and the production of a Plan of Work in consultation with the student's faculty advisor. Students are encouraged to investigate the different areas of research available by talking with various graduate faculty members and attending research seminars held by the Department. Advisor selection must be done within the first semester of admission. The student will then begin course selection and outlining the Plan of Work. The approved Plan of Work must designate a primary area of research and a minor field outside the Department. The student is encouraged, in consultation with their advisor, to define his/her own primary and minor fields of interest by the selection of a cohesive grouping of available graduate courses. The Plan of Work must include at least thirty credits in course work at, or above, the 7000 level. Twenty-one of these credits must be in course work other than directed study (CSC 7990). Both CSC 6500 and CSC 6580 must be part of the students' plan of work.

2. Proficiency Examination: In order to demonstrate knowledge of undergraduate-level computer science fundamentals, all Ph.D. students are required to pass the proficiency examination within the first two semesters of starting the program. This exam is given once each semester (not including the spring/summer term). The first attempt must be made in the students' first term in the program. In the first attempt, all three subject tests (Discrete Mathematics, Data Structures, and Computer Programming) must be attempted. Students are given two attempts to pass each subject. If all the exams are not passed after two attempts, the student will not be allowed to continue in the Ph.D. program.

3. Qualifying Examination: The Qualifying Exam is designed to determine the student's capacity for critical thinking as evident in both written and oral presentations. By the end of the second year in the program, students are required to make their first attempt at this exam. The exam consists of two parts. In the first portion of the exam

the student must demonstrate his/her knowledge of theoretical computer science at the graduate level in each of the two core theory areas taught in CSC 6500 and CSC 6580, both of which the student must have passed with grades of 'B' or better, or must take an additional written exam on each subject. In the second portion of the exam, the competency of the student in their major area of the research is to be demonstrated in the form of a written document and accompanying oral presentation. The exam is offered in March and November, and the student will have two opportunities to pass both parts. Failure to pass both parts of the qualifying examination by the end of the fifth semester will result in the student's removal from the Ph.D. program. Upon successful completion of this requirement, a Report on Doctor of Philosophy Oral Examination form is submitted to the Graduate School.

4. Dissertation Committee Formation: With the approval of the Department Graduate Committee, the student establishes a Dissertation Committee that consists of four members. If there are co-chairs, the committee will consist of five members. At least two committee members are from the student's home department, Computer Science. The Chairperson and one additional member must hold a Regular Graduate Faculty appointment in the Department of Computer Science. The committee will also include an external member from outside the department. This Committee is responsible for administering the prospectus and the dissertation defense of the candidate.

5. Candidacy: Candidacy is reached after the Plan of Work has been approved, the written qualifying examination has been passed, approximately fifty credits in course work have been completed, and the dissertation committee has been formed. Upon completion of these requirements, a Recommendation for Doctor of Philosophy Candidacy Status form is submitted to the Graduate School in order to advance the Ph.D. applicant to Candidate Status.

6. Prospectus: After completion of the written qualifying exam, the student will continue to develop the dissertation prospectus, a document that provides evidence that the prospective doctoral candidate has completed adequate preliminary research on the topic of the proposed doctoral dissertation. The principles for determining the scope of the prospectus are detailed in the Doctoral Dissertation Outline and Record of Approval form; general characteristics are available on the website: <http://www.gradschool.wayne.edu/>

7. Dissertation: The final stage is devoted primarily to the research and preparation of the dissertation. The dissertation research is presented and defended before the Dissertation Committee in a public lecture presentation. See the website for further information and graduation deadlines: <http://www.gradschool.wayne.edu/>

Bioinformatics and Computational Biology (Ph.D. Concentration)

The concentration in bioinformatics and computational biology is intended for doctoral students in computer science who wish to receive research training in this specialization. Students will be prepared to do inter-disciplinary work in computer science, biology, and biomedical research. They will be trained to identify important biological problems that require bioinformatics and computational solutions, and to identify and apply appropriate approaches to address these problems. This concentration has been developed to provide outstanding and highly-motivated students with the specialized training needed to initiate productive work in their chosen careers. General admission and degree requirements are the same as cited above for the Ph.D. program. Concentration requirements are as follows:

REQUIRED COURSES:

CSC 7300 – Bioinformatics I: Biological Databases and Data Analysis: Cr. 3
CSC 7301 – Bioinformatics I: Programming Lab: Cr. 1
CSC 7410 – Bioinformatics II: Cr. 4
MGG 7010 – Molecular Biology and Genetics: Cr. 4

Electives appropriate to each student's background and interests will be selected by the student and his/her advisor and could include courses such as: IBS/MGG 7030, Functional Genomics and Systems Biology.

Note: students must complete MGG 7010 before enrolling in the Bioinformatics CSC courses and CSC 7300 and 7301 must be completed before CSC 7410.

Assistantships and Fellowships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

The number and nature of assistantships can vary each academic year. Those interested in applying for a graduate teaching or research assistantship should submit their application materials to the Department of Computer Science by February 15 for the upcoming fall term, and by October 15 for the subsequent winter term. Late applications will be considered only on the basis of available positions. Along with the application students should submit three letters of recommendation, copies of transcripts, a departmental Graduate Admission Evaluation form, GRE scores, and a description of their research interests and background.

Research and Instructional Laboratories

The Department of Computer Science operates eight instructional and multiple research laboratories comprising about 300 state-of-the-art workstations and servers.

Webpage: The Department maintains a home page at <http://www.engineering.wayne.edu/cs>.

Computer Science Courses (CSC)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the Undergraduate Bulletin with all other undergraduate courses. Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5050 (ECE 4050) Algorithms and Data Structures. Cr. 4

Prereq: knowledge of C or C++ programming. Not for CSC major credit. Offered for graduate credit only. Introduction to problem solving methods and algorithm development; data abstraction for structures such as stacks, queues, linked lists, trees, and graphs; searching and sorting algorithms and their analysis. (T)

5250 Network, Distributed, and Concurrent Programming. Cr. 3

Prereq: CSC 4420 and CSC 4421. Fundamental concepts and skills of developing networked, distributed, and concurrent applications. Topics include: inter-process communication, TCP/IP sockets programming, remote method invocation, multithreading, concurrency and synchronization. (Y)

5270 Computer Systems Security. Cr. 3

Prereq: CSC 4420, CSC 4421, and CSC 5250. Fundamental technologies for enabling an e-society which is more predictable, more accountable, and less vulnerable to attacks. Covers three components: security requirements and protocols, cryptography algorithms, and case studies. (F)

5430 Game Programming and Design I. Cr. 3

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or CSC 5050. Fundamentals of game programming and game design using C++, DirectX, Windows, and C#. (F)

5431 Game Programming and Design I: Lab. Cr. 1

Prereq: MAT 2010, C++ programming experience; coreq: CSC 5430. Laboratory for CSC 5430. Focus on modding, or making changes to existing programs to achieve specific results. (F)

5710 Design of Intelligent Information Retrieval Systems. Cr. 3

Prereq: CSC 5800. Indexing retrieval models (vector space, probabilistic and language models); document classification models (Naïve Bayes and SVM); topic models (PLSA and LDA) and learning-to-rank methods; course includes practical assignments and a team-based final project. (Y)

5750 Principles of Web Technology. Cr. 3

Prereq: MAT 2010, CSC 3750; or senior or graduate standing. History and development of the world-wide web. Techniques for authoring static and dynamic content for the world-wide web. Web security techniques. Electronic commerce on the web. Lab exercises required. (F,W)

5800 Intelligent Systems: Algorithms and Tools. Cr. 3

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or CSC 5050; MAT 2010. Introduction to basic algorithms and software tools for intelligent data representation and analysis, including: data pre-processing, data exploration and visualization, model evaluation, predictive modeling, classification methods, association analysis, clustering, anomaly detection, representing extracted patterns as expertise, tools for data mining and intelligent systems such as WEKA, CLIPS, and MATLAB. (I)

5825 Introduction to Machine Learning and Applications. Cr. 3

Through algorithmic investigation, brainstorming, and case analysis, students develop the skills and strategies that are necessary for effective learning from data, including Big Data emerging from science and engineering. (W)

5830 Computational Modeling of Complex Systems. Cr. 3

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or CSC 5050. Introduction to computer methods useful for modeling complex systems which are refractory to traditional methods of analysis. Emphasis on problem formulation and concrete examples drawn from computer science, engineering, chemistry, and biology. (Y)

5860 Introduction to Pattern Recognition and Document Analysis. Cr. 3

Prereq: senior standing. Model of a pattern recognition system; representation techniques of classifiers; parametric and nonparametric classification methods; clustering; feature selection and extraction document processing, analysis, and classification. (Y)

5870 Computer Graphics I. Cr. 3

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or CSC 5050; MAT 2250. Graphics devices, graphics primitives, 2-D transformations, windowing and clipping, modeling 3-D objects, 3-D viewing transformations, hidden surface removal, shading and color. (Y)

5991 Special Topics in Computer Science. Cr. 1-4 (Max. 9)

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or graduate standing. Topic to be announced in the Schedule of Classes. (I)

6110 Software Engineering. Cr. 3

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or CSC 5050; MAT 2010. Software process models; advanced software system design; software project management; software analysis; testing and performance analysis; software maintenance; reverse engineering; software reuse; software metrics; object-oriented development. (Y)

6140 Knowledge-Based Software Engineering. Cr. 3

Prereq: CSC 4110 and CSC 4111; or CSC 6110. Domain modeling and object-oriented analysis; formal requirements specification languages; construction of programs from formal specifications and correctness proofs; rapid prototyping; transformational approaches to program development; acquisition of software engineering knowledge; program comprehension; knowledge-based approaches to software maintenance and reuse; computer-supported cooperative work. (I)

6220 Parallel Computing I: Programming. Cr. 4

Prereq: CSC 2200 and CSC 2201, both with grade of C or better, or CSC 5050; and CSC 3100 and CSC 3101. Parallel computing concepts, examples of parallel computers, parallelism in algorithms / data / programs, experiences with state of the art parallel computers. (Y)

6280 Real-Time and Embedded Operating Systems. Cr. 3

Prereq: CSC 4420 and CSC 4421. Operating system design for real-time and embedded systems. Focus on scheduling, synchronization, communication, and process and memory management for time-critical and resource-constrained applications. (B)

6290 Data Communication and Computer Networks. Cr. 3

Prereq: CSC 5250. Data communication fundamentals and principles governing computer communication networks. Components of networks, how they are connected; basics of design and implementation of network protocols. (Y)

6430 Game Programming and Design II. Cr. 3

Prereq: CSC 5430 and CSC 5431; coreq: CSC 6431. Game design methods, team development, languages for game design, debugging and testing, game platforms, memory management and I/O, game physics, character animation, AI agents, AI path programming, networking, online and multiplayer gaming. (Y)

6431 Game Programming and Design II: Lab. Cr. 1

Prereq: CSC 5430 and CSC 5431; coreq: CSC 6430. Architecture and tools for modern game platforms. Game development environment; basic aspects of game engine design, graphics engine design, use of shaders. Material Fee as indicated in the Schedule of Classes. (Y)

6500 Theory of Languages and Automata. Cr. 3

Prereq: CSC 4500. Recursive and recursively enumerable languages; decidability and computability; Rice's theorem; time complexity; space complexity. (F,W)

6580 Design and Analysis of Algorithms. Cr. 3

Prereq: CSC 3110. Best case, worst case, and expected case complexity analysis; asymptotic approximations; solutions of recurrence equations; probabilistic techniques; divide-and-conquer; the greedy approach; dynamic programming; branch and bound; NP-completeness; parallel algorithms. (F,W)

6620 Matrix Computation I. (ECE 5020) Cr. 4

Prereq: CSC 2110 and CSC 2111 or equiv.; and MAT 2250 for computer science students, or BE 2550 or former BE 3040 for engineering students. Background matrix algebra; linear system sensitivity; basic transformations; Gaussian elimination; symmetric systems; positive definite systems; Householder method for least squares problems; unsymmetric eigenvalue problems; the QR algorithm. (Y)

6710 Database Management Systems I. Cr. 3

Prereq: CSC 4710. Data models, normal forms, relational systems and SQL, query optimization, object-oriented systems, object-relational systems, student Oracle project. (Y)

6800 Artificial Intelligence I. Cr. 3

Prereq: CSC 5800 or CSC 3200. Basic concepts; topics include: recursive problem solving, knowledge representation using semantic networks and frames, state space search methods, planning and problem solving, game playing and adversarial search methods, rules and production systems (RETE networks), constraint satisfaction techniques and applications, optimization algorithms including genetic algorithms, logic programming. Implementation in Lisp and Prolog. (Y)

6860 Digital Image Processing and Analysis. Cr. 3

Prereq: graduate standing. Offered for graduate credit only. Review of image formation and acquisition; image transformation; image enhancement and restoration; image compression; morphological image processing; edge detection and segmentation; architecture for image processing. (I)

6870 Computer Graphics II. Cr. 3

Prereq: CSC 5870. Representing curves and surfaces; solid modeling; fractal geometry; camera models; illumination models; ray tracing; radiosity methods; transparency; texture; graphics packages. Material Fee as indicated in the Schedule of Classes. (Y)

6991 Topics in Computer Science. Cr. 1-4 (Max. 9)

Prereq: CSC 2200 and CSC 2201, both with grade of C or better; or graduate standing. Current topics to be announced in the Schedule of Classes. (I)

6995 Internship in Computer Science. Cr. 1-3 (Max. 4)

Prereq: written consent of advisor; 3.0 g.p.a. or above; completion of nine credits in computer science graduate course work. Open only to computer science majors. Offered for S and U grades only. Experience in industry using tools from the computer science curriculum.

Students provide a written report based on the internship experience. (T)

7100 Advanced Computer Architecture. Cr. 3

Prereq: ECE 4680 or CSC 3100 or former CSC 4100. Recent advances in processor architectures; chip multiprocessors; system-on-chips; embedded systems; DSP processors; system software for system-on-chips; hands-on programming experience. (F)

7110 Software Engineering Environments. Cr. 3

Prereq: CSC 6110. Architecture of software engineering environments; syntax directed editors; CASE tools; tools for software maintenance; expert systems for software maintenance. (Y)

7220 Parallel Computing II: Algorithms and Applications. Cr. 4

Prereq: CSC 6220 or equiv. Problems in parallel algorithms: design, analysis, complexity. Cluster and grid computing: tools, programming, and applications. (Y)

7260 Distributed Systems. Cr. 3

Prereq: CSC 5250. Models of distributed systems, distributed synchronization, algorithms, consistency and replication models and algorithms, fault-tolerance in distributed systems. (B)

7290 Advanced Computer Networking. Cr. 3

Prereq: CSC 6290. Foundations of computer networking (e.g., performance evaluation and analysis, protocol specification and verification), latest development in network architecture and technology (e.g., wireless networks, sensor networks, peer-to-peer networks, vehicular networks). Material fee as indicated in Schedule of Classes. (Y)

7300 Bioinformatics I: Biological Databases and Data Analysis. Cr. 3

Prereq: MAT 2010; coreq: CSC 7301. Concepts of bioinformatics; tools for storing and analysis of bioinformatics data. (W)

7301 Bioinformatics I: Programming Lab. Cr. 1

Coreq: CSC 7300. Hands-on experience and exercises for CSC 7300 lecture. Material Fee as indicated in the Schedule of Classes. (W)

7410 Bioinformatics II. Cr. 4

Prereq: CSC 7300, CSC 7301, MGG 7010. Biology of bioinformatics, DNA and protein sequencing, introduction of systems biology, mRNA expressions analysis, pathway and molecular machines analysis. (W)

7430 Electronic Commerce. Cr. 3

Prereq: CSC 2200. Introduction to design and analysis of internet commerce systems. Protocols for electronic transactions; online payments and exchanges e-cash; game theory and mechanism design; online auction design; sponsored search auctions, combinatorial auctions. (F)

7710 Database Management Systems II. Cr. 3

Prereq: CSC 6710. Concurrency control, transaction processing, crash recovery, security, distributed and heterogeneous databases, data warehousing, data mining, multimedia systems, student Oracle project. (Y)

7800 Artificial Intelligence II. Cr. 3

Prereq: CSC 6800. Advanced topics from these areas: machine learning techniques (inductive and deductive), neural networks and perceptrons, genetic algorithms, advanced concepts in knowledge-based system design, inexact inference, constraint satisfaction techniques and applications, object-oriented programming. Implementation in Lisp and Prolog. (Y)

7810 Data Mining: Algorithms and Applications. Cr. 3

Prereq: CSC 5800. Application of various basic/advanced data mining techniques to real-world problems. (W)

7825 Machine Learning. Cr. 3

Graduate standing in computer science. Supervised learning including regression, kernel-based, tree-based, probability model based and ensemble learning; unsupervised learning including distance based and model based; Markov Chain Monte Carlo (MCMC) methods; graphical models; current topics from literature. (F)

7860 Computer Vision. Cr. 3

Prereq: CSC 6860. Low-level vision processing, use of constraints in visual processing, three-dimensional object recognition, dynamic scene analysis, model-based vision systems, use of neural and fuzzy logic methods in vision. (Y)

7990 Directed Study. Cr. 1-5 (Max. 9)

Prereq: written consent of advisor prior to registration. (T)

7991 Advanced Topics in Computer Science. Cr. 1-4 (Max. 9)

Prereq: graduate standing. Topics to be announced in the Schedule of Classes. (B)

8110 Seminar in Software Engineering and Environments. Cr. 3 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: CSC 7110 and written consent of instructor. Discussion of current papers in the field. (B)

8260 Seminar in Networking, Distributed Systems and Parallel Systems. Cr. 3 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Discussion of current research papers in the fields. (B)

8710 Seminar in Database Management Systems. Cr. 3 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: CSC 6710. Discussion of current papers in the field. (B)

8800 Seminar in Artificial Intelligence. Cr. 3 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: CSC 7800 and written consent of instructor. Discussion of current papers in the field. (B)

8860 Seminar Topics in Computer Vision and Pattern Recognition. Cr. 3 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: CSC 7860 and written consent of instructor. Discussion of current papers in the field. (B)

8990 Graduate Seminar. Cr. 1 (Max. 2 for M.S.; max. 8 for Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Required of all master's and Ph.D. students. Discussion of current research by faculty and visitors. (F,W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor prior to registration. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: CSC 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following CSC 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: CSC 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following CSC 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: CSC 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following CSC 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in CSC 9991-9994. Offered for S and U grades only. Material Fee as indicated in the Schedule of Classes. (T)

Electrical and Computer Engineering

Office: 3100 W. Engineering Building; 313-577-3920

Chairperson: Mumtaz Usman

Website <http://engineering.wayne.edu/ece/>

Professors

R. Arrathoon (Emeritus), R. F. Erlandson (Emeritus), X. Han, M.H. Hassoun, F. Lin, J. Meisel (Emeritus), M. B. Scherba (Emeritus), M. P. Shaw (Emeritus), H. Singh, P. Siy (Emeritus), L.Y. Wang, C.-Z. Xu, Y. Xu, H. Ying, Y. Zhao

Associate Professors

I. Avrutsky, A. Basu, M-C. Cheng S. Jiang, J. Liu, S. M. Mahmud, A. Pandya, N. Sarhan, C. Wang

Assistant Professors

P.Y. Chen, M. Nokleby, C-T. Wu

Senior Lecturer

G-A Nazrii

Graduate Degrees

MASTER OF SCIENCE in Computer Engineering

MASTER OF SCIENCE in Electrical Engineering

DOCTOR OF PHILOSOPHY with a major in Computer Engineering

DOCTOR OF PHILOSOPHY with a major in Electrical Engineering

In the field of electrical and computer engineering, basic physical and mathematical principles are utilized to develop new devices, technologies, and techniques of constantly broadening application. Examples are the development, stemming from advances in solid-state and integrated circuit technology, of smaller, less expensive and more powerful computers, parallel processing systems, microprocessors, and other data processors, and their utilization in a growing range of system applications; the growing use of data communication and sophisticated communication networks; the development of photonics and fiber optic devices for various applications ranging from optical data processing to communication; development of sophisticated control techniques, remote sensors and transducers for advanced automation and electric systems; the application of electronics to health care and industrial material diagnostics (such as noninvasive measurements and ultrasound imaging); the development of smart sensors and nanotechnology for advanced electronic devices and medical instruments, and energy conversion devices and distribution systems such as smart power grid and solar cells.

Part-time study in courses offered in the evening allows professionals working in local industry to pursue graduate degrees concurrently with their employment.

Computer Engineering and Electrical Engineering (M.S. Programs)

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17; or the website <http://engineering.wayne.edu/ece/>. All applicants whose B.S. degree is not from an ABET-accredited college or university are required to submit additional pertinent informa-

tion, including results of the general test of the Graduate Record Examination (GRE), publications, and/or inventions.

Students with B.S. degrees from selected science and engineering undergraduate programs not specifically related to this discipline may be admitted into the master's program after completing a sequence of undergraduate courses designed to prepare them for the graduate curriculum.

DEGREE REQUIREMENTS

In the areas of electrical engineering and computer engineering the Master of Science degree is offered by this department under the following options:

Plan A: Thirty-two credits including an eight credit thesis.

Plan C: Thirty-two credits of course work.

For either plan, students must complete one of the following sets of core requirements related to a specialization:

Master of Science in Computer Engineering: General, Computer Architecture and Digital Design, Parallel and Distributed Systems, Machine Intelligence and Applications.

Master of Science in Electrical Engineering: Biomedical Systems, Communications and Circuits, Control Systems, Solid State Devices, Smart Sensors, Micro- and Nano-technology, Power Systems, Optical Engineering.

All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. For detailed requirements in the various core areas, students should consult with their department advisors.

Interdisciplinary Physics-ECE AGRADE Program (Accelerated Graduate Enrollment): Outstanding seniors in Physics (both Applied Physics option and Fundamental Physics option), who have completed at least 90 credits and have an overall GPA of at least 3.5, and major physics classes GPA at least 3.6, can apply to enter the cross-college AGRADE program between the Physics undergraduate program (College of Liberal Arts and Sciences) and Electrical Engineering (EE) Master's programs (College of Engineering). The AGRADE program allows students to apply up to 12 credits of selected graduate courses, taken as an undergraduate, towards a Master's degree in Electrical Engineering. The Physics courses that can be counted towards MS-EE degree include PHY5340/41, PHY5620/21, and PHY5100. This enables students to complete an undergraduate degree in Physics and a graduate degree in Electrical Engineering in just 5 years of full-time study. For more details, please contact the undergraduate Physics advisor in the Department of Physics and Astronomy, or the graduate advisor in the Department of Electrical and Computer Engineering.

Computer Engineering and Electrical Engineering (Ph.D. Programs)

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants must have an overall grade point average of 3.6 in a Master of Science degree program. It is possible for outstanding students to enter the Ph.D program with only a Bachelor of Science degree. All applicants whose B.S. degree is not from an ABET-accredited college or university are required to submit additional pertinent information, including results of the general test of the Graduate Record Examination (GRE), publications, and/or inventions.

DEGREE REQUIREMENTS

Candidates for the doctoral degree must complete ninety credits beyond the bachelor's degree, including thirty credits of dissertation

direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses ECE 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. A minimum of thirty credits must be earned in courses numbered 7000 and above. Credits accrued in a Master of Science degree program may be applied as part of the doctoral requirements. A written Ph.D preliminary examination should be taken within the first two semesters of residency as a Ph.D. applicant. A written and oral Ph.D. qualifying examination to attain doctoral candidacy is given after completion of most of the course work at a time recommended by the candidate's advisor. (All graduate students are required to register for dissertation credits for any semester in which they utilize campus facilities or are under faculty supervision.) All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. Students should consult Doctor of Philosophy Degrees (Ph.D.), p. 38 for Graduate School regulations governing doctoral study.

Electrical and Computer Engineering Courses (ECE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5020 (CSC 6620) Matrix Computation I. Cr. 4

Prereq: graduate standing, or CSC 2110 or equiv.; and BE 2550 for engineering students. Background matrix algebra; linear system sensitivity; basic transformations; Gaussian elimination; symmetric systems; positive definite systems; Householder method for least squares problems; unsymmetric eigenvalue problems; the QR algorithm. (I)

5100 (BME 5010) Quantitative Physiology. (CHE 5100) (IE 5100) (ME 5100) Cr. 4

The basic principles of human physiology presented from the engineering viewpoint. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models when feasible. (F,W)

5325 Smart Sensors and Fuel Cells. (AET 5325) Cr. 4

Prereq: senior standing in a B.S. program. Study of a multi-domain simulation program which enables engineers to study complex systems such as fuel cells, mems, and automotive power distribution systems. (F)

5330 (EVE 5430) Modeling and Control of Power Electronics and Electric Vehicle Powertrains. (AET 5330) Cr. 4

Prereq: senior standing in science or engineering discipline. Basic methodologies for modeling, control system design, system coordination, and optimization of renewable power sources and power electronics systems. (W)

5370 Mechatronic System Design I. (BME 5530) Cr. 4

Prereq: ECE 4600 or equiv.; written consent of instructor. Students work in small groups to design and build "smart" devices or systems. These products will integrate sensors, digital logic and/or microprocessors, and user interfacing. The products will be requested by a "client" and students will work as part of a cross-disciplinary team. (F)

5380 Mechatronic System Design II. (BME 5540) Cr. 4

Prereq: ECE 4600 or equiv.; written consent of instructor. Students work in small groups to design and build "smart" devices or systems. These products will integrate sensors, digital logic and/or microprocessors, and user interfacing. The products will be requested by a "client" and the students will work as part of a cross-disciplinary team. (W)

5410 Power Electronics and Control. (EVE 5410) Cr. 4

Prereq: graduate standing, or ECE 4330. Control of electric energy using solid-state devices, diodes, thyristors, triacs; mathematical analysis of circuits containing these devices; power converters and control; solid-state drives for motor control. (I)

5425 Introduction to Robotic Systems. Cr. 4

Prereq: BE 1500 or BE 2550 or BME 5020. Introduction to robot kinematics and control. Computational algorithms for robot movement, sensor fusion, and intelligent behavior, which are needed to build a system that performs actions and interacts with its environment. (F)

5430 Electric Energy Systems Engineering. Cr. 4

Prereq: graduate standing, or ECE 4330. Transmission capacity, load characteristics, power frequency control. Energy system component analysis and modeling. Steady-state analysis, load-flow problem and algorithms, optimal dispatch. Transient stability by simulation and direct methods. (Y)

5440 Computer-Controlled Systems. Cr. 4

Prereq: graduate standing, or ECE 4470 or CHE 4600 or ME 4420 or former ME 5540. Introduction to z-transform and sampling theory. Digital controller design using both transfer function techniques and state space methods. Implementation aspects of computer-controlled systems. (Y)

5450 Control and Optimization for Integrated Electric-drive Vehicle Systems. (ECE 5450) Cr. 4

Prereq: EVE 5430; open only to Engineering graduate students and undergraduates with senior standing. Understanding of how to control a system using modern control theory, how to optimize the performance of a system using various optimization technologies, and how to apply the control and optimization technologies to EDV systems. (W)

5460 Stochastic Processes in Engineering. Cr. 4

Prereq: IE 3220; and ECE 4330 or ME 5000. Elements of probability theory. Random variables. Random sequences. Convergence concepts, limit theorems and sampling. Gaussian processes and Brownian motion. Martingales and Markov Processes. Frequency-domain analysis. White noise representations. Sampling Theorem. Wiener Filtering. Recursive Filtering. Linear and nonlinear differential systems. Likelihood ratios and applications. (Y)

5470 Control Systems II. Cr. 4

Prereq: graduate standing, or ECE 4470. State space representation of systems; stability and Liapunov methods, controllability and observability, pole placement design using state feedback, observer design, optimal control, linear quadratic regulators, Kalman filter. (Y)

5550 Solid State Electronics. Cr. 4

Prereq: graduate standing, or ECE 4570, ECE 4800. Physical basis for the opto-electric properties of solids with particular emphasis on semiconductors. Basic principles associated with solid-state devices. Extrinsic and intrinsic semiconductors. Behavior of P-N junctions, bipolar and field-effect transistors. PC-based simulation of device characteristics using the PC1D simulator. (Y)

5575 Introduction to Micro and Nano Electro Mechanical Systems. Cr. 4

Prereq: senior or graduate student in engineering. Introduction of fabrication technologies and designs of fundamental Micro/Nano Electro Mechanical Systems (MEMS/NEMS). (W)

5610 Introduction to Parallel and Distributed Systems. Cr. 4

Prereq: graduate standing, or CSC 2000. Fundamentals of parallels and distributed systems. Programming experience in both computing environments. (F,W)

5620 Embedded System Design. Cr. 4

Prereq: graduate standing, or ECE 4600. Micro-controller architecture and its subsystems. Wired and wireless protocols for vehicular networking applications. Design and implementation of real-time embedded systems. (F,S)

5650 Computer Networks and Programming. Cr. 4

Prereq: ECE 4050 or graduate standing. Fundamentals of computer networks. TCP/IP and Internet protocols. Mobile and wireless networking. Network programming. (W)

5680 Computer-Aided Logical Design and FPGAs. Cr. 4

Prereq: ECE 4680. Threshold, symmetric functions, and iterative networks. Multivalued and fuzzy logic. Complex sequential machine realization. State equivalence and minimization. Automata and linear machines. State identification and fault detection. (T)

5690 Introduction to Digital Image Processing. Cr. 4

Prereq: graduate standing, or BE 2500, ECE 4330, ECE 4050, or equiv. Concepts of digital image processing from an operational perspective, with good exposure to theory. Accessibility of DIP to engineering. Detailed review of current techniques. (F)

5700 Digital Communications. Cr. 4

Prereq: ECE 4700 or equiv. Digital modulators and demodulators, M-ary PSK, M-ary FSK, optimal receiver for AWGN channel. correlator receiver, matched filter receiver, analysis of probability of bit errors for digital communication systems, Shannon limit, simulation of digital communication system. (I)

5770 Digital Signal Processing. Cr. 4

Prereq: ECE 4700. Analysis of discrete signals and systems. Applications to digital filtering, active filters, digital communication and encoding. (Y)

5870 Optical Communication Networks. Cr. 4

Prereq: ECE 4700; 4850. Laser and detectors; modulation and demodulation; optical transmitters and receivers; optical filters; optical amplifiers; architecture and network control; multi-access networks; FDDI networks, SONET/SDH, ATM, system performance. (Y)

5990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: admission to M.S. program, written approval of proposed study outline by advisor and chairperson prior to registration. Supervised study and instruction in the field selected by the student. (T)

5995 Special Topics in Electrical and Computer Engineering I. Cr. 1-4 (Max. 8)

Prereq: written consent of instructor. Maximum of eight credits in Special Topics may be elected in any one degree program. Special subject matter in electrical and computer engineering. Topics to be announced in Schedule of Classes. (T)

6100 Enabling Technology. (BME 6500) Cr. 3-4

Prereq: written consent of instructor. Principles of application of enabling technology: across life stages, for differing ethnic and cultural backgrounds, for individuals with varying functional abilities. (F,S)

6180 Biomedical Instrumentation. (IE 6180) (ME 6180) Cr. 4

Prereq: ECE 3300, BME 5010 or BMS 6550 (or former BMS 5550), and BME 5020. Engineering principles of physiological measurements, signal conditioning equipment, amplifiers, recorders and transducers. Recent advances in instrumentation. (W)

6570 Smart Sensor Technology I: Design. (BME 6470) (PHY 6570) Cr. 4

Prereq: B.S. degree in engineering or science. Offered for graduate credit only. Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. (F)

6660 Introduction to VLSI Systems. Cr. 4

Prereq: ECE 4680. Survey of very large scale integrated circuit components and design procedures. MOS fabrication, MOS gates, circuit architecture, device design, manufacturing and interface techniques. Material Fee as given in Schedule of Classes. (T)

6991 Industrial Internship. Cr. 1-4 (Max. 4)

Offered for S and U grades only. Prereq: graduate standing. Offered for graduate credit only. Internship experience that satisfies the curricular practical training requirements. (T)

7030 Mathematical Methods in Engineering I. Cr. 4

Prereq: ECE 4330. Introduction to functional analysis. Banach and Hilbert spaces. Fixed-point and projection theorem techniques. Approximation, estimation, and optimization theory. Applications to numerical and error analysis, non-linear equations, and modeling system identification. (Y)

7100 (BME 7100) Mathematical Modeling in Impact Biomechanics. (IE 7100) (ME 7100) Cr. 3-4

Prereq: ME 3400, and ECE 5100 or BMS 6550 (or former BMS 5550). Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. (W)

7160 (BME 7160) Impact Biomechanics. (ME 7160) Cr. 4

Prereq: ME 2400, and BME 5010 or BMS 6550 (or former BMS 5550). Biomechanical response of the body regions and the whole body to impact. Mechanisms of injury in blunt impact. Effects of restraints on injury reduction. Development of test surrogates such as dummies. (F)

7400 Medical Robotics and Systems. (BME 7400) Cr. 4

Prereq: ECE 5020 or equiv. Technology that interfaces computer engineering and electronics with surgery; introduction of key concepts in the field, including medical robotics, image-guided surgery, segmentation/3D modeling, medical simulation, and medical sensors. (W)

7420 (ME 7590) Nonlinear Control Systems. Cr. 4

Prereq: ME 5550 or ECE 5470 or ECE 5440. Provide examples of nonlinear dynamical control systems, perform system analysis using phase-portrait, and examine stability using Lyapunov's direct method and invariant set theorems (local and global stability). Introduce describing function method, feedback linearization technique, internal dynamics, and zero-dynamics. Design nonlinear robust controllers. (F)

7430 Control of Discrete Event Systems. Cr. 4

Prereq: ECE 5440 or ECE 5470 or ME 5550. Automation model of discrete event systems; formal languages and regular expressions; supervisory control; controllability and observability; decentralized control and co-observability; timed discrete event systems; performance analysis; applications to manufacturing systems and power systems. (B)

7440 Dynamic Systems and Optimal Control. Cr. 4

Prereq: ECE 5440 or ECE 5470 or ME 5550. Formulation of optimal control problems. Pontryagin's maximum principle and necessary conditions for optimality, with applications. Dynamic programming; Hamilton-Jacobi equation; optimal feedback control. (I)

7530 Advanced Digital VLSI Design Using VHDL. Cr. 4

Prereq: ECE 6660. Behavioral, data flow, and structure VHDL modeling. CADENCE CAD tools used to simulate and generate the schematic and layout of the synthesized VHDL code. (Y)

7550 Advanced Solid State Electronics I. Cr. 4

Prereq: ECE 5550 or ECE 6550. Review of solid state theories. Electrical conductivity, relaxation times and the Boltzmann equation. Mobility, Hall effect, contacts and application to negative differential conductivity devices such as the Gunn diode. (Y)

7570 Smart Sensor Technology II: Characterization and Fabrication. (BME 7470) (PHY 7580) Cr. 4

Prereq: ECE 6570. Integration of ongoing research in integrated technology of smart sensors. Design of smart sensor devices using

computer simulation. Fabrication of smart sensor. Material Fee as given in Schedule of Classes. (W)

7610 Advanced Parallel and Distributed Systems. Cr. 4

Prereq: ECE 5610 or ECE 5650. Advanced topics in parallel and distributed computing, multicore and parallel architecture, communication, synchronization, parallel algorithms and programming, load balancing and scheduling, security. (W)

7650 Scalable and Secure Internet Services and Architecture. Cr. 4

Prereq: graduate standing; ECE 5610 or ECE 5650. Advanced principles of distributed and cloud computing systems, the Internet, Internet server and data center, content delivery networks, performance scalability, energy-aware resource management, security and privacy, cost-effective engineering design. (W)

7660 Parallel Computer Architecture. Cr. 4

Prereq: ECE 5610, ECE 5620. Review of parallel computer architectures, including symmetric multiprocessors and scalable machines. Parallel software basics for various architectures. Fundamental issues including cache coherence, interconnection network, and synchronization; influence of these on performance of applications. (Y)

7680 Advanced Digital Image Processing and Applications. Cr. 4

Prereq: ECE 5690 or equiv. Advanced aspects, algorithms, methods in digital image processing and their corresponding applications in different fields. Students develop comprehensive skills and knowledge in digital image processing. (Y)

7690 Fuzzy Systems. Cr. 4

Prereq: ECE 4330. From basic fuzzy set theory to advanced topics such as neuro-fuzzy systems. (Y)

7700 Statistical Communication Theory. Cr. 4

Prereq: ECE 5700. Decision theory, binary decisions with single and multiple observations, signals in additive Gaussian noise, sequential decision theory, estimation theory, Kalman filtering. (Y)

7730 Telematics. Cr. 4

Prereq: ECE 5700. Introduction to automotive telematics, mobile communication channels, error correction, automatic crash response, vehicle diagnostics, vehicle tracking, vehicle safety, navigation, and current topics in telematics. (W)

7850 Fiber and Integrated Optics. Cr. 4

Prereq: ECE 5870. Discussion of geometric optics and ray propagation in optical fibers. Extension to physical optics and Maxwell's equations. Analysis of mode coupling and graded index fibers. Integrated optical waveguides: dielectric slabs and integrated optic networks. Coupling phenomenon, light sources, and detectors. Photon statistics and their relation to bit error rates. Power budgets, fan-in, and fan-out as applied to data link design. (Y)

7990 Directed Study. Cr. 1-8 (Max. 12)

Prereq: written consent of advisor, chairperson and graduate officer for master's students; written consent of advisor, chairperson and Dean of Graduate Studies for Ph.D. students. Outline of proposed study and petition must be submitted to graduate committee in advance of registration. Supervised study and instruction in an advanced topic. (T)

7995 Special Topics in Electrical and Computer Engineering II. Cr. 1-4 (Max. 12)

Prereq: written consent of instructor. Maximum 12 credits in Special Topics may be elected in any one degree program. A consideration of special subject matter in electrical and computer engineering. Topics to be announced in Schedule of Classes. (T)

7996 Research. Cr. 1-8 (Max. 8)

Prereq: written consent of advisor and chairperson. Design, investigation and experimental work on some phase of electrical and computer engineering. Written report required. (T)

8570 Smart Sensor Technology Seminar. (BME 8470) (PHY 8570) Cr. 1

Prereq: ECE 6570, 7570. Technological advances. Interaction of research experience in smart sensors and integrated devices. (W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.) (IND: 1)

Prereq: written consent of graduate advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ECE 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ECE 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ECE 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ECE 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ECE 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ECE 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ECE 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

9997 Doctoral Seminar. Cr. 1-4 (Max. 4)

Prereq: written consent of doctoral advisor. (T)

Industrial and Systems Engineering

Office: 2143 Manufacturing Engineering Building
4815 Fourth St.; 313-577-3821

Chairperson: Leslie Monplaisir

Website: <http://www.engineering.wayne.edu/ise/index.php>

Professors

Kenneth R. Chelst, Ratna Babu Chinnam, Nanua Singh (Emeritus), Kai Yang

Associate Professors

R. Darin Ellis, Kyoung-Yun Kim, Olugbenga Mejabi, Leslie Monplaisir, E. Alper Murat, Gary Wasserman

Assistant Professors

Evrin Dalkiran, Jeremy Rickli, Saravanan Venkatachalam, Qingyu Yang

Associate Professor (Research)

Celestine Aguwa, Gary Witus

Adjunct Professors

Julia Gluesing, Nitin Paranjpe, Nancy Philippart

Senior Lecturers

Dean Pichette

Executives in Residence

Jerry W. Leman

Graduate Degrees

BRIDGE GRADUATE CERTIFICATE in Systems Engineering

MASTER OF SCIENCE in Engineering Management

MASTER OF SCIENCE in Industrial Engineering

MASTER OF SCIENCE in Manufacturing Engineering

DOCTOR OF PHILOSOPHY with a major in Industrial Engineering

Industrial Engineering is a broadly-based integrated field concerned with enabling complex systems to function effectively. Managing the inventory of a production facility, for example, involves issues of production and stocking policy, manufacturing equipment, human resources, customer demand, and supplier relationships. The industrial engineer must understand the interaction of the components of a system, and coordinate the flow of materials and information to effectively manage the operation. He/she plays an important role in defining information needs and developing strategies for improving decision making in existing systems. The skills of the industrial engineer, however, can be applied in more than just the traditional production environment. In the growing service sector of the economy - including health care delivery, public safety, air transportation, energy, and banking - issues of resource management, scheduling, quality of service, and systems design are of increasing importance.

Manufacturing Systems Engineering was traditionally involved in developing process capabilities to realize the output of design engineering. Today, design and manufacturing systems engineering is becoming reciprocally integrated and both groups work together in teams to assure the soundness of design and producibility of goods and services. The manufacturing systems engineer must have an

understanding of the design process as well as special expertise in the knowledge and understanding of the production process, which is now computer-based and provides flexibility through numerical control. The manufacturing systems engineer is responsible for designing and implementing the cells and production lines which become the basic units of manufacture. Increasingly, such production units are becoming parts of an integrated factory system, and are not simply islands of automation. The manufacturing systems engineer must understand the multi-layered control architecture of the integrated factory, and the computer-based technologies which enable it.

Engineering Management has grown in importance as today's engineer must possess the necessary tools for effective technical management. Inherent in successful leadership is an understanding of the business functions of an organization, tools used in the decision-making process, and skills for efficient project management, among others. An effective engineering manager will utilize industrial engineering skills to develop strategies that improve the product development process, manage quality and productivity, and advance techniques in world-class manufacturing. More often, a business overview is critical to developing and improving these processes.

Systems Engineering is an interdisciplinary approach and means to enable the realization of successful systems. It focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, then proceeding with design synthesis and system validation while considering the complete problem.

The bridge certificate program in Systems Engineering provides formal courses for working engineers and professionals to enhance their knowledge in the area of systems engineering. Coursework covers a broad range of methods, practices and tools in all aspects of this field. Students who complete this program have the option to continue into the M.S. program in Industrial Engineering or Engineering Management. Credits earned as part of the Bridge Graduate Certificate in Systems Engineering can be applied towards the M.S. degree requirements as long as they were completed with a minimum grade of 'B-' and within six years of the completion date for the M.S. Applicants must have a Bachelor of Science degree in engineering.

Facilities: The Department maintains laboratories in systems simulation, computer-aided manufacturing, smart engineering systems, ergonomics, design, and concurrent engineering.

Master's Degree Programs of this department offer the flexibility of full or part-time study. Most of the courses are offered in the evening, allowing students to continue full-time employment in local industries. Some program classes are offered at off-campus sites. Many of the graduate-level courses are also offered in the evening, allowing graduate students also to continue full-time employment in local industries. To further accommodate the working student population, several engineering courses are offered online (refer to the schedule of classes to determine availability).

All incoming M.S. students must demonstrate competency in undergraduate probability and statistics, through successful completion of BE 2100, or equivalent courses. If the student fails to show competency, he or she may be required to complete a pre-requisite course in probability and statistics.

Systems Engineering (Bridge Graduate Certificate)

This program is designed for technical professionals with work experience and a degree in engineering. The program consists of twelve credits of coursework scheduled for completion by working engineers in two years. The certificate can serve as a bridge to the M.S. degree in Engineering Management or Industrial Engineering.

Admission Requirements: Applicants must meet the requirements for admission to the Graduate School (see Admission, Graduate

School, p. 17) and either the M.S. program in Industrial Engineering (see Industrial Engineering (M.S. Program), p. 201) or in Engineering Management (see Engineering Management (M.S. Program), p. 202). They must hold a baccalaureate degree in engineering from an institution accredited by the Accreditation Board for Engineering and Technology (ABET). In addition, they must have earned a grade point average of at least 2.8 in the upper division of their undergraduate program or have at least three years of full-time engineering work experience. International students are required to complete the GRE exam.

CERTIFICATE REQUIREMENTS

Students must complete twelve credits consisting of one required foundation course in systems engineering; at least one required course in project management, risk/decision analysis or problem solving; and one elective course. At least one course must be 7000-level or above. For courses specifically associated with this program see Systems Engineering Courses (SYE), p. 206.

Students may later apply all certificate credits toward the Master's degree requirements in Engineering Management or Industrial Engineering, provided any such credits have been earned with a minimum 'B' grade and are within the six years time limit for completing the Master's degree.

SYE 6490 – (IE 6490) Introduction to Systems Engineering: Cr. 2

And at least one of the following:

SYE 5470 – (ME 5470) Creative Prob. Solving in Design, and Mfg.: Cr. 4

SYE 6840 – (MGT 6840) Project Management (IE 6840): Cr. 1-4

SYE 7720 – (IE 7720) Engineering Risk and Decision Analysis: Cr. 4

Electives (6 credits max):

SYE 7995 – (IE 7995) Graduate Special Topics: Cr. 1-4

SYE 7998 – (IE 7998) Engineering Mgt. and Leadership: Cr. 2

Graduation Requirements: All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. Students may enroll on a full-time or part-time basis but must complete requirements within three years of admission.

Industrial Engineering (M.S. Program)

The master of science degree program in Industrial Engineering is built on a core designed to provide breadth of experience in systems modeling, analysis, and applications common in industrial engineering and operations analysis.

Admission Requirements: Admission to the master's program is contingent upon admission to the Graduate School; for requirements see Admission, Graduate School, p. 17. Applicants with a baccalaureate degree in engineering from an institution accredited by the Accreditation Board for Engineering and Technology (ABET), and who have earned a grade point average of at least 2.8 in the upper division of their undergraduate program are eligible for admission. GRE Exam is not required for applicants. However, a high GRE score will be considered as an incentive for the evaluation process. Additionally, applicants with an undergraduate degree in mathematics, physics, computer science, or another discipline with a strong analytical base may be considered for admission.

DEGREE REQUIREMENTS

The Master of Science in Industrial Engineering is offered under the following options:

Plan A: Thirty-two credits including up to eight thesis credits.

Plan C: Thirty-two credits of course work.

Both options require a common core of eight credits (for the general option, twelve core credits) as described below. While the core provides breadth to the student's program, depth of understanding is

acquired through completion of the required twenty-four credits in one of the specialization areas. Appropriate courses for specific specializations can be found on the department's website. Students interested in an area not among the specializations cited should elect the general option. A minimum twenty credits of specialization are required and up to eight credits may be earned in courses outside the Industrial and Systems Engineering Department, but only with prior approval of the graduate advisor. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Thesis Option: If a thesis option (Plan A) is selected, up to eight credits of Master's Thesis Research and Direction (IE 8999) may be required, which integrates with the student's plan of work to create depth of understanding in an area relevant to the program objective. In such cases, the requirement for the twenty-four credit hour specialization is waived, and an individually-designed program of study must be approved by both the thesis research advisor and the M.S. program officer.

Manufacturing Engineering (M.S. Program)

The master of science degree program in manufacturing engineering is built on a core designed to provide a firm foundation in the various elements of manufacturing and systems engineering.

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants with a baccalaureate degree in engineering from an institution accredited by the Accreditation Board for Engineering and Technology (ABET) and who have earned a grade point average of at least 2.8 in the upper division of their undergraduate program are eligible for admission. GRE Exam is not required for applicants. However, a high GRE score will be considered as an incentive for the evaluation process. Additionally, applicants with an undergraduate degree in mathematics, physics, computer science, or another discipline with a strong analytical base may be considered for admission.

Because of the interdisciplinary nature of the program, applicants whose undergraduate education is deficient in prerequisites for graduate classes may be required to take background courses which will NOT count toward the thirty-two credit degree requirement.

DEGREE REQUIREMENTS

The Master of Science in Manufacturing Engineering is offered under the following options:

Plan A: Thirty-two credits including up to eight thesis credits.

Plan C: Thirty-two credits of course work.

Both options require a common core of eight credits (for the general option, twelve core credits) as described below. While the core provides breadth to the student's program, depth of understanding is acquired through completion of the required twenty-four credits in one of the specialization areas. Appropriate courses for specific specializations can be found on the department's website: <http://www.engineering.wayne.edu/ise/index.php>. Students interested in an area not among the specializations cited should elect the general option. A minimum twenty credits of specialization are required and up to eight credits may be earned in courses outside the Industrial and Systems Engineering Department, but only with prior approval of the graduate advisor. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Thesis Option: If a thesis option (Plan A) is selected, up to eight credits of Master's Thesis Research and Direction (IE 8999) may be required, which integrates with the student's plan of work to create depth of understanding in an area relevant to the program objective. In such cases, an individually-designed program of study must be approved by both the thesis research advisor and the M.S. program officer.

Engineering Management (M.S. Program)

The department offers two options for a Master of Science in Engineering Management (EMMP). Students should read both sections carefully to determine which program they are eligible for.

On-campus Program, Engineering Management

The on-campus Master of Science in Engineering Management program is designed to build both technical competence and business acumen. The program builds understanding and skills critical to the support of fast-to-market strategies, which also guarantee product quality, and cost minimization. A systematic analytical framework is developed and coupled with tools for managing the engineering and technical functions within manufacturing-based companies. This cross-disciplinary program draws from the expertise of the College of Engineering and the School of Business Administration.

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The program is intended for the practicing engineer or technical leader with an undergraduate degree from an accredited engineering program, who possesses at least two years of full-time work experience. The work experience requirement is waived for U.S. based students who are currently working full-time in an engineering type job.

DEGREE REQUIREMENTS

This program is offered under Plan B: forty-two credits including a six-credit final project. There are four core segments: engineering management, business cognate, engineering cognate, and capstone project. A detailed course outline is available on the Department's website.

On-site Program (Automotive Supplier), Engineering Management

The on-site (automotive supplier) Master of Science in Engineering Management program is limited to working professionals at organizations with a partnership agreement with the Department of Industrial and Systems Engineering. Engineers with high potential are selected by management to participate in a three-year, two-evenings-per-week curriculum. The courses are team based, and include two years of class studies and team projects in areas such as leadership, quality management, global marketing, robust design, and information systems. The final year of the program involves a team capstone project, which provides application of the knowledge gained to a current strategy or opportunity within their organization.

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School, (for requirements, see Admission, Graduate School, p. 17) and is limited to management selected individuals from partner organizations. For more information on admission or becoming a partner organization, please see the Executive Education under the ISE website: <http://www.engineering.wayne.edu/ise/index.php> or contact the EMMP program chair.

DEGREE REQUIREMENTS

This program is offered under Plan B: forty-five credits including an eight-credit final project. There are four core segments: engineering management, business cognate, engineering cognate, and capstone project. A detailed course outline is available on the Department's website. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning

under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Industrial Engineering (Ph.D. Program)

The Doctor of Philosophy degree is conferred upon individuals who have demonstrated the ability to make original contributions to the knowledge in this field. The Ph.D. program develops experts and professionals who will continue in academic work, industry, or government. It encourages the attainment of excellence in research and scholarship necessary to catalyze the advancement of industrial engineering.

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In general, applicants are required to have a Master of Science degree in industrial engineering or operations research with a minimum grade point average of 3.5. Students with an undergraduate degree in one of these areas and a grade point average of 3.5 or above may apply for direct admission to the Ph.D. program. In such cases direct admission will be predicated on the specific courses and strength of the undergraduate curriculum.

Applicants with an undergraduate major in mathematics, computer science, or the physical sciences, completed at an accredited institution, are also eligible for admission to this program, provided an evaluation concludes that the educational background includes sufficient background in analytically-oriented course work.

Industrial Engineering (Ph.D. Program) - Global Executive Track

This is a unique track/curriculum designed to accommodate the busy schedule of working executives. Applicants for this cohort-based program are expected to bring ten years of experience with five years or more of significant managerial experience and management span of control, global experience, a technical B.S. Degree, and a relevant graduate degree. Upon completion of the program, the candidate earns a Ph.D. in Industrial Engineering. Every year, a limited number of highly qualified, full-time working professionals are admitted for the Winter term (no admissions in Summer or Fall terms).

DEGREE REQUIREMENTS

Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate, including thirty credits of dissertation direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses IE 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. A preliminary examination, a written and oral qualifying examination, and an oral dissertation defense are required. All course work must be completed in accordance with the regulations of the Graduate School and the College of Engineering governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively. Students should consult Doctor of Philosophy Degrees (Ph.D.), p. 38 for Graduate School regulations governing doctoral study.

Industrial Engineering Courses (IE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5100 (BME 5010) Quantitative Physiology. (CHE 5100) (ECE 5100) (ME 5100) Cr. 4

The basic principles of human physiology presented from the engineering viewpoint. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models when feasible. (F,W)

5780 (ME 5780) Products Liability Introduction for Engineers. Cr. 1

Prereq: graduate standing in engineering. Application of engineering practice to minimize products liability exposure. Stages of a products liability lawsuit; how engineers may be involved at different stages of the process. (Y)

5995 Special Topics in Industrial Engineering. Cr. 1-4

Special subject matter in industrial engineering. Topics to be announced in Schedule of Classes. (I)

6000 Digital Automation. Cr. 4

Prereq: graduate standing in engineering. Fundamentals of digital control and logic; integration and automation solution technologies (barcode systems, vision systems, etc.); data acquisition. (S)

6005 Automotive Engineering Statistics. Cr. 3

Prereq: graduate standing. Offered for graduate credit only. Introduction to probability and statistics for engineering students: analysis of random component in problems, understanding probability and statistics, opportunities for application, analysis of data using statistical software. (W)

6180 (BME 6480) Biomedical Instrumentation. (ECE 6180) (ME 6180) Cr. 4

Prereq: ECE 3300, BME 5010 or BMS 6550 (or former BMS 5550), and BME 5020. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (W)

6210 Applied Engineering Statistics. Cr. 4

Prereq: BE 2100 or placement exam. No credit after IE 4250. Analysis of variability in engineering decision making; data analysis, probabilistic models, hypothesis testing, regression and analysis of variance. (F,W)

6220 Value Engineering. Cr. 4

Resource management; systematic approach to solving problems and making decisions; forcing latent capabilities to be applied to challenging assumptions; application of unbiased logic techniques to produce superior results. (S)

6240 Quality Management Systems. Cr. 4

Prereq: BE 2100 or placement exam. Design of quality management systems. Topics include: QFD, quality planning, business operating

systems, TQM, standards, and auditing. Quality management tools such as PDCA and root case analysis. (W)

6270 Engineering Experimental Design. Cr. 4

Prereq: IE 6210. The design of engineering experiments for manufacturing process analysis, human factors experimentation, societal systems analysis and life testing; basic experimental design models, blocking, factorial experiments, nested designs, covariance analysis, response surface analysis, estimation of effects. (F)

6310 Lean Operations and Manufacturing. Cr. 2

Fundamental theories and concepts in lean manufacturing, six-sigma, mistake proofing, problem solving, process management. Students develop competency in identifying causes and sources of waste in manufacturing, industrial, and business operations. (F,W)

6405 Integrated Product Development. (EVE 5600) (AET 5600) Cr. 4

Product development process: product architectures, concurrent engineering. Integration of marketing, design, and manufacturing functions for product development. How such processes are designed to account for various manufacturing and other business constraints to ensure that customer needs are met. (F)

6420 Computer Aided Manufacturing and Lab. Cr. 4

Prereq: IE 6415. CAM and process planning. Principles of manufacturing planning and control. Design and integration of ASRS, AGVS, robotic systems in manufacturing. (W)

6425 Product Lifecycle Management and Sustainable Design. Cr. 4

Prereq: enrollment in graduate engineering program. Introduction to modern principles, practices, and applications of PLM and sustainable design. (W)

6430 Computer Simulation Methods. Cr. 2

Coreq: IE 6310. The application of discrete, continuous and combined simulation methods to the solution of a variety of production and service systems problems. Computer simulation and a term project involving an application are required. (F,W)

6442 Facilities Design and Materials Flow. Cr. 2

Plant location theory, analysis of models of plant location. Models for determining plant size and time phasing. Design of manufacturing warehouse and material handling facilities. Use of analytical and computer-aided methods in the facilities design process. (W)

6470 Stochastic System Modeling: Queuing and Simulation. Cr. 2

Description of queuing systems; analytical solutions; discrete events systems; modeling framework and object models; terminating and non-terminating systems; statistical analysis; case studies. (Y)

6490 Introduction to Systems Engineering in Design. (SYE 6840) Cr. 2

Open only to engineering majors. Introduction to the engineering and analysis of systems with process focus. (F)

6510 Information Systems for the Manufacturing Enterprise. Cr. 2

Methods for information flow modeling. Information needs of global manufacturer: design, testing, manufacture, and delivery. Partnership relation to suppliers via information. (F)

6520 Negotiating in an I E Environment. Cr. 2

Open only to graduate students. Offered for graduate credit only. Analytic and interpersonal skills needed to negotiate effectively. Students integrate the analytic and interpersonal skills necessary to be an effective negotiator in a rapidly-changing technical environment. (B:S)

6560 Deterministic Optimization. Cr. 4

Offered for graduate credit only. Introduction to philosophy of operations research. Formulation of linear program models and their solutions. Duality and sensitivity analysis. The transportation model. Introduction to probabilistic modeling and applications of queuing models. Network models decision theory. (F, W)

6610 Introduction to Six Sigma. Cr. 4

For Fall and Winter terms, open to non-IE majors only (IE majors should elect IE 7610); for Spring/Summer terms, no restrictions apply. For the working engineer who requires exposure to basic concepts of 6-Sigma and its work applications. (W,S)

6840 (MGT 6840) Project Management. (SYE 6840) Cr. 1-4

Principles of successful project management including: time and cost management, risk analysis, human resource management. Consideration of both operational and conceptual issues. Introduction to project management tools. (W,S)

6850 Manufacturing Strategies. Cr. 2

Prereq: graduate standing in engineering. Strategic approach to the management of manufacturing including: relationship to corporate strategy, operationalizing manufacturing concepts, impact of new technology and manufacturing concepts, impact of new technology and manufacturing as a competitive resource; case-studies approach. (Y)

6991 Industrial Internship. Cr. 1-3

Prereq: prior written consent of department and supervisor in semester prior to internship assignment. Offered for S and U grades only. (F,W)

7100 (BME 7100) Mathematical Modeling in Impact Biomechanics. (ECE 7100) (ME 7100) Cr. 3-4

Prereq: IE 5100 or BMS 6550 or former BMS 5550; ME 3400. Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. (W)

7125 Human Factors Engineering. Cr. 4

Prereq: BE 2100 or equiv and graduate standing. Current methods and topics in engineering research on human capabilities and limitations as a system component. Advanced analysis, modeling and design of human-centered systems. (W)

7210 Robust Design. Cr. 4

Prereq: IE 6210. Fundamental principles including role of variability, types of noise, and variability reduction strategies to increase product quality. Techniques such as: DOE, RSM, Taguchi, reliability estimation, and design for reliability. (F)

7250 Quality Engineering. Cr. 4

Prereq: IE 6210. Quality loss function; introduction to on-line and off-line quality control; product and process design optimization using Taguchi methods; fractional factorial designs using orthogonal arrays and linear graphs; robust design and signal to noise ratio. (W)

7270 Reliability Estimation. Cr. 4

Prereq: BE 2100 or placement exam. Reliability measures, failure distributions, reliability block diagrams, reliability estimation using exponential and Weibull distributions, sequential life testing and Bayesian reliability. (F)

7290 Quality and Productivity Management. Cr. 4

Topics in product assurance management including: definition, history, philosophy of quality. Strategic elements of proactive quality, design for quality, process project control, reliability program management. (Y)

7315 Production Systems. Cr. 4

Topics include: Fundamental theories and concepts in design and operation of production systems for manufacturing and service organizations, using concepts of inventory management, production plan-

ning, factory physics, production control and supply, chain management. (W)

7325 Supply Chain Management. Cr. 4

Fundamental theories and concepts in design and management of supply chains. Theories and applications of mathematical models in SCM. Logistics, advanced strategic and tactical planning, extended enterprise integration. (F)

7400 Capstone: Integrated Product Engineering. Cr. 4

Prereq: IE 6400, IE 6410, IE 6420. Integration of product development tools and theory. Industry-based project to develop hands-on experience with integrated project design and development. Application to robust product development methodologies. (W)

7410 Agile Systems for the Manufacturing Enterprise. Cr. 2

Factors that help define the agility of a system; greater workforce autonomy and changes in training and production of technical personnel. Main elements of operations management. (Y)

7420 Flexible Manufacturing Systems. Cr. 4

Analysis and design of flexible manufacturing systems. FMS control and communication architecture, FMS material handling architecture. Flexibility analysis. Computer-integrated manufacturing (CIM). (F)

7520 Optimization Methods. Cr. 4

Prereq: basic knowledge of Linear programming and graduate standing. Introduction to optimization theory and optimization problems. Necessary and sufficient conditions for optimality. Mathematics and algorithms of linear programming. Non-linear programming and integer programming. Research methods. Duality in optimization problems. Geometric programming. (F)

7570 Deterministic System Models and Optimization. Cr. 2

Prereq: graduate standing. Methods for quantifying impact of specific constraints on overall performance of a system; use of journal articles on corporate use of these models. (Y)

7610 Fundamentals of Six Sigma. Cr. 4

Prereq: IE 6210. No credit after IE 6610. For the industrial engineer with a solid foundation in probability and statistics. Advanced knowledge to develop students into 6-Sigma consultants. (W)

7710 Introduction to Stochastic Processes. Cr. 4

Fundamental understanding of various probability models from applied and theoretical perspectives. Topics include: probability review, Markov chains, Poisson process, continuous time Markov chains, queuing processes, and inventory applications. (B)

7720 Engineering Risk and Decision Analysis. (SYE 7720) Cr. 3-4

Structure, modeling and analysis of technical management decisions with emphasis on multiple objectives and trade-offs, and significant uncertainty. Explores barriers to rational decision making. (B:W)

7830 Management of Technology Change. Cr. 2

Prereq: graduate standing. In-depth treatment of development and implementation of advanced technology; special attention to interaction among technology work process, organization, human resources, and culture. (F)

7860 Intelligent Analytics. Cr. 4

Prereq: graduate standing; strong familiarity with a computer language. Computational intelligence methods used to solve complex analytics problems and develop decision support systems. Project-centric approach with the goal of developing several analytics solutions for real-world problems. (F)

7870 Quality Leadership and Process Improvements. Cr. 2

Prereq: graduate standing. Quality philosophies used as basis for quality process improvements; discussions and journal articles used to examine re-engineering, supply chain management, and the human side of quality; team project included. (Y)

7880 Computer Supported Collaborative Engineering. Cr. 2

Prereq: graduate standing and IE 6420. Review of collaborative engineering tools, techniques and systems related to design and development of engineering products for both co-located and distributed team. (W)

7990 Directed Study. Cr. 1-6

Prereq: written consent of advisor, chairperson and graduate officer for master's students; written consent of advisor, chairperson and Dean of Graduate Studies for Ph.D. students. Student selects some field of industrial engineering for advanced study and instruction. An outline approved by the instructor must be presented before registration in this course. (T)

7995 Graduate Special Topics. (SYE 7995) Cr. 1-4

Special subject matter in industrial engineering. Topics to be announced in Schedule of Classes. (I)

7996 Research. Cr. 1-6

Prereq: written consent of advisor and chairperson; outline approved by instructor prior to registration for this course. Advanced design, investigation or experimental work. (T)

7999 Engineering Management Leadership Project. Cr. 1-6 (6 req.)

Prereq: written consent of advisor. Integration of knowledge from individual courses in M.S. engineering management curriculum. Team-oriented focus on major industrial problem. (T)

8920 Decision and Risk Analysis for Research. Cr. 3

Prereq: Global Executive Track or ISE Ph.D. standing (Major: IEG or INDE). Structure, modeling, and analysis of technical global management decisions with emphasis on multiple objectives and trade offs, and significant uncertainty. Explores current trends in decision analysis research. (B:F)

8930 Global Perspectives on Engineering Manufacturing and Management. Cr. 2

Prereq: Global Executive track Ph.D. student. Provides technical leaders with a system of frameworks to holistically understand and practically manage operations, to be technologically competitive in the global marketplace. Foundation for the Country Courses. (W)

8935 Global Engineering and Manufacturing Management: Eastern Europe. Cr. 1

Prereq: Global Executive track Ph.D. student. Country course designed to provide broad coverage about Eastern Europe to an industrial engineering cohort with considerable business experience. (F)

8936 Global Engineering and Manufacturing Management: South America and Mexico. Cr. 1

Prereq: Global Executive track Ph.D. student. Country course designed to provide broad coverage about South America and Mexico to an industrial engineering cohort with considerable business experience. (F)

8941 From Idea through Launch: Products and Services I. Cr. 2-3

Prereq: Global Executive track Ph.D. student. Course comprised of twelve modules; the processes and progression from product or service innovation to development and launch. (W)

8942 From Idea through Launch: Products and Services II. Cr. 2-4

Prereq: Global Executive track Ph.D. student. Course comprised of twelve modules; the processes and progression from product or service innovation to development and launch. (F)

8943 From Launch through Sustainability: Products and Services I. Cr. 2-4

Prereq: Global Executive track Ph.D. student. From when the finished product hits the market to all the steps necessary to make the product sustainable. (W)

8944 From Launch through Sustainability: Products and Services II. Cr. 2-4

Prereq: Global Executive track Ph.D. student. From when the finished product hits the market to all the steps necessary to make the product sustainable. (F)

8950 Advanced Engineering Statistics. Cr. 3

Prereq: Global Executive track Ph.D. student; successful completion of online refresher course. Skill development in model building, ANOVA, multiple regression, multivariate statistics, forecasting, and time series modeling. (F)

8951 Research Design. Cr. 3

Prereq: Global Executive track Ph.D. student. Focus on qualitative research design and methods. Discussion of conceptual and practical facets of the process of framing a research question, up to development of an instrument for data collection. (W)

8952 Research Methods. Cr. 3

Prereq: Global Executive track Ph.D. student. Focus on quantitative research design and methods. Topics such as purpose of statistical models, mathematical representation, interpretation, and methods are covered. Typical methods include: multiple regression, multivariate analysis (including survey data), and structural equation modeling. (F)

8960 Literature Review. Cr. 1-2

Prereq: Global Executive track Ph.D. student. Development of library skills for identifying key authors, articles, journals, books, dissertations, case studies, conferences, web sites, professional associations, and NSF funding for a scholarly area of interest. (S)

8970 Leadership of the Global Technical Organization. Cr. 3

Prereq: Global Executive track Ph.D. student. Understanding the elements of leadership and the dynamics of leadership behavior; development of the skills necessary for leading in a global technical organization. (W)

8992 Graduate Seminar: Product Development. Cr. 1

Prereq: Ph.D. standing. Offered for S and U grades only. Grad. students must earn total of 4 credits in IE 8990-8995. Research and development methods for Ph.D. students: literature review, identification of research opportunities, investigation of specific topics; assessment of major contributions and of gap between application and theory. Students present research findings and receive feedback. (I)

8993 Graduate Seminar: Supply Chain Management. Cr. 1

Prereq: Ph.D. standing. Offered for S and U grades only. Grad. students must earn total of 4 credits in IE 8990-8995. Research and development methods for Ph.D. students: literature review, identification of research opportunities, investigation of specific topics; assessment of major contributions and of gap between application and theory. Students present research findings and receive feedback. (I)

8995 Graduate Seminar. Cr. 1 (Max. 4)

Prereq: Ph.D. standing. Offered for S and U grades only. Grad. students must earn total of 4 credits in IE 8990-8995. Research and development methods. Leading-edge research topics. Platform for student to present preliminary research findings and obtain feedback. (F,W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of graduate advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: IE 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following IE 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: IE 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following IE 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: IE 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following IE 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in IE 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Systems Engineering Courses (SYE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5470 (ME 5470) Creative Problem Solving in Design and Manufacturing. Cr. 4

Coreq: ME 4250 or equiv. Concepts of laws of natural development of engineering systems. Algorithm for inventive (creative) problem-solving (AIPS-85). Creative use of physical and geometrical effects in design of mechanical and manufacturing systems. Concepts of strength, stiffness, vibratory effects, reliability in mechanical design. (Y)

6490 (IE 6490) Introduction to Systems Engineering in Design. Cr. 2

Open only to engineering majors. Introduction to the engineering and analysis of systems with process focus. (Y)

6840 (MGT 6840) Project Management. (IE 6840) Cr. 1-4

Principles of successful project management including: time and cost management, risk analysis, human resource management. Consideration of both operational and conceptual issues. Introduction to project management tools. (Y)

7720 (IE 7720) Engineering Risk and Decision Analysis. (Cr. 4

Structure, modeling and analysis of technical management decisions with emphasis on multiple objectives and tradeoffs, and significant uncertainty. Explores barriers to rational decision making. (B:W)

7995 (IE 7995) Graduate Special Topics. Cr. 1-4

Special subject matter in industrial engineering. Topics to be announced in Schedule of Classes. (Y)

Mechanical Engineering

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Chairperson: Nabil G. Chalhoub; ab9714@wayne.edu
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Professors

V.L. Berdichevsky, N.G. Chalhoub, N.A. Henein, R.A. Ibrahim, M.C. Lai,
G.M. Newaz, C.A. Tan, S.F. Wu

Associate Professors

E.O. Ayorinde, M. Jansons, J.C. Ku, X. Wu

Assistant Professors

Leela Arava, Guru Dinda,

Lecturers

M.A.E. Ozbeki, U. Asad

Professor Emeritus

W. Bryzik, C.N. DeSilva, K.A. Kline, R.A. Piccirelli, T. Singh, D. Taraza

Adjunct Professors

B. Abdul-Nour, D.M. Beloiu, F. Bolourchi, H. Farhat, I. Grace, N. Mital, A. Padgaonkar, V. Pylypchuk, J. Min, S. Raveendra, G. Santangelo, H. Shapiro, H. Tang, C. Wang

Graduate Degrees

MASTER OF SCIENCE in Mechanical Engineering

DOCTOR OF PHILOSOPHY with a major in Mechanical Engineering

The opportunities and challenges in the field of mechanical engineering are diverse and virtually unlimited. The broad variety of career possibilities includes research and development, design analysis and synthesis, manufacturing and production engineering, testing, sales, engineering, maintenance and administration. The challenge of a mechanical engineer may lie in the perfection and reliability of a device that will be duplicated a million-fold or in the control optimization of a single complex system of unique design. The mechanical engineering curriculum is designed to prepare graduate students in many applied fields, including such important areas as biomechanics, energy conversion, combustion engines, emissions controls, machine tool design, manufacturing, computer graphics, structural analysis, automatic controls, vehicle dynamics and design, continuum mechanics, fluid dynamics, environmental design, mechanisms, acoustics and noise control, laser diagnostics, and composite materials. Faculty members in the Department are currently engaged in state-of-the-art research in all of these areas. Specialized areas of research support for graduate students include: manufacturing processes, composite material behavior, combustion, acoustics and noise control, vibrations, laser diagnostics, biomechanics, control of mechanical systems, sheet metal stamping, and engine research.

Part-time study (with most courses offered in the evening) and cooperative programs allow professionals working in local industry to pursue graduate degrees while employed.

Mechanical Engineering (M.S. Program)

Program specializations at the master's degree level may be undertaken in many areas, including acoustics, vibrations, machine tool design, biomechanics, combustion engines, controls, composite materials, and fluid and solid mechanics, among others. These program specializations are available to both part-time and full-time students, in either research or non-research degree programs.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

DEGREE REQUIREMENTS

The master's degree in mechanical engineering is offered under the following options:

Plan A: A minimum of thirty-two credits in course work including an eight-credit thesis.

Plan C: A minimum of thirty-two credits in course work.

Students can choose up to three semesters of internship with the permission of both the ME Graduate Advisor and the Office of International Students and Scholars (OISS). ME 6991 credits must be taken in addition to the minimum 32 credits required for the MSME under either plan A or plan C.

Credit distribution includes: at least twenty-four credits in mechanical engineering courses, including a minimum of two courses on the 7000-level for Plan A students in addition to their MS thesis and three courses on the 7000-level courses for Plan C students. Directed study and directed research courses (ME 7990 and 7996) cannot be counted toward satisfying the 7000-level course requirement. A maximum of four credits in directed study or directed research (ME 5990, 7990 and 7996) can be applied towards the degree. Every master's degree student must select at least four courses from one of the following thrust areas: Noise and Vibration Control, Advanced Materials and Manufacturing, Advanced Propulsion & Energy Systems. A list of approved courses in each of the three thrust areas can be found in the Handbook for Graduate Students in Mechanical Engineering, available from the Department and listed on the Department home page. In addition, a minimum of four credits in a math intensive course is required. The math intensive course may be taken from the following suggested list: ME 5400, 5410, 5440, 5460, 6550, 5100, 5160, 5620, 5700, 5720, 5300 and 5800; MAT 5070, 5220, 5230, 5410. Thesis credit requirements are met by satisfactory completion of ME 8999. The overall GPA for completing MSME Degree is B or better with no more than two courses with grades of C. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Mechanical Engineering (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. It is required that applicants submit Graduate Record Examination (GRE) scores. In addition, applicants must have a graduate grade point average of 3.5 or above and must have completed an undergraduate major or substantial specialized work in his/her proposed doctoral major field. Students with an undergraduate grade point average of 3.5 or above may apply for direct admission to the Ph.D. program; students with less than a 3.5 undergraduate g.p.a.

must complete a master's degree program in mechanical engineering prior to consideration for admission to a Ph.D. program.

DEGREE REQUIREMENTS

A minimum of ninety semester credits beyond the baccalaureate degree must be earned in the Ph.D. program. The thirty credit dissertation registration requirement is fulfilled by registering for the courses ME 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. In addition, at least half of all course work credit exclusive of dissertation credits must be earned in the Department of Mechanical Engineering. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively.

Requirements for All Ph.D. Students

1. Preliminary Qualifying Examination: This is a three-part written examination administered once per year. All Ph.D. applicants must pass this examination within three semesters after admission to the Ph.D. program. Students must choose to be examined in any three of the following fields: (i) Controls, (ii) Dynamics, (iii) Vibrations, (iv) Fluid Mechanics, (v) Solid Mechanics, (vi) Thermodynamics, and (vii) Heat and Mass Transfer. Each student has two chances to pass this examination. Students must register their choice of fields with the Director of Graduate Studies at least thirty days prior to the examination date.

2. Final Qualifying Examination: This examination consists of written and oral parts covering the student's major and minor areas and other related fields. The student is expected to take this examination before registering for ME 9991.

3. An approved Plan of Work should be filed with the Office for Graduate Studies, see Plan of Work, Doctoral, p. 38, or <http://wayne.edu/gradschool/phd/forms>, for further information.

4. A Doctoral Dissertation Outline, approved by *all* members of the Doctoral Committee and the Departmental Graduate Program Committee should be filed by the student immediately after completing the oral part of the Final Qualifying Examination.

Mechanical Engineering Courses (ME)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5040 Finite Element Methods I. Cr. 4

Prereq: graduate standing in engineering. Introduce finite element methods and review solid mechanics concepts and formalisms, variational methods and potential energy principles. Emphasize the basic understanding of the finite element method including its physical and mathematical principles, numerical procedures and their implementation. Define displacement-based formulations of spring, bar, beam, plane strain and plane stress elements along with isoparametric element formulation, assembly of elements and solution of global stiffness equations. (F,W)

5100 (BME 5010) Quantitative Physiology. (CHE 5100) (ECE 5100) (IE 5100) Cr. 4

The basic principles of human physiology presented from the engineering viewpoint. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by simple mathematical models when feasible. (F,W)

5110 (EVE 5130) Fundamental Fuel Cell Systems. (AET 5110) (CHE 5110) Cr. 4

Prereq: graduate standing engineering. Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. (F)

5115 (EVE 5110) Fundamentals of Electric-drive Vehicle Engineering. Cr. 4

Prereq: graduate standing in engineering. Cover engineering fundamentals and basic design of electric-drive vehicle powertrains by understanding and analyzing the relevant multi-physics and applying the associated equations and simple models. (F)

5120 Fundamentals of Alternative Energy Technology. (AET 5120) Cr. 4

Prereq: graduate standing in engineering. Provide an overview/review of thermodynamics. Cover advanced thermodynamics topics of energy and chemical reacting systems. Introduce general areas of alternative energy technology, engineering analysis and design of solar angle/time/radiation, solar heating, solar photovoltaic, and wind power. (W)

5160 (BME 5210) Musculoskeletal Biomechanics. Cr. 4

Prereq: BME 5010 or BMS 6550 or former BMS 5550. Structure and properties of the major tissue components of the musculoskeletal system and evaluation of how tissues combine to provide support and motion to the body. (W)

5170 Design of Human Rehabilitation Systems. Cr. 4

Prereq: senior or graduate standing in science or engineering discipline. Design, fabrication and testing of customized hardware to aid handicapped patients. (F)

5180 (BME 5370) Introduction to Biomaterials. Cr. 4

Prereq: BE 1300, BME 5010 or BMS 6550 (or former BMS 5550). Introduction to study of both biological materials (bone, muscle, etc.) and materials for medical applications. Topics include tissue properties and effects of pathology, biocompatibility, and design considerations. (Y)

5210 Convective and Radiative Heat Transfer. Cr. 4

Prereq: graduate standing in engineering. Introduce radiative processes, properties of solids, radiative heat transfer among surfaces in an enclosure and gas radiation. Derive energy equation for laminar flows. Apply semi-empirical correlations for forced and free convection of laminar and turbulent flows. Implement analytical methods for convective heat transfer and heat exchange analysis. (F)

5215 (EVE 5120) Fundamentals of Battery Systems for Electric and Hybrid Vehicles. (AET 5310) (CHE 5120) Cr. 4

Prereq: graduate standing in engineering. Cover fundamental electrochemistry and engineering aspects for electric propulsion batteries including lead acid, nickel metal hydride, lithium ion and capacitor technologies. (W)

5300 Intermediate Fluid Mechanics. Cr. 4

Prereq: graduate standing in engineering. Introduce fluid kinematics entailing vector field, potential flows, vorticity along with the computation of particle trajectory in a given velocity field and near stagnation points. Define basics of fluid dynamics including stress tensor in fluids, Navier-Stokes equations, Euler's equations, properties of solutions of Euler's equations, Bernoulli's integral and role of viscosity. Extend the analysis to two-dimensional potential flows and vortex flows. (W)

5330 Advanced Thermal Fluid System Design. Cr. 4

Prereq: ME 4210 and ENG 3060. Open only to AGRAD students. Involve teamwork on semester-long open-ended design project of thermal fluid systems to meet performance requirements using sound design process and system engineering approach. Apply engineering principles and computational design software to analyze and optimize system or subsystem processes. (F,W)

5400 Dynamics II. Cr. 4

Prereq: graduate standing in engineering. Cover three-dimensional kinematics and kinetics of rigid bodies, Euler angles, angular momentum, D'Alembert Principle, equations of motion in general rotating coordinate frames. Derive Lagrange's equation of motion for particles and rigid bodies. Introduce Lagrange multipliers, holonomic and non-holonomic constraints, virtual work principle, and Hamilton's Principle. Material Fee As Indicated In The Schedule of Classes (F)

5410 Vibrations II. Cr. 4

Prereq: graduate standing in engineering. Review the vibration response of two-degree-of-freedom systems including frequency response function. Extend the analysis to multi-degree-of-freedom systems including eigenvalues (natural frequencies) and orthogonality of eigenvectors (normal modes). Introduce numerical and experimental modal analysis techniques. Formulate the boundary-value problem for the vibration of continuous structural elements such as rods, strings, and beams. (W)

5425 Analysis of Vibration Movements and Instrumentation. Cr. 4

Prereq: graduate student standing in engineering. Basic tools and instrumentation, such as spectral analyzers to measure and analyze vibration time histories of excitation and response signals (stationary or non-stationary) in the time and frequency domains. Fast Fourier transform, frequency time analyses. Material Fee As Indicated In The Schedule of Classes (F)

5440 Industrial Noise Control. Cr. 4

Prereq: graduate standing in engineering. Basic and advanced measurement techniques to acquire various acoustic quantities in a non-ideal environment including measurements of pressure, power and

intensity of sound levels, reverberation time, absorption, coefficients of materials, room acoustics, and modal analysis. Cover noise reduction and control strategies for engineering applications. (F)

5453 Automotive Manufacturing Systems and Processes. Cr. 4

Prereq: graduate standing in engineering. Introduce principles and methodologies of automotive assembly systems and processes. Cover operation management, quality management, principle of system development, planning and analysis of assembly systems and supportive functions, assembly processes, automatic and manual operations, management of tooling development and honing processes of sheet metal parts. (S)

5460 Fundamentals in Acoustics and Noise Control. Cr. 4

Prereq: graduate standing in engineering. Introduce principles of sound generation, propagation and interaction with solid boundary surfaces, as well as engineering noise control applications. Gain hands-on experience on simulating sound radiation and interactions with solid boundaries, and estimating sound transmission through partitions. (B:F)

5580 Computer-Aided Mechanical Design. Cr. 4

Prereq: graduate standing in engineering. Introduce aspects of constraint-based solid modeling and parametric modeling using Uni-graphics, Solid Edge, I-DEAS and Pro-E. Develop intelligent solid models with application to data management and sheet metal design. Introduce computer-aided simulation and manufacturing. (S)

5620 Fracture Mechanics in Engineering Design. Cr. 4

Prereq: graduate standing in engineering. Introduce linear and non-linear fracture mechanics principles and their applications to structural design. Formulate fracture parameters based on energy methods and stress-intensity factors for linear elastic fracture mechanics (LEFM), J-Integral and crack tip opening displacement (CTOD) for elastic plastic fracture mechanics (EPFM). Introduce design concepts based on failure assessment diagram and damage tolerance. Cover crack growth mechanisms, crack closure and crack retardation concepts. (F,W)

5700 Fundamentals of Mechanics. Cr. 4

Prereq: graduate standing in engineering. Introduce Lagrangian and Hamiltonian classical mechanics. Derive thermodynamics laws from mechanics. Cover continuum kinematics and basics of tensor analysis, continuum mechanics (basic laws; thermodynamics of continuum media; classical continuum models). Material Fee As Indicated In The Schedule of Classes (W)

5720 Mechanics of Composite Materials. Cr. 4

Prereq: graduate standing in engineering. Develop a comprehensive understanding of analytical models of micro-mechanical and macro-mechanical behavior of composite materials. Conduct stiffness, strength, hydrothermal, laminate, viscoelastic, dynamic behavior and fracture analyses. Introduce experimental characterization procedures for mechanical behavior evaluation. (F)

5730 Tribology and Lubrication Technology. Cr. 4

Prereq: graduate standing in engineering. Introduce friction, wear, and lubrication fundamentals including wear mechanisms, application of coatings, surface engineering fundamentals, measurement of surface topological features and surface wear. (Y)

5780 Products Liability Introduction for Engineers. (IE 5780) Cr. 1

Prereq: graduate standing in engineering. Application of engineering practice to minimize products liability exposure. Stages of a products liability lawsuit; how engineers may be involved at different stages of the process. (Y)

5800 Combustion Engines. Cr. 4

Prereq: graduate standing in engineering. Cover thermodynamics and cycle analysis of spark and compression ignition engines. Intro-

duce combustion processes in actual systems, engine performance characteristics and engine modeling. (F,W)

5810 Combustion and Emissions. Cr. 4

Prereq: ME 5800 and graduate standing in engineering. Define air quality and emissions standards. Cover fundamentals of emission formation in combustion systems, wall quenching and imperfect combustion, unburned hydrocarbons, carbon monoxide, aldehydes, nitrogen oxides, species stratification in the combustion chamber, and particulates. Discuss the effects of design parameters and engine operating variables on emission formation. Introduce chemical kinetics simulation. (W)

5820 Thermal Environmental Engineering. Cr. 4

Prereq: graduate standing in engineering. Design and analyze heating, ventilating and air-conditioning systems. Introduce moist air properties calculations, heat transfer and transmission coefficients, heating load, cooling load, heating and cooling equipment, duct design, fans, air distribution, and refrigeration principles. (S)

5900 National Design Competition Projects. Cr. 1-4 (Max. 6)

Prereq: written consent of director of undergraduate studies or the director of graduate studies. (T)

5990 Directed Study. Cr. 1-4 (Max. 6)

Prereq: senior or graduate standing; seniors: written consent of advisor and chairperson; graduates: written consent of advisor, chairperson, Open only to seniors and graduate students. (T)

5995 Special Topics in Mechanical Engineering I. Cr. 1-4 (Max. 8)

Prereq: graduate standing in engineering. Maximum of eight credits in special topics may be elected in any one degree program. Topics to be announced in Schedule of Classes. (I)

6180 (BME 6480) Biomedical Instrumentation. (ECE 6180) (IE 6180) Cr. 4

Prereq: ECE 3300, BME 5010 or BMS 6550 (or former BMS 5550), and BME 5020. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (W)

6550 Modeling and Control of Dynamic Systems. Cr. 4

Prereq: graduate standing in engineering. Introduce state-space representation of dynamical systems, apply Lyapunov stability criteria, and examine controllability and observability of systems. Design linear state feedback controllers using pole-placement technique and formulate full- and reduced-order linear state observers such as Luenberger observer. Design linear model following controller and linear quadratic optimal controllers Material Fee As Indicated In The Schedule of Classes (F)

6991 Internship in Industry. Cr. 1-4 (Max. 4)

Offered for S and U grades only. Written report describing internship experience. (T)

7020 Finite Element Methods II. Cr. 4

Prereq: graduate standing in engineering. Introduce isoparametric elements, plate and shell elements. Perform dynamic analysis of structures (explicit versus implicit methods). Formulate problems with geometric, materials, and/or contact nonlinearities. Introduce hybrid variational techniques, Cover examples dealing with solids, fluids and heat transfer by utilizing commercially available software such as HyperMesh, OptiStruct, LS/DYNA and ANSYS. (W)

7100 (BME 7100) Mathematical Modeling in Impact Biomechanics. (ECE 7100) (IE 7100) Cr. 3-4

Prereq: ME 3400, and BME 5010 or BMS 6550 (or former BMS 5550); written consent of instructor. Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. (W)

7160 (BME 7160) Impact Biomechanics. (ECE 7160) Cr. 4

Prereq: BME 5010 or BMS 6550 or former BMS 5550. Biomechanical response of the body regions and the whole body to impact. Mechanisms of injury in blunt impact. Effects of restraints on injury reduction. Development of test surrogates such as dummies. Material Fee As Indicated In The Schedule of Classes (F)

7180 (BME 7300) Advanced Topics in Biomaterials and Tissue Mechanics. (MSE 7180) Cr. 4

Prereq: BME 5210 or 5370. Seminar format: advanced topics presented to the class; lectures by the instructor and by the participants based on literature reviews. Topics determined by student interest. (B)

7195 (BME 7210) Tissue Biomechanics. Cr. 4

Prereq: BME 5010 or BMS 6550 or former BMS 5550; BME 5020, BME 5210. Tissue-level mechanical properties. Analytical models of hard and soft tissue mechanics. Soft tissue viscoelasticity, quasilinear viscoelasticity and biphasic theory. Wolff's law and bone remodeling, bone fatigue and microfracture. Form and function relationships from microstructure to macrostructure. (B:F)

7260 Heat and Mass Transfer. Cr. 4

Prereq: graduate standing in engineering. Introduce transport phenomena and rate equations. Formulate heat and mass transfer problems using lumped, differential and integral formulations. Solve these problems using the method of separation of variables, partial solutions, variation of parameters, superposition, Laplace transformation and Duhamel Integral for problems with time-dependent boundary conditions. Apply these concepts to various thermal and combustion systems. (F)

7290 Advanced Combustion and Emissions I. Cr. 4

Prereq: graduate standing in engineering. Introduce thermodynamics of chemically reacting mixtures, oxidation mechanisms of hydrocarbon fuels, theories of explosions, structure of pre-mixed hydrocarbon flames, propagation of laminar premixed flames, pre-mixed turbulent flames, kinetics of nitrogen oxides formation, combustion and emissions in spark ignition engines and control strategies. Material Fee As Indicated In The Schedule of Classes (W)

7300 Advanced Fluid Mechanics. Cr. 4

Prereq: graduate standing in engineering. Understand the physics of governing equations of conservation of mass, momentum, energy, and other scalar properties in transport processes. Express the numerical aspects of the transport processes in finite volume approach and pressure-based solution algorithm. Introduce physical models of turbulence, multi-phase and reacting flows. Acquire hands-on experience of formulation, meshing, simulation, post-processing and presentation to solve engineering problems. Stress the importance of CFD encountered in real-life engineering applications. (W)

7310 Computational Fluid Mechanics and Heat Transfer. Cr. 4

Prereq: ME 5300 and graduate standing in engineering. Understand the physics of governing equations of conservation of mass, momentum, energy, and other scalar properties in transport processes. Express the numerical aspects of the transport processes in finite volume approach and pressure-based solution algorithm. Introduce physical models of turbulence, multi-phase and reacting flows. Acquire hands-on experience of formulation, meshing, simulation, post-processing and presentation to solve engineering problems. Stress the importance of CFD encountered in real-life engineering applications. (F)

7315 (EVE 7310) Electric-drive Vehicle Modeling and Simulation. Cr. 4

Prereq: graduate standing in engineering. Cover modeling, simulation and control of electric-drive vehicle powertrain including plant modeling, controls model development, and in-the-loop controls testing. Proficiency in MATLAB/Simulink is required. (W)

7400 Advanced Dynamics. Cr. 4

Prereq: ME 5400 and graduate standing in engineering. Introduce physical concepts and formalisms of Newtonian, Lagrangian, and Hamiltonian mechanics. Formulate calculus of variations including Hamiltonian least action principle and Euler-Lagrange equation. Develop the boundary-value problem of continuous elastic structures using Hamilton's principle. Model strongly nonlinear dynamical systems involving impact, non-smooth and discontinuous loads. Material Fee As Indicated In The Schedule of Classes (W)

7410 Vibrations of Continuous Systems. Cr. 4

Prereq: ME 5400 and 5410; graduate standing in engineering. Model and solve boundary-value problems of vibration for continuous elastic structures using approximate algorithms and computational schemes. Assess the effects of boundary conditions on the eigenvalue problem of geometrically nonlinear elastic structures. (W)

7420 Random Vibrations. Cr. 4

Prereq: graduate standing in engineering. Introduce statistical parameters of random vibration such as mean, mean square, correlation function, power spectral density, cumulant and moment generating function. Define Brownian motion process, white noise, Markov processes, and Fokker-Planck-Kolmogorov equation. Develop stochastic calculus rules (Itô and Stratonovich integrals) and stochastic averaging. Generate random response statistics of single- and two-degree-of-freedom systems. (W)

7440 Signal Processing Technologies and Their Applications. Cr. 4

Prereq: graduate standing in engineering. Develop advanced signal processing techniques for analyzing transient signals containing discontinuities and sharp spikes with applications to such fields as blind sources separation, de-noising time-domain signals, etc. Acquire hands-on experience with software such as LabVIEW to set up experiments and analyze data. (W)

7451 Advanced Manufacturing II: Material Forming. Cr. 4

Prereq: graduate standing in engineering. Cover classical theory of plasticity and basic equations, deformation behavior and constitutive equations of materials, deformation mechanisms related to microstructures, mechanical analyses of various forming processes, experimental study on material properties, microstructure evolution and forming mechanics. (B:F)

7460 Advanced Acoustics and Noise Control. Cr. 4

Prereq: ME 5460 and graduate standing in engineering. Introduce advanced techniques in near-field acoustical holography for visualizing acoustic fields, analyzing vibro-acoustic correlations and identifying the critical vibration components responsible for acoustic radiation from a vibrating structure. (B:W)

7480 Nonlinear Vibration. Cr. 4

Prereq: ME 5410 and 7400; graduate standing in engineering. Categorize nonlinearities in mechanical systems and qualitatively describe their effects on the dynamic response. Introduce the concepts of phase portrait, limit cycles, dynamic characteristics of Duffing and Van der Pol oscillators, parametric vibration and parametric resonance. Outline nonlinear techniques such as harmonic balance, averaging method, and multiple scales methods to analyze nonlinear modal interaction (internal resonance), vibro-impact dynamics and chaotic motion. (F)

7550 Control of Dynamic Systems. Cr. 4

Prereq: ME 6550 or ECE 5470; graduate standing in engineering. Formulate static optimization problems with equality constraints, system identification, parameter optimization using Lyapunov's method. Introduce calculus of variations including dynamic optimization with equality constraints and apply them to formulate linear regulator and tracking problems. Introduce Pontryagin's minimum principle and state inequality constraints. Solve minimum time prob-

lems and minimum control effort problems. Material Fee As Indicated In The Schedule of Classes. (W)

7590 Nonlinear Control Systems. (ECE 7420) Cr. 4

Prereq: ME 6550 or ECE 5470; graduate standing in engineering. Provide examples of nonlinear dynamical control systems, perform system analysis using phase-portrait, and examine stability using Lyapunov's direct method and invariant set theorems (local and global stability). Introduce describing function method, feedback linearization technique, internal dynamics, and zero-dynamics. Design nonlinear robust controllers. (F)

7610 Theory of Elasticity. Cr. 4

Prereq: ME 5700 and graduate standing in engineering. Define boundary value problems of linear elasticity. Cover variational principles in linear elasticity along with theory of beams, plates and shells. Introduce homogenized description of composite materials. Material Fee As Indicated In The Schedule of Classes (F)

7680 Manufacturing Processing Mechanics. Cr. 4

Prereq: ME 5040; graduate standing in engineering and written consent of instructor. Perform finite element analysis (FEA) of non-linear large strain deformation problems using the software ABAQUS. Cover thermal-mechanical coupled deformation problems involving micro-manufacturing of micro-electronic mechanical systems (MEMS), electronic packaging, composite curing, creep-fatigue of micro-system and large plastic deformation in metal forming. (Y)

7720 Advanced Mechanics of Composite Materials. Cr. 4

Prereq: ME 5720; graduate standing in engineering. Conduct a review on tensor notation with application to stress strain and constitutive equations. Develop damage tolerance analysis and approaches including durability of composite materials and structures. Conduct extensive literature review and independent focused research on the above topics that encompass advanced models and their applications. (W)

7820 Engineering Non-Destructive Evaluation (NDE) Methods and Industrial Applications. Cr. 4

Prereq: graduate standing in engineering. Cover basic and advanced non-destructive evaluation methods used in industry. Treat in-depth the physics and engineering NDE applications of ultrasonics, vibration, acoustic emission and thermal wave sciences. Cover methodologies of penetrant and eddy current diagnostics. Illustrate NDE concepts through laboratory experiments. (F)

7850 Dynamics and Vibration of Automotive Engines. Cr. 4

Prereq: ME 5800; graduate student standing. Covers kinematics, dynamics and balance of reciprocating engines, engine mounts and torsional vibrations of powertrains. (Y)

7990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: written consent of chairperson or graduate director. Advanced study and instruction in mechanical engineering. (T)

7995 Special Topics in Mechanical Engineering II. Cr. 1-8 (Max. 8)

Prereq: written consent of chairperson or graduate director. Special subject matter in mechanical engineering. Topics to be announced in Schedule of Classes. (I)

7996 Research. Cr. 1-4 (Max. 4)

Prereq: written consent of chairperson or graduate director. Perform experimental and analytic study on a selected topic in mechanical engineering. (T)

7997 Mechanical Engineering Graduate Seminar. Cr. 0

Prereq: graduate standing. Offered for S and U grades only. Advanced concepts in mechanical engineering; presentation of research results and current developments. Written reports required. (F,W)

8020 Crashworthiness and Occupant Protection in Transportation Systems I. Cr. 4

Prereq: ME 5040. Introduce crashworthiness and occupant safety facts along with computational environment influences. Review of federal motor vehicle safety regulations. Design strategies for crash load sustainment and disbursement. Review the plasticity theory and its application to modeling and design. Define strategic material selection for crash affected and related regions. Cover modeling, analysis and simulation techniques in restraint systems, energy management, and various barrier crash tests. (F,W)

8030 Crashworthiness and Occupant Protection in Transportation Systems II. Cr. 4

Prereq: ME 8020. Develop mathematical models of vehicle crashes in front, side, rear, and rollover modes. Cover roles of vehicle structures and restraint systems in reducing risk of injury. (W)

8290 Advanced Combustion and Emissions II. Cr. 4

Prereq: ME 7260. Introduce single-component and multi-component droplet evaporation and combustion processes, liquid fuel sprays formation, evaporation and combustible mixture formation, comparison between autoignition of homogeneous and heterogeneous mixtures, diffusion flames, combustion of liquid sprays in compression ignition engines and emission control strategies along with advances in gasoline compression ignition engines. (W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ME 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ME 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ME 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ME 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ME 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ME 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ME 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Engineering Technology, Division of

Office: 4855 Fourth Street; 313-577-0800

Chairperson: Chih-Ping Yeh

Website: <http://www.et.eng.wayne.edu/>

Professors

Gene Liao, Mukasa E. Ssemakula, Ece Yaprak

Associate Professors

Chih-Ping Yeh

Assistant Professors

Jimmy Chen, Wen Chen, Ana Djuric

Part-Time Faculty

Wayne Cai, Randy Fang, David Fu, Bryce Grevemeyer, Kuochih Hong, Ramarajan Ilankamban, Jean C. Lynn, Gopi K. Neelem, Boguslow Opalinski, Sandra Overway, Vinod K. Singh, Moise Sunda, Joseph Vaglica, Kwo-Hsiung Young, Mark Zokvic

Graduate Degree

MASTER OF SCIENCE in Engineering Technology

The Division of Engineering Technology, founded in 1973, stresses the application of current technology to typical industrial problems. The curricula maintain a close relationship between theoretical principles taught in the classroom and their applications.

Engineering technology is a profession closely related to engineering. It deals with the application of knowledge and skills to industrial processes, production and management. Technologists are organizers of people, materials, and equipment for the effective planning, construction and maintenance of technical facilities and operations. Their responsibilities require technical and practical knowledge. Graduates of Wayne State's engineering technology programs are employed in such areas as manufacturing engineering, engineering production, marketing, maintenance, quality control, product testing, field engineering, consulting engineering, design, and technical supervision.

Engineering Technology (M.S. Program)

The Master of Science in Engineering Technology (M.S.E.T.) program is designed to meet the needs of adults who wish to expand or upgrade their knowledge within the areas of their previous training or current profession. It provides for highly individualized graduate study, and is designed to promote greater depth of understanding in a field of specialization beyond the bachelor's level. It allows more advanced coverage in specialized topics, develops more rigorous analytical skills, helps to advance expertise, and prepares graduates to perform more sophisticated and independent work.

Admission Requirements and Student Selection Procedures:

Admission to the M.S.E.T. degree program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, all applicants must:

- Hold a bachelor's degree in engineering technology or a related discipline from a college or university of recognized standing, or the equivalent;
- Have maintained at least a 'B' average (3.0 g.p.a.) in undergraduate coursework;

c) Provide at least two letters of recommendation from persons acquainted with the applicant's academic achievement at the institution most recently attended (applicants whose academic references date back more than five years may substitute other references, if desired);

d) Submit with his/her application a preliminary proposal for the intended plan of study which includes a general set of objectives and an outline of types of coursework or other educational projects to be pursued;

2. Applicants who do not meet the 3.0 g.p.a. requirement but whose g.p.a. does fall within the Graduate School's qualified admission span (2.5 to 2.9 g.p.a.) may be admitted with a conditional status. Immediately upon successful completion of two graduate-level courses with a grade of 'B' or above, the candidate must request in writing that his/her status be changed to regular status.

3. Students will be required to submit a finalized Plan of Work, listing all the courses the student intends to take to fulfill the degree requirements. The Plan must be developed with the aid of the student's faculty advisor and is generally submitted by the time the student has earned eight credits.

DEGREE REQUIREMENTS

The Master of Science in Engineering Technology degree is offered under the following options:

PLAN B: A minimum of thirty-two credits in graduate-level (numbered 5000 and above) course work, including a four- to six-credit Master's Project (ET 7999).

PLAN C: A minimum of thirty-two credits of graduate level course work (numbered 5000 and above).

For either plan, students must complete the core requirements: ET 7430, ET 7450, and ET 7850. A minimum grade of 'B' is required in core courses, and no 'F' grade in any course is acceptable. All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees (see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Engineering, p. 166, respectively), in addition to fulfilling the general scholarship requirements of the Division.

Residency Requirement: Of the required credits for the M.S.E.T. degree, a minimum of eighteen must be Division of Engineering Technology courses. A maximum of eight transfer credits may be allowed for graduate courses taken at other accredited institutions, if they are appropriate to the student's plan of study. Up to eight credits in graduate courses completed at Wayne State as a non-degree graduate student may be applied toward degree requirements and must be included in the applicant's preliminary Plan of Work. Minimum completion period for the degree is three semesters.

Master's Project: ET 7999 integrates the knowledge gained in coursework, laboratory studies, and prior work experience to provide a focused activity demonstrating the student's ability to perform master's-level work. The master's project should include elements of design, synthesis, fabrication, modeling and simulation, CAD/CAM, and empirical and theoretical analysis balanced in a manner appropriate to the student's specific project.

A member of the Division of Engineering Technology faculty holding a graduate faculty appointment chairs the student's Master's Project Advisory Committee. (Individuals outside the Division directing master's project research must hold an adjunct graduate faculty appointment.) An adjunct graduate faculty member may co-chair the Committee. Using the form provided by the Division, the student must submit a proposal indicating the scope of the project, the problem to be solved, the nature of the system to be studied, the plan of approach and work plan for the activity, facilities and resources to be employed, and the student's qualifications for performing this work. The Master's Project Advisory Committee may accept, decline, or request resubmission of the proposal as explained to the student.

Only students with accepted proposals are allowed to register for ET 7999. Requests to elect additional credits in ET 7999 beyond those originally allowed by the Master's Project Advisory Committee must also be approved by the Committee.

Engineering Technology Courses (ET)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5100 Fundamentals of Mechatronics and Industrial Applications. Cr. 3

Prereq: EET3180 or MCT 3010. Fundamentals of mechatronics and their applications in industry; building blocks of mechatronic products including sensors, proximity, displacement and rotational measurement sensors, force and torque measurement sensors, pressure sensors, accelerometers, and actuators; introduction of closed-loop control, electrohydraulic motion control, PLC mechatronics design by embedding sensors, actuators and controllers into mechanical components. (W)

5500 Graduate Industrial Internship. Cr. 1-4 (Max. 4)

Prereq: graduate standing and written consent of instructor. Offered for S and U grades only. Offered for graduate credit only. Industrial practice under supervision in cooperative education. Oral presentation and written report describing professional experience required. (T)

5870 Engineering Project Management. Cr. 3

Prereq: MAT 1800. Insights into human and organizational behavior affecting products; quantitative tools for successful management of engineering projects. A variety of product types are addressed. How to select, initiate, operate and control as well as terminate a project. (F,W)

5995 Special Topics in Engineering Technology I. Cr. 1-4 (Max. 8)

Prereq: written consent of instructor. Topics to be announced in Schedule of Classes. (I)

7300 Advanced Battery Systems for Hybrid Electric Vehicles. Cr. 4

Prereq: PHY 2140. Hybrid vehicle technology and battery fundamentals, including powertrain requirement, configuration and components, in-vehicle emergency storage systems, thermal management, control systems, cell monitoring, balancing, and on-board diagnostics. Computer simulation for battery system modeling and hands-on experiments for battery testing, validation, and verification. (F,W)

7430 Methods of Engineering Analysis I. Cr. 4

Prereq: ET 3450. Applications of differential equations, partial derivatives, Laplace transforms, Fourier series, matrices, vectors. (F,W)

7450 Methods of Engineering Analysis II. Cr. 4

Prereq: CSC 1050; coreq: ET 7430. Computer applications and numerical methods of solving differential and integral equations, fast Fourier transforms, spectrum analysis, curve fitting, approximation of function. (W)

7850 Statistical Methods and Applications. Cr. 4

Prereq: ET 3850, coreq: ET 7430. Sampling techniques in production data analysis, correlation coefficients, regression analysis, control charts, design of experiments, analysis of variance, Factor analysis. (W)

7990 Directed Study. Cr. 1-8 (Max. 8)

Prereq: written consent of instructor. Supervised study and instruction in an advanced topic. Outline of proposed study and petition

must be submitted to graduate committee in advance of registration for approval. (T)

7995 Special Topics in Engineering Technology II. Cr. 1-4 (Max. 8)

Prereq: written consent of instructor. Topics to be announced in Schedule of Classes. (I)

7999 Master's Project. Cr. 1-6 (Min. 4, max. 6)

Prereq: written consent of instructor. Design, fabrication, system optimization, and applications of graduate level material. (T)

Electrical/electronic Engineering Technology Courses (EET)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5720 Computer Networking Applications. Cr. 4

Prereq: EET 3100, 3720. Networking protocols, components, architecture, and standards. Data communication, data packet structure, data transmission methods and techniques, network topologies, and media access control methods. Material Fee As Indicated In The Schedule of Classes (Y)

7720 Advanced Computer Networking. Cr. 4

Prereq: EET 5720; coreq: ET 7430. Latest advances in networking; inter-networking with bridges, routers, and switches. LAN and WAN protocols, high speed networks. (Y)

Manufacturing/industrial Engineering Technology Courses (MIT)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5500 Machine Tool Laboratory. Cr. 1

Prereq: ET 2140. Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. (F,W)

5700 Industrial Robots Modeling and Simulation. Cr. 4

Senior or graduate standing in science or engineering discipline. Modeling, simulation and programming of industrial robots in flexible manufacturing environment; the direct and inverse kinematic problems; homogeneous and composite homogeneous transformation matrices; links, joints, the Denavit-Hartenberg representation; kinematic equations for manipulators; and geometric approach applied for 2DOF, 3DOF, and up to 6DOF manipulators. (W)

7700 Robotics and Flexible Manufacturing. Cr. 4

Prereq: ET 7430, MIT 4700. Kinematics, dynamics and controls of the manipulators, their design and applications in flexible manufacturing cells. Computer-integrated manufacturing. (I)

Mechanical Engineering Technology Courses (MCT)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5210 Energy Sources and Conversion. Cr. 3

Prereq: ET 3430, PHY 2140. Various energy sources and how they are utilized. Wind, solar, geothermal, fuel cells, storage devices, energy economics and transportation techniques, related to harnessing energy to a usable form such as electricity and heat. (Y)

6150 Hybrid Vehicle Technology. Cr. 4

Prereq: ET 3450, PHY 2140. Technical concepts and design, energy analysis, unified modeling approach, optimization, control; power generation, engine overview, concepts of hybridization, on-board energy storage; overview of motors, transmissions, fuel cells, future applications. (Y)

College of Fine, Performing
and Communication Arts

Dean: Matthew Seeger

Foreword to the College of Fine, Performing, and Communication Arts

Directory of the College of Fine, Performing, and Communication Arts, p. 218

Graduate Degrees and Certificates, p. 218

The College of Fine, Performing and Communication Arts at Wayne State University provides the highest quality education for practitioners, scholars and consumers in art, art history, communication, dance, music and theatre. This education leads to careers, uses for the arts in other disciplines, enhanced critical abilities, the enrichment of everyday life and the building of new generations of artists, professionals and scholars. Programs of study focus on the integration of theory and practice through the creation, discovery, preservation and transmission of knowledge in fine, performing and communication arts.

The College serves the University and the larger community by creating partnerships that emphasize its own rich, diverse curriculum, interdisciplinary studies, reciprocal professional interaction and outreach activities appropriate to each area of work. Special emphasis is placed on forging alliances with local, state and national constituencies such that the College is both a leader and a resource providing expertise, information and guidance.

Within an appropriate and attractive academic environment the College promotes an atmosphere conducive to intellectual and artistic growth, risk-taking and personal and professional development at all levels in both individual and collaborative endeavors. This environment also assists the College in its role as a national center for creative, research and teaching excellence.

As the cultural gateway of the University, the College provides public events and curricular offerings that nurture creative development, enrich aesthetic values and sensitivity, heighten awareness of the arts experience and reflect the disciplinary diversity of its areas of study. Cultural, racial, ethnic and gender diversity is an important commitment in public events and educational efforts.

Ultimately, the mission of the College is the integration of theory and practice through the creation, discovery, preservation and transmission of knowledge in the fine, performing and communication arts.

Campus Resources: Traditional courses of study are augmented by a variety of performance and presentation resources considered integral to many of the creative programs. Included in these are the Hilberry Repertory Theatre, the Symphonic Band and University Orchestra, plus exhibitions in the Elaine L. Jacob Galler, which features national and international artists and designers, and the Art Department Gallery, all of which usually features work created by students, faculty, and alumni. These are only a few of the campus resources that are especially important for majors in the College. A more comprehensive listing can be found under each of the specific departments.

Detroit Resources: The proximity of the Wayne campus to institutions of the Detroit Cultural Center (which includes the Detroit Institute of Arts, the Museum of Contemporary Art Detroit, the Detroit Public Library, the Charles Wright Museum of African American History, Michigan Opera Theatre and Orchestra Hall, among other institutions) provides further unique and enriching benefits for students; professional staff members of these institutions often serve as adjunct faculty in College programs. Nearby, too, are major print and electronic communications resources that similarly provide both adjunct faculty and professional assistance to other programs in the College.

Accrediting Agencies: Programs in the Music Department are accredited by the National Association of Schools of Music. Programs offered by the Maggie Allesee Department of Theatre and Dance are accredited by the National Association of Schools of Theatre and the National Association of Schools of Dance. The Public Relations program offered by the Department of Communication is accredited by the Public Relations Society of America.

Graduate Degrees and Certificates

GRADUATE CERTIFICATE in Communication and New Media

GRADUATE CERTIFICATE in Dispute Resolution

GRADUATE CERTIFICATE in Health Communication

GRADUATE CERTIFICATE in Orchestral Studies

MASTER OF ARTS with majors in

Art

Art History

Communication

Music

MASTER OF ARTS IN DISPUTE RESOLUTION

MASTER OF ARTS IN DISPUTE RESOLUTION / JURIS DOCTOR Joint Degree Program

MASTER OF MUSIC with concentrations in

Composition/Theory

Conducting

Jazz Performance

Music Education

Performance

MASTER OF FINE ARTS with majors in

Art

Theatre

DOCTOR OF PHILOSOPHY with majors in

Communication

Directory of the College of Fine, Performing, and Communication Arts

University Telephone Area Code: 313

Website: <http://www.cfpc.wayne.edu/>

DEAN

Matthew W. Seeger: 5104 Gullen Mall; 313-577-5342

INTERIM SENIOR ASSOCIATE DEAN FOR FACULTY AFFAIRS

James Thomas: 5104 Gullen Mall; 313-577-5342

INTERIM ASSOCIATE DEAN FOR CURRICULAR AND STUDENT AFFAIRS

Loraleigh Keashly: 5104 Gullen Mall; 313-577-5342

ASSISTANT DEAN

Joan M. Ferguson: 5104 Gullen Mall; 313-577-5342

ASSOCIATE DIRECTOR OF STUDENT SERVICES

Lezlie Hart: 5104 Gullen Mall; 313-577-5337

STUDENT SERVICES

Kelly Driscoll: 5104 Gullen Mall; 313-577-5364

Allison Pavlicek: 5104 Gullen Mall; 313-577-9774

ACADEMIC PROGRAMS COORDINATOR

Robin N. Collins, 5104 Gullen Mall, 313-577-9443

BUDGET

Janine Dunlop: 5104 Gullen Mall; 313-577-5206

INFORMATION OFFICER

David Romas: 5104 Gullen Mall; 313-577-5448

INFORMATION TECHNOLOGY

Christopher Gilbert: 5104 Gullen Mall; 313-577-5363

Christopher Scalise: 5104 Gullen Mall; 313-577-6673

ASSOCIATE DIRECTOR OF INFORMATION AND TECHNOLOGY (COMPUTING)

Gary Cendrowski: 5104 Gullen Mall; 313-577-8341

DIRECTOR OF MAJOR GIFTS

Laura Orme: 5104 Gullen Mall; 313-577-5336

MAJOR GIFTS OFFICER

Heather Mourer, 5104 Gullen Mall; 313-577-0277

ALUMNI OFFICER

Rhonda Welsht: 5104 Gullen Mall; 313-577-1087

INFORMATION MANAGEMENT SPECIALIST

Karin Abel: 5104 Gullen Mall; 313-577-9337

UNIVERSITY ART COLLECTION COORDINATOR

Sandra Schemske: 5104 Gullen Mall; 313-577-9264

EXECUTIVE SECRETARY TO THE DEAN

Nicole Johnson; 5104 Gullen Mall; 313-577-9820

HUMAN RESOURCES CONSULTANT

Marcia Lovett: 313-577-4908

DEPARTMENTAL OFFICES

ART AND ART HISTORY

John Richardson, Chair: 150 Art Building; 313-577-2980

COMMUNICATION

Lillian (Lee) Wilkins, Chair: 585 Manoogian Hall; 313-577-2943

MUSIC

Norah Duncan IV, Chair: 1321 Old Main; 313-577-1795

THEATRE AND DANCE

John G. Wolf, Chair: 3225 Old Main; 313-577-3508

Mailing address for all offices:

(Department Name), College of Fine, Performing and Communication Arts, 5104 Gullen Mall, Wayne State University, Detroit, MI 48202

Academic Regulations for the College of Fine, Performing, and Communication Arts

For complete information regarding the academic rules and regulations of the University, students should consult *Academic Regulations, Graduate*, p. 32. The following additions and amendments pertain to the College of Fine, Performing and Communication Arts.

Admission

For Graduate School regulations, see *Admission, Graduate School*, p. 17.

In the selective admission of graduate students, preference is given to those students who have achieved superior undergraduate scholastic records and who evidence superior artistic abilities.

If a student's undergraduate preparation is considered deficient for advanced work in his/her major field, additional work may be required at the undergraduate level. All prerequisite credits must be earned prior to or concurrent with the first graduate credits. Certain degrees have additional requirements as stated in the following pages.

Graduate Scholarship

Graduate degrees are conferred not merely upon the completion of a prescribed number of courses nor necessarily after a given period of residence, but rather in recognition of each candidate's outstanding ability and high attainments as evidenced in all course work, research, scholarly writing, examinations, personal fitness for a chosen profession, and promise of professional competence. All course work must be completed in accordance with the academic regulations of the Graduate School, as well as College and Departmental regulations governing graduate scholarship and degrees; see sections beginning under *Academic Regulations, Graduate*, p. 32 and *Academic Regulations for the College of Fine, Performing, and Communication Arts*, p. 219.

Graduate Degree Requirements

General requirements for graduate degrees may be found beginning under *Degree and Certificate Requirements, Graduate*, p. 36. In addition to these and to the information below, other requirements are specified by the individual graduate departments. Students should consult the program and requirements of the departments in which they plan to major.

Candidacy is an advanced status that is recommended by the student's advisor and authorized by the Graduate School upon evidence of the applicant's superior scholarship, appropriate personal qualities and promise of professional competence. Admission as an applicant does not assure acceptance as candidate for a degree. Also, candidacy is a necessary but not sufficient requirement for graduation.

To be eligible for candidacy, the student must file an official, approved Plan of Work. The Plan of Work should provide for effective concentration in a major field, with proper supporting courses in related fields. All master's applicants should file the Plan of Work with their respective department's Graduate Officer. In preparing a Plan, students should evaluate with care their personal and professional objectives as well as all degree and departmental requirements. Normally, students enrolled in master's degree programs are expected to

file a Plan of Work by the time the equivalent of eight to twelve graduate credits have been earned. In the Master of Fine Arts program, however, the Plan of Work should be filed by the time the equivalent of fourteen to eighteen credits have been earned. Candidacy must be authorized by the time twelve to eighteen graduate credits have been earned (dependent upon the applicant's degree program) or subsequent registration may be denied. Plans are filed with the department's Graduate Officer. Once the Plan of Work has been approved, the form to change the student's classification from 'applicant' to 'candidate' will be processed by the department Graduate Officer.

Ph.D. applicants should file the Plan of Work with the Graduate School, when approximately forty credits beyond the baccalaureate degree have been earned. In addition to filing the Plan, the student must have satisfied the foreign language requirements, must have passed the Final Qualifying Examination (written and oral), and must have submitted and received the Graduate Dean's approval on the Dissertation Outline before the doctoral committee will recommend candidacy.

Commencement: Students are required to file an Application for Graduation online through Academics no later than the end of the fourth week of classes in the intended term of graduation. Information concerning commencement announcements, caps and gowns, invitations, tickets, time and place, assembling and other relevant items will be sent via email to graduates prior to the event. Candidates for advanced degrees are requested and expected to attend the commencement at which the University confers upon them the honor of the degree earned.

Master's Degree Requirements

In the Master of Arts and Master of Music programs, the minimum requirement for the degree is thirty-two credits under one of the following plans:

Plan A: Twenty-four credits in course work plus an eight-credit thesis.

Plan B: Twenty-nine credits in course work plus a three-credit essay.

Plan C: Thirty-two credits in course work. This plan is authorized only in selected areas. The essay or thesis is not required for this plan; however, most departments require a final comprehensive examination. Students should consult an advisor for details.

These requirements vary slightly depending on the department and major curriculum; students should see the degree programs outlined in the following pages for specific information.

COURSE REQUIREMENTS: At least twenty-four credits must be taken in residence. At least six credits in the major field, in addition to the essay or thesis, must be in courses open only to graduate students (7000 and above).

Master of Fine Arts Degree Requirements

In the Master of Fine Arts degree programs, the minimum requirement includes fifty-four to sixty graduate credits plus a final project completed under Plans B or C as follows:

Plan B: Sixty credits including a three-credit essay. This plan is open only to studio art majors.

Plan C: Sixty credits, depending on the student's major, including a final project. For specific requirements, students should consult the Art and Art History or Theatre departmental sections of this bulletin.

All M.F.A. degree requirements must be completed within three years.

Doctoral Degree Requirements

Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate degree including thirty credits of dissertation direction. The thirty credit dissertation registration requirement is fulfilled through registration in the courses 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Examinations (Ph.D.)

Preliminary Qualifying Examinations: Responsibility for the requirement of a preliminary qualifying examination is vested in the graduate faculty of each department and specifically its committee on doctoral study. Accordingly, each committee may require this examination of all of its candidates or of any candidate at any time it may determine prior to the final qualifying examination.

Final Qualifying Examination: The final qualifying examination is required of each applicant. The applicant may request his/her doctoral committee to authorize the final qualifying examination after an approved Plan of Work has been filed with the Graduate School, AND after the Dean of the Graduate School has approved the *Dissertation Outline*. The examination will be in part written and in part oral. When this examination has been passed, the applicant will be advanced to the status of 'doctoral candidate'.

The Written Qualifying Examination will cover the applicant's major and minor areas and may include such other related matters as the doctoral examining committee may prescribe. Within thirty days after the written examination has been passed, the oral qualifying examination will be conducted by the doctoral examining committee, in the presence of the chairperson of the departmental committee on doctoral study or his/her designee. This examination will relate to the subject matter of the written examination, the applicant's major and minor areas and other pertinent matters.

If an examining committee does not certify that the applicant has been passed in either the written or oral examination, it must make specific recommendations with reference to admitting the applicant to a second examination and specify any additional work that should be completed prior to such an examination. If a second examination is held, it must be scheduled within one calendar year and shall be considered final.

The student's doctoral committee is selected at the time the doctoral Plan of Work is prepared. At this time, and upon consultation with the chairperson of the student's doctoral committee, a member outside of the student's major department is appointed to the committee and is expected to meet as a member of the student's committee while the research and preparation of the dissertation are in process. He/she, along with all members of the committee, will also be present at the final oral presentation. The chairperson of the student's committee files a brief report to the Graduate School detailing the conduct of the oral presentation.

Essays, Theses, and Dissertations

There is no prescribed form for the essay. Title page format as given in the Graduate School's *Guide for Preparing Theses and Dissertations* may be used for essays. Standard style manuals may be consulted for form, as desired by the student or department.

One copy of the essay should be approved and signed by the advisor. This copy will reside with the department.

The thesis or dissertation *must be an original work, either in or definitively related to the student's major area of specialization*. If proper standards or quality, objectivity, originality, and independence are maintained, the candidate may use data, which he/she has derived from his/her University research. Neither the results of the research nor the publication of findings can be restricted by any non-university agency nor can they be published prior to acceptance by the Gradu-

ate School, unless prior approval of such publication has been secured from both the advisor and the Graduate School. Advisors have primary responsibility for approval of the essay or thesis, but every member of a doctoral committee must read, approve and sign the dissertation.

A thesis student may not begin work on a manuscript until he/she has submitted an approved Plan of Work and outline form. He/she may then register for the thesis or dissertation and pay regular fees in the same manner as for all other course work.

Master's degree candidates under the essay plan register for the course numbered 7999, Master's Essay Direction, in the department of their major; a total of three credits must be elected.

Master's candidates under the thesis plan register for the course numbered 8999 in the department of their major. This course is entitled *Master's Thesis Research and Direction* and must be elected for a total of eight credits. Ph.D. candidates register for thirty credits in their major field in the courses numbered 9991-9994, as outlined above, under 'Doctoral Degree Requirements.' All credit used toward meeting dissertation requirements must be earned in this course.

The publication and dissemination of research findings will not be restricted by the University after the manuscript has been received and accepted by the Graduate School.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning on under Financial Assistance, Graduate, p. 26. Additional information may be found in the College departmental sections, below.

Fine Arts Courses, Multidisciplinary (FPC)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Special Topics. Cr. 3 (Max. 6)

(Y)

5025 Entrepreneurship in the Arts. Cr. 3

Explores the possibilities of entrepreneurship as a career/life option. Students will identify the intersection of the arts, arts culture, entrepreneurship and the individual to provide a practical and meaningful guide to creating a professional career in the arts. (W)

5500 Topics in Art in Community. Cr. 3

Prereq: junior, senior or graduate standing in the College; written consent of instructor. Role and function of art and the artist in community, accompanied by a required community-based learning project. Topics and nature and location of community projects vary from term to term. Material Fee as given in Schedule of Classes. (I)

5660 Creativity: Building the New. Cr. 3

Prereq: junior standing or above, or written consent of instructor. Theoretical and experiential exploration in creativity and its relation to individuals, organizations, and the entrepreneurial process. (Y)

5990 CFPCA Service-Learning. Cr. 0

Coreq: minimum of two credits in a designated corequisite Course. Offered on a Pass/No Pass basis. Corequisite course used to designate the service-learning component of specified CFPCA courses. Maximum of three registrations allowed. (T)

Art and Art History

Office: 150 Art Building, 450 Reuther Mall; 313-577-2980
Chairperson: John Richardson
Undergraduate Art Advisors: Michele Porter and Avanti Herczeg
Visual Resource Librarian: Terry Kirby
Interim Art Exhibitions Director: Tom Pyrzewski
Woodshop Supervisor: Robert Taormina
Sculpture and 3D Studio Supervisor: Michael Bogdan
Office Supervisor: Amy Hays
Office Services Clerk Sr.: Ted Duenas
Office Services Clerk II: Mallory Smith
Website: <http://www.art.wayne.edu>

Professors

Jeffrey Abt, Dora Apel, Melvin Rosas, John Richardson, Stanley Rosenthal, Joseph B. Zajac

Associate Professors

Pamela DeLaura, Margaret Franklin, Brian Kritzman, Evan Larson-Voltz, Brian Madigan, Judith Moldenhauer, Jennifer Olmsted, Margi Weir, Marilyn Zimmerman

Assistant Professors

Danielle Aubert, Derek Coté, Lauren Kalman, Heather Macali, Daniel McCafferty, Samantha Noel, Millee Tibbs, Eric Troffkin

Senior Lecturers

Siobhan Gregory, Rayneld Johnson

Lecturers

Richard Haley, Katie MacDonald, Dennis Robare, Susan Widawski

Adjunct Associate Professor

Holly Feen-Calligan (College of Education)

W. Hawkins Ferry Endowed Chair in Twentieth Century Art History and Art Criticism

Dora Apel

Elaine L. Jacob Endowed Chair

Melvin Rosas

Emeritus/Emerita Faculty

William A. Allen, Phyllis A. Ashinger, Richard J. Bilaitis, Robert Broner, Thomas P. Fitzgerald, John G. Hegarty, Carolyn Jane Hooper, Marion E. Jackson, Urban Jupena, John Mills, James Nawara, Thomas C. Parish, Patricia A. Quinlan, James M. Raymo, Horst Uhr, Robert J. Wilbert

Graduate Degrees

MASTER OF ARTS with a major in art and a specialization in one of the following: ceramics, drawing, fibers, graphic design, industrial design, interior design, metalsmithing, painting, photography, printmaking, or sculpture

MASTER OF ARTS with a major in art history

MASTER OF ARTS with a major in design and merchandising

MASTER OF FINE ARTS with a major in art and a specialization in one of the following: ceramics, drawing, fibers, graphic design, metalsmithing, painting, photography, printmaking, or sculpture

Art (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The applicant must hold a Bachelor of Fine Arts degree or another degree and equivalent course work. Admission by the Graduate School of the University means only that the applicant has satisfied the academic standards required for general admission. Final admission is determined by the Department based on the following ranked criteria: 1) portfolio, 2) personal interview, 3) academic record, 4) reference letters, 5) statement of intent.

DEGREE REQUIREMENTS

A minimum of thirty-three credits in art, including at least eighteen credits in the studio major, six credits in electives, three credits in art history, three credits in the Master of Arts Seminar in art, and three credits in Master's Essay. All course work must be completed in accordance with the regulations of the Graduate School and the College of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219, respectively. This program is offered under the following option:

Plan B: Thirty-three credits in course work, including three credits for an essay.

Candidacy: All graduate students begin their work as Master's Applicants. After twelve credits have been completed, a Plan of Work must be signed by the faculty advisor and submitted to the Department Graduate Officer. If the student has maintained a 3.0 grade point average and the Plan is accepted, his/her status is changed to Master's Candidate.

Art (M.F.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants who present a superior portfolio and hold a Bachelor of Fine Arts degree or a Master of Arts degree in art may apply for direct admission. Final admission is determined by the Department based on the following ranked criteria: 1) portfolio, 2) personal interview, 3) academic record, 4) reference letters, 5) statement of intent.

During the semester in which an applicant in the Master of Arts in Art program will be completing a minimum of fifteen credits, the student may be invited by the graduate review committee to apply for admission to the Master of Fine Arts program. If accepted, the applicant's fifteen credits in graduate study may apply toward the Master of Fine Arts degree.

In either case, the M.F.A. degree program demands superior qualification, potential, and commitment as an artist.

DEGREE REQUIREMENTS

The Master of Fine Arts degree is offered under the following option:

Plan C: Sixty credits in art, including a thesis exhibition held as close to the final semester as possible.

Plan C must be completed within three years. A minimum of sixty credits in art should include at least thirty-six credits in the studio major, twelve credits in electives, six credits in art history (one of which is to be a 20th century survey of art or a course on contemporary art), and six credits in the M.F.A. Seminar (ACS 8997 and ACS 8998). All course work must be completed in accordance with the regulations of the Graduate School and the College of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219, respectively.

Candidacy: After twelve credits have been completed, a Plan of Work must be signed by the faculty advisor and submitted to the Department Graduate Officer. An applicant becomes a degree candidate only upon recommendation by the graduate review committee.

Full-time attendance is required in the program which requires a minimum of four semesters of study, excluding the summer term. All M.F.A. candidates must also meet the following requirements:

1. A satisfactory final review of the candidate's work.
2. An exhibition of the work produced for M.F.A. credit.
3. Submission for departmental files of 5-10 images of the work on a CD.
4. The completion and submission of an artist's statement. The statement will accompany the thesis exhibition.

This program provides the student with the opportunity for intensive work toward personal artistic goals. The entire graduate staff is available to the student for consultation and instruction.

Art History (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The applicant must have an undergraduate or equivalent degree in art history, a minimum 'B' average in undergraduate art history, and three semester of college-level work in one approved foreign language, appropriate to scholarly study in this field, with a 'B' (3.0) average or better.

DEGREE REQUIREMENTS

This master's degree is offered under the following options:

Plan A: Thirty-two credits in course work, including at least six credits on the 7000-level and eight credits in thesis.

Plan B: Thirty-three credits in course work, including at least six credits on the 7000-level and three credits in essay.

Students may concentrate in one of the following specialties of art history, but must take at least one course in four out of the five core areas: African, Classical, Medieval, Renaissance/Baroque, and Modern. All students are required to take AH 5090, (WI) Theory and Methods of Art Historical Research, in their first year unless they have taken a similar course during their undergraduate training. Students must pass a comprehensive examination after fifteen graduate credits towards the master's degree have been earned and before the essay or thesis topic can be approved by the advisor. All course work must be completed in accordance with the regulations of the Graduate School and the College of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219, respectively.

Applicants should obtain from the Department a copy of *Guidelines for M.A. Degree Candidates in Art History* for more details.

Candidacy: see above under Master of Arts in Art degree.

Assistantships and Scholarships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning on under Financial Assistance, Graduate, p. 26. The following information pertains to the Department of Art and Art History.

Graduate Teaching Assistantships are offered for a full academic year and include a stipend and a waiver of tuition for up to ten credits in the Fall and Winter terms. They are available on a limited basis and selection is determined by a combination of merit and the teaching needs of the Department. Consequently, assistantships are usually reserved for students on the advanced level of the M.F.A. program.

Departmental Scholarships: The scholarships listed below pertain to the Department. In addition, other private and institutional donors make scholarship funds available to the Department for students in art and art history. Detailed information on scholarships is available in the Art and Art History Office.

Albert and Peggy DeSalle Scholarship Fund: An award of variable amount open to any student in the Department specializing in metals or photography; based on financial need, artistic talent, and scholastic achievement.

Linda Marlene Iden Scholarship: An award of variable amounts open to any student in the department specializing in one of the studio art areas; based on artistic talent, academic performance, and financial need.

Marji Kunz Fashion Scholarship: An award of variable amount open to any student in fashion design and merchandising based on scholarly and professional development.

John and Irene Sowinski Scholarship: An award of variable amount open to any student in the Department specializing in one of the studio art areas; based on financial need, artistic talent, and scholastic achievement.

Albert L. and Alice W. Steinbach Scholarship: An award of variable amount open to any student in the Department specializing in art history; based on past academic achievement and scholarly potential.

Presidential Scholarship: An award of \$1,000 offered to an incoming graduate student in recognition of outstanding past achievement and exceptional artistic potential.

Art: Graphic Design Courses (AGD)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5250 Graphic Design III: Complexity and Variety in Design. Cr. 3

Prereq: AGD 2240, 2250, 3250, and 4250. Open only to upper division art majors in B.A. or B.F.A. program; or M.A. program art majors. Complex design situations. Research and methodology. Project may include package design, instruction manuals, book and brochure design, publication design. Material Fee As Indicated In The Schedule of Classes (F,W)

5260 (WI) Senior Seminar. Cr. 3

Prereq: senior standing. Open only to upper division art majors in B.A. or B.F.A. program; or M.A. program art majors. Issues affecting the theory, history, and practice of design; impact of design on society and impact of society on design. Required readings, student presentations, class discussion, slide lectures, guest speakers. Satisfies the General Education Writing Intensive Course in the Major requirement. Material Fee As Indicated In The Schedule of Classes (W)

5700 Special Topics. Cr. 3 (Max. 15)

Prereq: AGD 4250. Open only to upper division art majors in B.A. or B.F.A. program; or M.A. program art majors. Examination of specific issue in design theory, history or practice. Topics may include: corporate identity, globalization of design, exhibition design, design history. Material Fee As Indicated In The Schedule of Classes (S)

5890 Directed Projects: Graphic Design. Cr. 3-6 (Max. 12)

Prereq: written consent of instructor. Open only to art majors in B.A., B.F.A. or M.A. program. Individual problems. Material Fee As Indicated In The Schedule of Classes (F,W)

5990 Field Study: Internship. Cr. 3 (Max. 6)

Prereq: AGD 4250 and written consent of instructor. Open only to senior art majors in B.A. or B.F.A. program. Supervised field experience designated to correlate classroom theory with practical work. Material Fee As Indicated In The Schedule of Classes (T)

5997 Graphic Design IV: Systems, Series, and Advanced Studies in Visual Communication. Cr. 3

Prereq: AGD 2240, 2250, 3250, 4250, and 5250. Open only to upper division art majors in B.A. or B.F.A. program; or M.A. program art majors. Extended student projects such as identity systems with various applications, families of package design, series of form design, or poster series. Possible collaborative projects; extensive research. Material Fee As Indicated In The Schedule of Classes (F,W)

6260 Advanced Typography. Cr. 3

Prereq: junior standing and completion of AGD 4250. Open only to upper division art majors in B.A. or B.F.A. program; or M.A. program art majors. Advanced and experimental typography; typography as an expressive language in 2-D and 3-D; projects in information design. Material Fee As Indicated In The Schedule of Classes (I)

7250 Graduate Problems in Graphic Design. Cr. 3-9 (Max. 24)

Prereq: AGD 5250. Open only to students in M.A. program. Individual problems in advanced advertising design. Material Fee As Indicated In The Schedule of Classes (F,W)

8850 M.F.A. Studio: Graphic Design. Cr. 3-9 (Max. 36)

Open only to graduate art majors in M.F.A. program. Extended problems in graphic design; individual research with 18 to 27 hours of laboratory per week. Material Fee As Indicated In The Schedule of Classes (F,W)

Art: Ceramics Courses (ACR)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5550 Advanced Ceramics. Cr. 3 (Max. 6)

Prereq: ACR 4550. Open only to art majors in B.F.A. or M.F.A. program. Advanced hand building and wheel throwing demonstrations. Lectures on historical and contemporary issues. Emphasis on personal growth and development. Material Fee As Indicated In The Schedule of Classes (T)

5880 Directed Projects: Ceramics. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Open only to art majors in B.F.A. or M.F.A. program. Independent projects and study in consultation with faculty. Material Fee As Indicated In The Schedule of Classes (F,W)

7550 Graduate Problems in Ceramics. Cr. 3 (Max. 9)

Prereq: ACR 5550. Election of more than three credits per semester requires consent of instructor. Open only to art majors in M.A. or M.F.A. program. Individual problems in advanced ceramics. Material Fee As Indicated In The Schedule of Classes (T)

8880 M.F.A. Studio: Ceramics. Cr. 3-9 (Max. 36)

Open only to art majors in M.F.A. program. Extended problems in ceramics; individual research with eighteen to twenty-seven hours of laboratory per week. Material Fee As Indicated In The Schedule of Classes (F,W)

Art: Drawing Courses (ADR)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5060 Advanced Concepts in Drawing and Painting. Cr. 3 (Max. 6)

Prereq: ADR 3070 or APA 4000. Open only to art majors. Emphasis on individual projects using any appropriate medium. Work is created independently (out of class) with scheduled critiques for faculty guidance; may include lectures, demonstrations, off-campus visits. Material Fee As Indicated In The Schedule of Classes (Y)

5070 Advanced Life Drawing. Cr. 3 (Max. 6)

Prereq: ADR 3070. Open only to art majors. Continued study of human figure based on observation. Composition. Expressive interpretation of the figure through broad range of media. Material Fee As Indicated In The Schedule of Classes (F,W)

5080 Landscape Drawing. Cr. 3 (Max. 6)

Prereq: ADR 1050, ADR 1060, and ACO 1200. Open only to art majors. Drawing or painting, as appropriate, outdoors at a variety of urban, suburban, and rural sites in the metropolitan Detroit area; students are expected to drive or carpool to locations within an hour of Detroit. Interpretation of landscape subjects through observation and imagination. Material Fee as indicated in Schedule of Classes. (S)

5090 Anatomy. Cr. 3

Prereq: ADR 2070. Superficial human anatomy including effects of muscular and skeletal systems. Drawing from both models and skeletons, lectures, demonstrations. Material Fee As Indicated In The Schedule of Classes (Y)

5100 Contexts of Studio Practice. Cr. 3 (Max. 6)

Open only to art majors in B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors. Critical inquiry into art issues, past and present, and contemporary studio practices related to painting. Seminar based on visits to museums, galleries, private collections, artists' studios, and optional trips to major art centers such as New York and Chicago. (Y)

5160 Advanced Alternative Drawing Methods and Materials. Cr. 3 (Max. 6)

Prereq: ADR 1050, ADR 1060, ACO 1200 or graduate standing. Open only to junior students and above. Survey of contemporary and traditional materials and methods of paper making, paper casting, paper cutting and paper folding, as well as an introduction to book binding and altered books. New techniques will be incorporated into a personal body of work. (Y)

5700 Advanced Concepts in Drawing and Painting. Cr. 3 (Max. 6)

Prereq: junior or senior standing. Open only to art majors. Emphasis on individual projects using any appropriate medium. Work is created independently (out of class) with scheduled critiques for faculty guidance; may include lectures, demonstrations, off-campus visits. Material Fee As Indicated In The Schedule of Classes (Y)

5800 Directed Projects: Drawing. Cr. 3-6 (Undergrad. max. 6; grad. max. 9)

Prereq: written consent of instructor. Open only to art majors. Individual work supervised by faculty on arranged basis. (F,W)

7060 Graduate Problems in Drawing and Painting. Cr. 3-9 (Max. 24)

Open only to art majors. Emphasis on self-directed projects with advice from faculty. May include lectures, demonstrations, and visits to off-campus sites. Material Fee As Indicated In The Schedule of Classes (Y)

7070 Graduate Life Drawing. Cr. 3 (Max. 9)

Prereq: ADR 5070. Open only to art majors. Individual projects based upon study of the human figure. Broad range of media encouraged. Material Fee As Indicated In The Schedule of Classes (F,W)

7080 Landscape Drawing. Cr. 3-6 (Max. 15)

Open only to art majors. Drawing or painting, as appropriate, outdoors at a variety of urban, suburban and rural sites in the metropolitan Detroit area; students are expected to drive or carpool to locations within an hour of Detroit. Interpretation of landscape subjects through observation and imagination. Material Fee as given in Schedule of Classes. (S)

7700 Graduate Problems in Drawing and Painting. Cr. 3-9 (Max. 24)

Open only to art majors. Emphasis on self-directed projects with advice from faculty. May include lectures, demonstrations, and visits to off-campus sites. Material Fee As Indicated In The Schedule of Classes (Y)

8800 M.F.A. Studio: Drawing. Cr. 3-9 (Max. 36)

Open only to art majors in M.F.A. program. Extended self-directed work in drawing (eighteen to twenty-seven hours per week). Consultation with appropriate graduate faculty on an arranged basis. (F,W)

Art: Fashion Design and Merchandising Courses (AFA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5422 Fashion Design: Flat Pattern. Cr. 3 (Max. 9)

Prereq: AFA 2410. Open only to design majors in B.A., B.S., or M.A. program. Original designs from a basic sloper. Material Fee As Indicated In The Schedule of Classes (Y)

5430 History of Costume. Cr. 3

Prereq: one art history course. Survey of historic costumes from pre-historic to present. Emphasis on influence of social factors. (F)

5442 Fashion Design: Draping. Cr. 3 (Max. 9)

Prereq: AFA 2420, AFA 5422. Open only to design majors in B.A., B.S., or M.A. program. Creation of original garments by draping on half-scale and standard-size dress forms. Material Fee As Indicated In The Schedule of Classes (I)

5452 Fashion Design: Tailoring. Cr. 3 (Max. 6)

Prereq: AFA 2420, AFA 5422, AFA 5442. Open only to design majors in B.A., B.S., or M.A. program. Tailoring techniques applied to coats and suits. Material Fee As Indicated In The Schedule of Classes (F)

5460 Merchandising II. Cr. 3

Prereq: AFA 3460. Open only to design majors in B.A., B.S., or M.A. program. Current trends in merchandising. Emphasis on global aspects. (F)

5470 Visual Merchandising: Display. Cr. 3

Prereq: ACO 1200 and ACO 1230. Open only to design majors in B.A., B.S., or M.A. program. Visual merchandising concepts and trends. Relationship of design elements and principles to the tools and structures used in display. Creative experimentation in the various media. Material Fee As Indicated In The Schedule of Classes (F,W)

5472 Special Topics in Fashion. Cr. 3 (Max. 12)

Prereq: AFA 2420 and AFI 2660. Application of unique printed and dyed fabrics to garment design. Surface design processes and motif development relating directly to clothing design are stressed, along with advanced garment construction techniques. Material Fee as indicated in Schedule of Classes. (S)

5490 Economics of Merchandising. Cr. 3

Prereq: completion of Math Proficiency Requirements, AFA 3460. Open only to design majors in B.A., B.S., or M.A. program. Application of merchandising principles and systematic planning to achieve profit goals. (W)

5992 Supervised Field Experience. Cr. 3 (Max. 6)

Prereq: senior standing. Open only to senior design majors in B.A., B.S., or M.A. program. Supervised field experience designed to correlate classroom theory with practical work. (F)

6440 Computer-Aided Design for Apparel Design. Cr. 3

Prereq: AFA 5440. Open only to design majors in B.A., B.S., or M.A. program. Use of computer-aided design software applied to apparel design concepts; garment designing, grading, and marker-making. Material Fee As Indicated In The Schedule of Classes (W)

6993 Study Tour. Cr. 3

Open only to art or design majors in B.A., B.S., B.F.A., M.A. or M.F.A. program. Group tour to major market sources; observation and analysis of products and marketing procedures. Topics to be announced in Schedule of Classes. (B:S)

7410 Practicum in Textile Testing. Cr. 3

Prereq: AFA 2410. No credit after AFA 3410. Open only to design majors in B.A., B.S., or M.A. program. Recent developments in textiles and quality assurance practices. Standardized testing methods to determine textile properties and performance. Material Fee As Indicated In The Schedule of Classes (W)

7850 Seminar. Cr. 3

Open only to design majors in B.A., B.S., or M.A. program. Development and practice of the research process and effective writing skills. (W)

7990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of instructor. Open only to design majors in B.A., B.S., or M.A. program. Individual projects. (F,W)

Art: Fibers Courses (AFI)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5650 Weaving: Senior Project. Cr. 3 (Max. 6)

Prereq: AFI 3650. Open only to students in the College of Fine, Performing and Communication Arts enrolled in B.S., B.A., B.F.A., M.A., or M.F.A. program. Directed project in weaving. Research and written evaluative statement required. Material Fee As Indicated In The Schedule of Classes (T)

5660 Fabric Printing and Dyeing: Senior Project. Cr. 3 (Max. 15)

Prereq: AFI 3660. Open only to students in the College of Fine, Performing and Communication Arts enrolled in B.S., B.A., B.F.A., M.A., or M.F.A. program. Extensive project or series of works determined by student; research and written statement. Material Fee As Indicated In The Schedule of Classes (T)

5870 Directed Projects: Fibers. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)

Open only to students in the College of Fine, Performing and Communication Arts enrolled in B.S., B.A., B.F.A., M.A., or M.F.A. program. Individual problems. (F,W)

7650 Graduate Problems in Weaving. Cr. 3 (Max. 9)

Prereq: AFI 5650. Open only to students in M.A. or M.F.A. program. Advanced problems in weaving. Material Fee As Indicated In The Schedule of Classes (T)

7660 Graduate Problems: Fabric Printing and Dyeing. Cr. 3 (Max. 9)

Prereq: AFI 5660. Open only to students in M.A. or M.F.A. program. Individual problems in fibers. Material Fee As Indicated In The Schedule of Classes (T)

8860 M.F.A. Studio: Fibers. Cr. 3-9 (Max. 36)

Open only to art majors in M.F.A. program. Supervised creative work done in the major concentration. Material Fee As Indicated In The Schedule of Classes (F,W)

Art: Industrial Design Courses (AID)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5300 Advanced Studio/Product. Cr. 3 (Max. 15)

Prereq: AID 3300. Open only to art majors in B.A, B.F.A., or M.A. program. Advanced techniques in presentation of design solutions. Students build upon their ability to communicate two-dimensionally; introduction of digital manipulation and creation software. Material Fee As Indicated In The Schedule of Classes. (F,W)

5310 Advanced Presentation. Cr. 3 (Max. 9)

Prereq: AID 3310. Open only to art majors in B.A, B.F.A., or M.A. program. Advanced techniques in the presentation of design solutions. Students build on their ability to communicate two-dimensionally, with introduction of digital manipulation and creation software. Material Fee As Indicated In The Schedule of Classes. (F)

5330 3-D Modeling. Cr. 3 (Max. 9)

Prereq: AID 3300. Open only to upper division art majors in B.A. or B.F.A. program, or art M.A. students. Principles of three-dimensional modeling. Surface development, rendering, and creation of virtual environments. Material Fee As Indicated In The Schedule of Classes. (F)

5997 (WI) Senior Seminar. Cr. 3

Prereq: senior standing in industrial design concentration. Open only to senior art majors in B.A. or B.F.A. program, or art M.A. students. Seminar on contemporary issues in industrial design including professional concerns in transportation and product design, presentation, and production. Satisfies the General Education Writing Intensive Course in the Major requirement. (B)

6300 Advanced Studio: Transportation. Cr. 3 (Max. 9)

Prereq: AID 3300. Open only to art majors in B.A. or B.F.A. program, or art M.A. students. Form and proportion studies. Development of sketch techniques for communicating the complex form of the automotive body. Taught by professional automotive designers. Material Fee As Indicated In The Schedule of Classes (F,W)

6310 Advanced Studio/Exhibit. Cr. 3 (Max. 9)

Prereq: AID 5300. Open only to art majors in B.A. or B.F.A. program, or art M.A. students. Advanced design concepts in exhibit design. Project planning, ideas of brand imaging, phenomenological notions of the spatial experience. Material Fee As Indicated In The Schedule of Classes (F)

6320 History of Modern Design I. Cr. 3

Open only to College of Fine, Performing and Communication Arts students enrolled in B.A, B.F.A., or M.A. program. Major design trends in America and Europe from mid-nineteenth century to World War I. Covers a broad spectrum of the applied arts. (F)

6330 History of Modern Design II. Cr. 3

Open only to College of Fine, Performing and Communication Arts students enrolled in B.A, B.F.A., or M.A. program. Major design

trends in America and Europe from end of World War I through 1950s. Covers a broad spectrum of the applied arts. (W)

7300 Graduate Industrial Design. Cr. 3-9 (Max. 24)

Prereq: AID 5300 or 6300. Open only to students in M.A. program. Individual problems in industrial design. Material Fee As Indicated In The Schedule of Classes. (F,W)

Art: Interdisciplinary Electronic Arts Courses (AIN)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5830 Directed Projects in Digital Arts. Cr. 1-3 (Max. 6)

Prereq: written consent of instructor. Individual problems in electronic arts. Material Fee As Indicated In The Schedule of Classes (F,W)

6230 Advanced Projects in Digital Arts. Cr. 3 (Max. 15)

Prereq: AIN 4230. Research- and project-oriented studio class for intermediate students. Discussion, critique, development and refinement of technical and conceptual approaches to the application of digital technologies within the fine arts. Material Fee As Indicated In The Schedule of Classes (W)

6250 Advanced Experimental 3D Animation. Cr. 3 (Max. 9)

Prereq: AIN 4230. Workshop focusing on 3D animation and modeling techniques. Technical tuition supplemented by critiques and screenings. Material Fee As Indicated In The Schedule of Classes (Y)

6830 Special Topics in Digital Arts. Cr. 3 (Max. 12)

Prereq: AIN 2220, AIN 3220. In-depth specializations supplementing and building on digital arts courses. Topics may include: programming for artists; sound design and sonic arts. (F,W)

Art: Interior Design Courses (AIA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Furniture/Product Workshop. Cr. 3 (Max. 9)

Prereq: AIA 1610, 2610 and 5610. Open only to art majors in B.A., B.F.A., or M.A. program. History, ergonomic and design development of furniture and product design. Projects evolve from hand and CAD drawings to scaled models of furniture and product designs. Material Fee As Indicated In The Schedule of Classes (F)

5610 Interior Materials and Systems. Cr. 3

Open only to art majors in B.A, B.F.A., or M.A. program. Estimating, specifying, and the techniques used in the application of materials and systems used in interior design. Lectures, guest speakers, and field trips. Material Fee As Indicated In The Schedule of Classes (W)

5620 Building Construction Systems in Architecture I. Cr. 3

Prereq: AIA 2610, 3610. Open only to art majors in B.A, B.F.A., or M.A. program. Residential and commercial construction systems incorporating governmental and building codes; site and foundation to roof systems; small-scale hand and CAD documentation of architectural details. Material Fee As Indicated In The Schedule of Classes (F)

5630 Interior Lighting Design and Application. Cr. 3

Prereq: AIA 3610, 4610. Open only to art majors in B.A, B.F.A., or M.A. program. Lighting sources, fixtures, manufacturer's lighting system and application to interior spaces. Basic lighting foot-candle calculations; layouts and psychology of lighting description to be applied in a final project. Material Fee As Indicated In The Schedule of Classes (W)

5640 Building Construction Systems in Architecture II. Cr. 3

Prereq: AIA 2600, 4600, 4610, and 5620. Open only to interior design majors. Development of architectural construction documents: working drawings and written specifications of commercial interior space; plan, elevation, section, details and perspective through hand and CAD documentation. Material Fee As Indicated In The Schedule of Classes (W)

5660 Supervised Field Experience. Cr. 3 (Max. 6)

Open only to art majors in B.A, B.F.A., or M.A. program. Supervised field study experience designed to correlate classroom theory with professional practice. Material Fee announced in Schedule of Classes. (T)

5991 Directed Projects: Interior Design. Cr. 3-6 (Max. 9)

Open only to art majors in B.A, B.F.A., or M.A. program. Individual problems. Material Fee announced in Schedule of Classes. (F,W)

5997 (WI) Senior Seminar. Cr. 3

Open only to senior art majors in B.A. or B.F.A. program, or art majors in M.A. program. Investigation of designers, styles, and periods of interior design through charettes and documentation. Resume and portfolio development and review; writing of intensive research paper. Material Fee announced in Schedule of Classes. (W)

6610 Interior Design Studio IV. Cr. 3

Prereq: AIA 4610, 5640. Open only to art majors in B.A., B.F.A., or M.A. program. Large-scale new or adaptive re-use: office, hospitality, health-care or retail interior spaces. Professional hand and CAD graphic and skill development. Integration of codes, ADA, human factors, HVAC and lighting principles, furniture and equipment specification related to specific environment. Material Fee As Indicated In The Schedule of Classes (W)

6650 Business Practicum. Cr. 2

Prereq: AIA 4610. Open only to art majors in B.A., B.F.A., or M.A. program. Examination of different types of business formations and their characteristics; professional practices and procedures, professional ethics, contemporary topics in interior design practice. Material Fee announced in Schedule of Classes. (F)

7990 Directed Study. Cr. 1-4

Prereq: written consent of advisor, instructor, and graduate officer. Open only to M.A. students. Material Fee announced in Schedule of Classes. (Y)

Art: Metalsmithing Courses (AME)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5600 Advanced Jewelry and Metalsmithing. Cr. 3 (Max. 6)

Prereq: AME 3601. Open only to art or design and merchandising majors in B.A., B.F.A., M.A. or M.F.A. program. Intellectual and conceptual nature of student's artwork; discussion and analysis. Methods of criticism. Material Fee As Indicated In The Schedule of Classes (F,W)

5860 Directed Projects: Metalsmithing. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Open only to art or design and merchandising majors in B.A., B.F.A., M.A. or M.F.A. program. Individual problems. (F,W)

7600 Graduate Study in Metal Arts. Cr. 3 (Max. 9)

Prereq: AME 5600. Open only to art or design and merchandising majors in M.A. or M.F.A. program. Individual problems. Directed study and project development in metal arts. Material Fee As Indicated In The Schedule of Classes (F,W)

8860 M.F.A. Studio: Metal Arts. Cr. 6-9 (Max. 36)

Open only to M.F.A. students with a graduate concentration in metals. Open only to art majors in M.F.A. program. Extended problems in metalsmithing; individual research with eighteen to twenty-seven hours of laboratory per week. (F,W)

Art: Painting Courses (APA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Oil Painting IV. Cr. 3 (Max. 6)

Prereq: APA 4000. Open only to upper division art majors or graduate students in M.A. or M.F.A. in art. Individual development in painting. Material Fee As Indicated In The Schedule of Classes (Y)

5060 Advanced Concepts in Drawing and Painting. Cr. 3 (Max. 6)

Prereq: ADR 3070 or APA 4000. Open only to upper division art majors in B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors. Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. Material Fee As Indicated In The Schedule of Classes (Y)

5100 Contexts of Studio Practice. Cr. 3 (Max. 6)

Open only to art majors B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors. Critical inquiry into art issues, past and present, and contemporary studio practices related to painting. Seminar based on visits to museums, galleries, private collections, artists' studios, and optional trips to major art centers such as New York and Chicago. (Y)

5110 Watercolor Painting III. Cr. 3 (Max. 6)

Prereq: APA 3110. Open only to upper division undergraduate art majors, and graduate majors in M.A. or M.F.A. programs. Individual work in transparent and/or opaque water-based media. Material Fee As Indicated In The Schedule of Classes (F,W)

5130 Figure Painting Advanced: Water Media. Cr. 3 (Max. 6)

Prereq: APA 3130. Open only to upper division art majors B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors. Individual development in water media based on observation of human figure. Material Fee As Indicated In The Schedule of Classes (Y)

5140 Figure Painting Advanced: Oil and Other Media. Cr. 3 (Max. 6)

Prereq: APA 3140. Open only to upper division art majors B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors. Individual development based on the human figure using any appropriate medium. Material Fee As Indicated In The Schedule of Classes (Y)

5160 Advanced Alternative Painting Media. Cr. 3 (Max. 6)

Open only to upper division undergraduate art majors, and graduate majors in M.A. or M.F.A. programs. Prereq: APA 2130, APA 2000, or APA 2110. Individual work in the materials and methods of acrylic painting, encaustic painting, pastel painting, as well as collage and mixed media painting. Material Fee as indicated in Schedule of Classes (Y)

5700 Advanced Concepts in Drawing and Painting. Cr. 3 (Max. 6)

Prereq: ADR 3070 or APA 4000. Open only to upper division art majors in B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors.

Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. Material Fee As Indicated In The Schedule of Classes (Y)

5810 Directed Projects: Painting. Cr. 3-6 (Undergrad. max. 6; grad. max. 9)

Prereq: written consent of instructor. Open only to art majors B.A., B.S., B.F.A. program, or M.A. or M.F.A. art majors. Self-directed work in consultation with graduate faculty on an arranged basis. (F,W)

7000 Graduate Oil Painting. Cr. 3 (Max. 9)

Prereq: APA 5000. Open only to graduate art majors in M.A. or M.F.A. program. Individual work in oil painting, or other material as appropriate. Material Fee As Indicated In The Schedule of Classes (T)

7060 Graduate Problems in Drawing and Painting. Cr. 3-9 (Max. 15)

Open only to art majors in M.A. or M.F.A. program. Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. Material Fee As Indicated In The Schedule of Classes (Y)

7080 Landscape Painting. Cr. 3-6 (Max. 15)

Open only to graduate art majors. Prereq: APA 2000 or former APA 2100. Painting or drawing, as appropriate, outdoors at various urban, suburban and rural sites in metropolitan Detroit area. Interpretation of landscape subjects through observation and imagination. Students are expected to drive or carpool to locations within an hour of Detroit. Material Fee as given in Schedule of Classes. (S)

7110 Graduate Watercolor Painting. Cr. 3 (Max. 18)

Prereq: APA 5110. Open only to graduate art majors in M.A. or M.F.A. program. Individual work in transparent and/or opaque water-based media. Material Fee As Indicated In The Schedule of Classes (F,W)

7130 Graduate Problems in Figure Painting: Water Media. Cr. 3-9 (Max. 18)

Prereq: APA 5130. Open only to art majors in M.A. or M.F.A. program. Individual development of images based on the human figure. Material Fee As Indicated In The Schedule of Classes (Y)

7140 Graduate Problems in Figure Painting: Oil Media. Cr. 3 (Max. 9)

Prereq: APA 5140. Open only to art majors in M.A. or M.F.A. program. Individual development of images based on the human figure. Material Fee As Indicated In The Schedule of Classes (Y)

7700 Graduate Problems in Drawing and Painting. Cr. 3-9 (Max. 15)

Open only to art majors in M.A. or M.F.A. program. Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. Material Fee As Indicated In The Schedule of Classes (Y)

8810 M.F.A. Studio: Painting. Cr. 3-9 (Max. 36)

Open only to art majors in M.F.A. program. Extended self-directed work in painting (eighteen to twenty-seven hours per week). Consultation with appropriate graduate faculty on an arranged basis. (F,W)

Art: Photography Courses (APH)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5420 Advanced View Camera. Cr. 3-6 (Max. 9)

Prereq: APH 4420. Open only to art majors in B.A., B.F.A., M.A. or M.F.A. program. Refinement of view camera techniques and advanced lighting techniques. Material Fee As Indicated In The Schedule of Classes (Y)

5440 Experimental Photography. Cr. 3 (Max. 6)

Prereq: APH 3410. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Work in non-traditional processes including image and emulsion transfer, hand-applied emulsions, laser copy and xerographic transfer. Material Fee As Indicated In The Schedule of Classes (B)

5450 Selected Topics in Photography. Cr. 3 (Max. 6)

Prereq: APH 4410. Open only to art majors in B.A., B.F.A., M.A. or M.F.A. program. Topics to be announced in Schedule of Classes. Material Fee As Indicated In The Schedule of Classes (Y)

5850 Directed Projects: Photography. Cr. 3-9 (Undergrad. max. 9; grad. max. 18)

Prereq: written consent of instructor. Open only to art majors in B.A., B.F.A., M.A. or M.F.A. program. Individual problems. (F,W)

5860 Social Documentary: Community, Compassion, and Activism. Cr. 3 (Undergrad. max. 9; grad. max. 30)

Prereq: APH 2400. Photographic documentation applied to social cause, community representation, and visual/multicultural critical theory. Material Fee As Indicated In The Schedule of Classes (I)

7400 Graduate Photography. Cr. 3-9 (Max. 24)

Open only to graduate art students in M.A. or M.F.A. program. Individual problems in advanced photography. Material Fee announced in Schedule of Classes. (F,W)

8850 M.F.A. Studio: Photography. Cr. 3-9 (Max. 36)

Open only to graduate art students in M.F.A. program. Extended problems in photography; individual research with eighteen to twenty-seven hours of laboratory per week. Material Fee announced in Schedule of Classes. (F,W)

Art: Printmaking Courses (APR)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5470 Advanced Photo Processes for Printmaking. Cr. 3 (Max. 9)

Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Processes for lithography, intaglio, and serigraphy. Material Fee As Indicated In The Schedule of Classes (W)

5480 Advanced Intaglio Printmaking. Cr. 3 (Max. 6)

Prereq: APR 3480. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Advanced problems in intaglio. Multiplate and rollup color printing. Photo intaglio techniques, experimental media. Material Fee As Indicated In The Schedule of Classes (F,W)

5490 Advanced Lithography. Cr. 3 (Max. 6)

Prereq: APR 3490. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Advanced problems in lithography. Black and white, multicolor, transfer methods. Material Fee As Indicated In The Schedule of Classes (F,W)

5500 Advanced Serigraphy. Cr. 3 (Max. 15)

Prereq: APR 3500. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Advanced problems in screen-printing. Photo transfer, multi-media approaches. Material Fee As Indicated In The Schedule of Classes (Y)

5510 Advanced Relief and Experimental Printmaking. Cr. 3 (Max. 15)

Prereq: APR 3500 and 5490. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Traditional relief methods: woodcut, wood engraving, linocut; also monoprint and monotype, constructed prints, other experimental approaches. Material Fee As Indicated In The Schedule of Classes (S)

5840 Directed Projects: Printmaking. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Open only to art majors in B.A., B.F.A., M.A. or M.F.A. program. Individual problems. (F,W)

7470 Graduate Photo Processes for Printmaking. Cr. 3 (Max. 9)

Open only to art majors in M.A. or M.F.A. program. Exploration of non-traditional formats and print surfaces. Editioning optional. Material Fee As Indicated In The Schedule of Classes (F)

7480 Graduate Intaglio. Cr. 3 (Max. 9)

Prereq: APR 3480. Open only to art majors in M.A. or M.F.A. program. Advanced problems in intaglio. Multiplate and rollup color printing. Photo intaglio techniques, experimental media. Material Fee As Indicated In The Schedule of Classes (F,W)

7490 Graduate Lithography. Cr. 3-9 (Max. 21)

Open only to art majors in M.A. or M.F.A. program. Advanced work in lithography. Material Fee As Indicated In The Schedule of Classes (F,W)

7500 Graduate Serigraphy. Cr. 3

Open only to art majors in M.A. or M.F.A. program. Advanced work in serigraphy. Material Fee As Indicated In The Schedule of Classes (I)

7510 Graduate Relief and Experimental Printmaking. Cr. 3

Prereq: graduate standing in art. Open only to art majors in M.F.A. program. Traditional relief methods: woodcut, wood engraving, linocut; also monoprint and monotype, constructed prints, other experimental approaches. Material Fee as indicated in Schedule of Classes. (Y)

8840 M.F.A. Studio: Printmaking. Cr. 3-9 (Max. 36)

Open only to art majors in M.F.A. program. Extended problems in printmaking; individual research with eighteen to twenty-seven hours of laboratory per week. Material Fee as given in Schedule of Classes. (F,W)

Art: Sculpture Courses (ASL)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5150 Advanced Sculpture. Cr. 3 (Max. 9)

Prereq: ASL 2150, 3150, 3170, 3190. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Development of personal and professional body of work. Discussions, lectures, assignments. Material Fee As Indicated In The Schedule of Classes (T)

5170 Figurative Sculpture II. Cr. 3 (Max. 6)

Prereq: ADR 3090 and ASL 3170. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Emphasis on advanced and self-directed problems in figurative sculpture. Material Fee As Indicated In The Schedule of Classes (Y)

5180 Sculpture: Advanced Technology. Cr. 3 (Max. 6)

Prereq: ASL 5170. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. One major project, which explores the application of non-traditional materials and technologies: research, industrial liaisons, equipment. Material Fee As Indicated In The Schedule of Classes (I)

5190 Sculpture Foundry II. Cr. 3 (Max. 9)

Prereq: ASL 3190. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Development of ideas and skills using either casting or fabrication or both. Material Fee As Indicated In The Schedule of Classes (Y)

5810 Special Topics in Sculpture. Cr. 3 (Max. 6)

Open only to sculpture majors. Prereq: ASL 2150, 3150, 3170, and 3190. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Topics to be announced in Schedule of Classes. Material Fee As Indicated In The Schedule of Classes (Y)

5820 Directed Projects. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Open only to upper division art majors in B.A. or B.F.A. program, or art majors in M.A. or M.F.A. program. Independent projects done in consultation with instructor. Material Fee As Indicated In The Schedule of Classes (F,W)

7150 Graduate Sculpture. Cr. 3 (Max. 9)

Prereq: graduate standing. Open only to art majors in M.A. or M.F.A. program. Graduate-level problems. Material Fee As Indicated In The Schedule of Classes (T)

8820 M.F.A. Studio: Sculpture. Cr. 3-9 (Max. 36)

Open only to art majors in M.F.A. program. Extended problems in sculpture; individual research with eighteen to twenty-seven hours of laboratory per week. Material Fee As Indicated In The Schedule of Classes (F,W)

Art History Courses (AH)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5090 (WI) Theory and Methods of Art Historical Research. Cr. 3

Prereq: written consent of instructor. Introduction to the methods of research in art history. History of the discipline's methodology examined through selective readings. (I)

5130 The African City: Art and the Politics of Place. Cr. 3

Prereq: AH 1110, or AH 1120, or AH 1130. Exploration of key issues in the study of Africa's urban cultures. Focuses on the art and architecture of historical cities and considers the ways in which global African cities shape contemporary artistic practice. (T)

5150 Islamic Arts of Africa: Muslim Identities at the Crossroads. Cr. 3

Prereq: AH 1110 and AH 1120. Focus on histories of cultural exchange between different societies within Africa and beyond. Relationship between social identity, ideas of religiosity and cultural self-expression. Students taking course for graduate credit must write a more substantial research paper in consultation with the instructor. (W)

5210 Hellenistic Art. Cr. 3

Prereq: AH 1110 and AH 1120. Sculpture, painting and architecture of the Greek world from Alexander the Great to Cleopatra. (I)

5250 Ancient Rome. Cr. 3

Prereq: AH 1110 and AH 1120. Development of Rome into an imperial capital. Design, function and political significance of public monuments in the city. (I)

5260 Classical Greek Art. Cr. 3

Prereq: AH 1110 and AH 1120. Greek painting, sculpture and architecture of the fifth and fourth centuries B.C. Emphasis on decorative programs of temples and cult statues. (I)

5270 Roman Painting and Sculpture. Cr. 3

Prereq: AH 1110 and AH 1120. Painting and sculpture of the Roman Republic and Empire, and their cultural context. (Y)

5310 The Ancient City of Athens. Cr. 3

Prereq: AH 1110 and AH 1120. The history of Athens as an urban center in antiquity. Public monuments, buildings and landscape as reflecting the city's aspirations and fortunes. (I)

5450 Art and Architecture in the High Middle Ages. Cr. 3

Prereq: AH 1110 and AH 1120. Art and architecture in western Europe, 1050-1250. Development of Romanesque and Gothic styles in architecture, painting, and sculpture. (I)

5500 Early Renaissance in Italy. Cr. 3

Prereq: AH 1110 and AH 1120. Art and architecture from Giotto to Botticelli; transformation of late medieval art prior to Black Death, classical revival in Florence; North Italian artists such as the Bellinis and Mantegna. (B)

5510 High Renaissance and Mannerism in Italy. Cr. 3

Prereq: AH 1110 and AH 1120. The art of Leonardo, Raphael, Michelangelo, Titian, and their contemporaries. (I)

5520 Art of Renaissance Venice. Cr. 3

Prereq: AH 1120 or AH 1110. Art of fifteenth and sixteenth century Venice considered in its socio-political milieu. (B)

5570 Performance Art of the Americas. Cr. 3

Explores Performance Art created in North, Central, and South America, as well as in the Caribbean. Performance Art is a Western visual art movement in which the artist's body is the primary medium of expression, and this art form's evolution will be examined from the late nineteenth to the twenty-first century. (F)

5600 Baroque Art in Italy. Cr. 3

Prereq: AH 1110 and AH 1120. Art of late sixteenth and seventeenth century Italy in its socio-political milieu. (B)

5610 Baroque Art in the Netherlands. Cr. 3

Prereq: AH 1120 or AH 1110. Seventeenth-century art in the Netherlands in context of its socio-political milieu. (I)

5710 Trends in Nineteenth Century Art. Cr. 3

Prereq: AH 1110 and AH 1120. Topics to be announced in Schedule of Classes. (B)

5715 Modernism: Nineteenth and Twentieth Centuries. Cr. 3

Prereq: AH 1110 and AH 1120. Origins of Modernism in the mid-nineteenth century; avant-garde art in Europe and the U.S. from 1850 to 1950; theories of Modernism in the visual arts. (B)

5720 Twentieth Century Art. Cr. 3

Prereq: AH 1110 and AH 1120. European and American paintings, sculpture, and new media surveyed from 1900 to present. (B)

5780 Topics in Twentieth-Century Art. Cr. 3 (Max. 6)

Prereq: AH 1110 and AH 1120. Topics to be announced in Schedule of Classes. (Y)

5855 Museum Practicum. Cr. 3

Prereq: AH 1110 and AH 1120. Cooperative arrangement between the art history program and the Detroit Institute of Arts, in which the student applies art historical training to a current project or exhibition in the museum. (B)

5990 Directed Study. Cr. 1-3 (Max. 6)

Prereq: written consent of instructor. Open only to art history majors in B.A. or M.A. program. Supervised advanced reading and research in the history of art. (F,W)

5997 Seminar. Cr. 3 (Max. 9)

Prereq: junior standing or above; AH 1110 and AH 1120. Open only to art history or art majors in B.A., B.F.A., M.A. or M.F.A. program. Readings, discussion, and research paper on special topics in art history; topics to be announced in Schedule of Classes. Graduate students undertake research paper in addition to other assignments. (Y)

7200 Seminar in Greek and Roman Art. Cr. 3-6 (Max. 9)

Open only to art history majors in M.A. program. Topics to be announced in Schedule of Classes. (B)

7300 Seminar in Medieval Art. Cr. 3-6 (Max. 9)

Open only to art history majors in M.A. program. Topics to be announced in Schedule of Classes. (B)

7500 Seminar in Renaissance Art. Cr. 3-6 (Max. 9)

Open only to art history majors in M.A. program. Topics to be announced in Schedule of Classes. (Y)

7700 Seminar in Modern Art. Cr. 3 (Max. 6)

Open only to art history majors in M.A. program. Topics to be announced in Schedule of Classes. (F,W)

- 7999 Master's Essay Direction. Cr. 1-3**
Open only to art history majors in M.A. program. (F,W)
- 8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)**
Open only to art history master's candidates in M.A. program. (F,W)

Art Colloquia, Seminars, and Special Courses (ACS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5200 Art Gallery Management. Cr. 3

Offers a larger sense of the profession gained through readings, opportunities to network within and outside Wayne State University's art galleries, and hands-on experience. The following operational fundamentals are thoroughly examined: exhibition and season design, marketing, budgeting, and standard facility requirements. (W)

5210 Art Gallery Internship. Cr. 1-3

Prereq: written consent of department. Provides students with opportunities to serve as interns at galleries and museums internal and external to the department. Students update the instructor with documentation of significant projects that they have worked on. (T)

5650 Museum Culture: Histories, Critiques, Practices. Cr. 3

The art museum as a subject of cultural history and criticism, social policy, and art. Includes panel discussions among museum professionals and opinion leaders, designed to explore current issues. (Y)

7998 Master of Arts Seminar. Cr. 3

Open only to art majors in M.A. program. Directed reading, research, bibliography. Offered fall semester only. (F)

7999 Master's Essay Direction. Cr. 1-3

Open only to art master's candidates in M.A. program. (F,W)

8997 Master of Fine Arts Seminar I. Cr. 3

Open only to majors in M.F.A. program. Concepts of art; contemporary art problems. (F)

8998 Master of Fine Arts Seminar II. Cr. 3

Open only to majors in M.F.A. program. Concepts of art; contemporary art problems. (F)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Open only to art history master's candidates in M.A. program. (F,W)

Communication

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Professors

Edward J. Pappas (Emeritus), Raymond S. Ross (Emeritus), Matthew W. Seeger, Lillian C. Black Wilkins, George W. Ziegelmueller (Distinguished Emeritus)

Associate Professors

Loraleigh Keashly, Katheryn C. Maguire, Patricia K. McCormick, Julie M. Novak, Hayg H. Oshagan, Donyale R. Padgett, Pradeep Sopory, John W. Spalding (Emeritus), Frederick Vultee, Kelly M. Young

Assistant Professors

James L. Cherney, Kelly Donnellan, Kristin D. Eckert, Michael J. Fuhlhage, Kelly A. Jakes, Rahul Mitra, Marc A. Ruiz, Elizabeth Stoycheff, Stephanie T. Tong, William C. Warters (Research)

Lecturers

Juanita Anderson, Jane Fitzgibbon, Jack W. Lessenberry, Karen McDevitt, Alicia M. Nails, Michele A. Najor, Kimmerly S. Piper-Aiken, Katie L. Rasmussen, Ronald J. Stevenson, Denise M. Vultee

Graduate Degrees and Certificates

DOCTOR OF PHILOSOPHY with a major in Communication.

MASTER OF ARTS with a major in Communication and concentration in communication studies; journalism; media arts; media studies; and public relations and organizational communication.

MASTER OF ARTS IN DISPUTE RESOLUTION

Joint JURIS DOCTOR / MASTER OF ARTS in Dispute Resolution

GRADUATE CERTIFICATE in Dispute Resolution

GRADUATE CERTIFICATE in Communication and New Media

GRADUATE CERTIFICATE in Health Communication

The Department of Communication, in the College of Fine, Performing, and Communication Arts, offers graduate study leading to a doctoral degree, master's degree, and graduate certificate. The Department includes about thirty full-time faculty members with strong backgrounds in scholarly and professional approaches to the study and practice of communication. The Department has about 650 undergraduate majors and 150 graduate students. Approximately twenty-five graduate assistantships are offered each year to doctoral students.

The Department and faculty offices are in Manoogian Hall, located near the intersection of the John C. Lodge Freeway and Warren Avenue, in the heart of Detroit's Cultural Center. There are two television production facilities associated with the Department: the Midtown Studio (developed in partnership with Detroit Public Television, Channel 56) located on the main floor of 5057 Woodward and the Old Main studio located in the Old Main building, at the intersection of Warren and Cass Avenues. Most graduate courses are offered in the evening in Manoogian Hall.

Philosophy, Departmental

Communication is a human activity in which ideas, information, and perceptions are shared. The study of human communication involves the theory, research, and practice of human interaction among indi-

viduals, groups, institutions, and cultures, using quantitative, qualitative, rhetorical, and critical approaches.

The graduate program in communication is designed to establish and maintain high standards of scholarly research and creative/professional activity, while providing excellence in academic instruction at both the theoretical and applied levels. The graduate program encompasses the full range of empirical, rhetorical, and creative approaches, in which each student is focused through a personal Plan of Work.

Alumni of the program are skilled researchers, practitioners, critical consumers, and thoughtful observers of communication processes. While many serve as recognized scholars and educators throughout the country and world, others occupy responsible positions as communication professionals in business, government, and industry.

The research interests and methodological approaches of the faculty are diverse. Faculty members and graduate students have written extensively on computer-mediated communication, critical and cultural studies, dispute resolution, health and risk communication, interpersonal communication, journalism studies, media effects, media studies, organizational communication, public relations, and rhetorical theory and criticism. Faculty members also have diverse professional backgrounds and experiences and have won numerous state, regional, national, and international creative/professional awards. The graduate program is deeply committed to research and scholarship on the interrelations of theory, practice, research, experience, strategy, and ethics.

Communication (Ph.D. Program)

At the Ph.D. level the primary aim of the Department is to help students develop the theoretical basis and the analytical and research skills necessary for scholarly inquiry into various communication acts, processes, and contexts. Courses in the Department are designed to serve several specific purposes:

1. To promote research and study into all aspects of communication process and effects.
2. To provide intensive inquiry into communication areas such as computer-mediated communication, critical and cultural studies, dispute resolution, health and risk communication, interpersonal communication, journalism studies, media effects, media studies, organizational communication, public relations, and rhetorical theory and criticism.
3. To prepare students for communication related careers in public service organizations and private business.
4. To prepare communication educators.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. Admission to the Department's Ph.D. program is competitive and is based on an applicant's entire academic record; requirements stated below are minimum standards for consideration and do not guarantee admission. The Department requires an M.A. degree in communication or a related field, with a minimum 3.5 grade point average on a 4.0 scale. In those instances where an applicant's M.A. is not communication-related, or there are fewer than fifteen semester credits in communication, the applicant may be admitted to the department's master's degree program until such time as sufficient background for doctoral study is demonstrated.

Application: There are six parts to the Ph.D. application process including submission of the following:

1. The Application for Graduate Admission, which is available online at: <http://wayne.edu/admissions/graduate>.
2. Three letters of recommendation from persons qualified to assess the applicant's scholarly potential.

3. A two- to three-page statement of the applicant's academic interests and professional goals identifying faculty with whom the applicant would like to work.

4. A sample of written scholarship, such as a research paper or a master's thesis.

5. Graduate Record Examination (GRE) scores (minimum 50th percentile required). International students are also required to submit scores from Test of English as a Foreign Language (TOEFL) (minimum 100 on Internet-based Test required) or equivalent tests.

6. Official transcripts from each college and university attended.

Doctoral students are admitted for the fall semester only. The deadline for the first round of admissions is January 15. Application materials are submitted online through Graduate Admissions, except for current Wayne State University graduate students, who should submit all application materials directly to the department.

DEGREE REQUIREMENTS

Doctoral degree requirements consist of a minimum of ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses COM 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. All coursework must be completed in accordance with the academic procedures of the College of Fine, Performing and Communication Arts and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate and Academic Regulations for the College of Fine, Performing, and Communication Arts.

All students must complete COM 8000: Introduction to Ph.D. Studies in Communication in the first semester of coursework with a grade of B or better. Students must also complete COM 7810: Seminar in Communication Education in their first semester of coursework, but this can be waived. The student's Coursework Worksheet and Plan of Work must be developed in consultation with the advisor; the Worksheet must be filed within the first eighteen credits and the Plan of Work within the first twenty-seven credits of study.

REQUIREMENTS

COM 8000: Introduction to Ph.D. Studies in Communication
COM 7810: Seminar in Communication Education (can be waived)

- Minimum five Tool/Methods courses. Up to two graduate-level transfer courses may be applied, but these will not count toward the required minimum sixty credits of coursework. Foreign language reading and writing proficiency as determined by appropriate tests can count as one Tool course, if the adviser judges the language directly relevant to the dissertation project.
- Minimum four Content courses in the Department of Communication that together constitute a research area specialization.
- Additional Elective Content courses as needed to achieve minimum sixty credits of coursework (includes up to thirty credits transferred from prior graduate-level coursework, if applicable).
- Content courses (minimum nine credits) outside the Department of Communication that together constitute a Minor/Cognate.
- Minimum thirty dissertation credits (COM 9991, COM 9992, COM 9993, COM 9994, each seven and half credits, to be taken in consecutive semesters).
- Successful completion of the written and oral parts of the Qualifying Examination.
- Successful presentation and defense of the Dissertation Prospectus.
- Successful presentation and defense of the Doctoral Dissertation.

Communication (M.A. Program)

The Department offers a master's degree in Communication with concentrations in the following areas: Communication Studies, Journalism, Media Arts, Media Studies, and Public Relations & Organizational Communication.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Admission to the M.A. program is competitive and is based on an applicant's entire academic record; the following requirements are minimum standards for consideration and do not guarantee admission. The Department requires that the applicant have a B.A. or B.S. in communication or a related field with a minimum 3.2 ('B'=3.0) grade point average for the upper-division (the last sixty semester credits) of coursework and a minimum of fifteen semester credits in communication. Applicants with a grade point average below 3.2 for the last sixty semester credits of coursework may submit Graduate Record Examination (GRE) scores as additional evidence of academic ability. In some instances students not meeting the grade point average requirement may be admitted as a post-baccalaureate student until such time as sufficient background for graduate study is demonstrated. To be considered, applicants must also submit a statement of academic interest and professional goals (reasons for interest in pursuing the degree), and a sample of written work (such as a research paper or a professional/creative project).

Applicants should complete the online Application for Graduate Admission and submit official transcripts from each college and university previously attended. Questions regarding these should be addressed to the Office of Graduate Admissions, Wayne State University, Detroit MI 48202. International students are also required to submit scores from Test of English as a Foreign Language (TOEFL) (minimum 100 on Internet-based Test required) or equivalent tests.

M.A. applicants are admitted for the fall and the winter semesters. Deadline for application materials for fall semester admission is June 1; and for the winter semester it is November 1.

DEGREE REQUIREMENTS

The Master of Arts degree is offered by the Department under the following options:

Plan A: At least thirty-two credits, including an eight credit thesis.

Plan B: At least thirty-three credits, including a three credit essay.

Plan C: Thirty-three to forty-eight credits in coursework.

Students must plan a program of study as early as possible in consultation with the assigned advisor. Candidacy must be established by filing an approved Plan of Work by the time twelve credits have been earned. COM 7000 must be included in the Plan of Work and must be taken during the first semester of coursework. All students must complete COM 7000 with a grade of B or better in order to continue in the program.

All coursework must be completed in accordance with the academic procedures of the College of Fine, Performing and Communication Arts and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219.

Essays or theses may be chosen when allowed as an option in the concentration, after consultation with the advisor. A final oral examination will be held for those writing theses.

Courses that relate to a student's particular area of interest are selected in consultation with the advisor and are formalized by filing the Plan of Work. The Plan of Work must be approved by the advisor and the Director of Graduate Studies.

CONCENTRATION REQUIREMENTS

Communication Studies

The Communication Studies concentration is designed for students with a general interest in the study of human communication. It is intended primarily for students preparing for doctoral study in communication. Requirements include:

COM 7000 – Introduction to M.A. Studies in Communication

A minimum of six courses, including one Methods (M) Course, preferably all from any one of the following four tracks:

RHETORICAL THEORY AND CRITICISM:

- COM 6350 – Communication, Culture, and Conflict: Cr. 3
- COM 7110 – Theory of Argument: Cr. 3
- COM 7190 – Classical Rhetorical Theory: Cr. 3
- COM 7200 – (M) Rhetoric of Visual Culture: Cr.3
- COM 7250 – (M) Rhetorical Criticism: Cr. 3
- COM 7300 – (M) Feminist Rhetorical Criticism: Cr. 3
- COM 7310 – Rhetoric & Contemporary Intellectual Developments: Cr. 3
- COM 7350 – Rhetoric of Citizenship and National Identity: Cr. 3
- COM 8350 – (M) Advanced Study in Rhetorical Criticism: Cr. 3

INTERPERSONAL COMMUNICATION AND SOCIAL INFLUENCE:

- COM 6180 – Principles of Health Communication: Cr. 3
- COM 6270 – New Media Theory: Cr. 3
- COM 6350 – Communication, Culture, and Conflict: Cr. 3
- COM 7155 – Theories of Interpersonal Communication: Cr. 3
- COM 7170 – Health Communication: Cr. 3
- COM 7260 – (M) Quantitative Research Methods in Comm.: Cr. 3
- COM 7340 – Interviewing: Cr. 3
- COM 7360 – (M) Qualitative Research Methods in Comm: Cr. 3
- COM 7365 – (M) Ethnographic Methods for Com. Research: Cr. 3
- COM 7410 – Communication Theory: Cr. 3
- COM 7580 – (M) Content Analysis: Cr. 3
- COM 8170 – Seminar in Interpersonal Communication: Cr. 3
- DR 7100 – Roots of Social Conflict: Cr. 3
- DR 7210 – Concepts and Processes of Dispute Resolution I: Cr. 3

SMALL GROUP AND ORGANIZATIONAL COMMUNICATION

- COM 6180 – Principles of Health Communication: Cr. 3
- COM 6200 – Theories of Small Group Processes: Cr. 3
- COM 6250 – Organizational Communication: Cr. 3
- COM 7140 – Public Relations Campaigns: Cr. 3
- COM 7150 – Micro-level Organizational Communication: Cr. 3
- COM 7160 – Crisis Communication: Cr. 3
- COM 7165 – Communication and Issue Management: Cr. 3
- COM 7170 – Health Communication: Cr. 3
- COM 7240 – Communication Consulting and Training: Cr. 3
- COM 7410 – Communication Theory: Cr. 3
- DR 7210 – Concepts and Processes of Dispute Resolution I: Cr. 3

POLITICAL AND PUBLIC COMMUNICATION:

- COM 6100 – Speech Writing: Cr. 3
- COM 6350 – Communication, Culture, and Conflict: Cr. 3
- COM 7040 – Language and Power: Cr. 3
- COM 7120 – Contemporary Political Campaigns: Cr. 3
- COM 7130 – Research in Social Movements: Cr. 3
- COM 7250 – (M) Rhetorical Criticism: Cr. 3
- COM 7260 – (M) Quantitative Research Methods in Comm.: Cr. 3
- COM 7700 – Mass Media and Political Communication: Cr. 3
- DR 6120 – Human Diversity and Human Conflict: Cr. 3
- DR 7100 – Roots of Social Conflict: Cr. 3
- DR 7210 – Concepts and Processes of Dispute Resolution I: Cr. 3

One of the following plan options:

Plan A: Eight credits in COM 8999 with an approved thesis, and additional elective courses to total a minimum of thirty-two credits.

Plan C: Additional elective courses to total 35-48 credits.

Journalism

The Journalism Concentration is intended for careers in news organizations, academic teaching and media management. The program is individually tailored and includes courses in print and broadcast management skills, organizational communication, Internet-based reporting, and communication and cultural diversity issues. Requirements include:

- COM 5080 – History and Law of American Journalism: Cr. 3
- COM 6280 – Reporting on Diversity: Cr. 3
- COM 7000 – Introduction to M.A. Studies in Communication: Cr. 3

One of the following Research Methods Courses:

- COM 6530 – Audience Measurement & Survey Techniques: Cr. 3
- COM 7260 – Quantitative Research Methods in Comm.: Cr. 3
- COM 7365 – Ethnographic Methods for Comm. Research: Cr. 3
- COM 7580 – Content Analysis: Cr. 3

One of the following Theory Courses:

- COM 7410 – Communication Theory: Cr. 3
- COM 7520 – Theories of Media Effects: Cr. 3
- COM 7700 – Mass Media and Political Communication: Cr. 3

Five courses from the following, as may be appropriate for the concentration, selected in consultation with the advisor:

- COM 5250 – Professional Issues: News Media Mgt.: Cr. 3
- COM 5300 – Layout and Design: Cr. 3
- COM 5310 – Investigative Reporting: Cr. 3
- COM 5381 – TV News Reporting and Digital Editing: Cr. 3
- COM 5420 – Director's Workshop: Cr. 3
- COM 5460 – Magazine Writing: Cr. 3
- COM 5500 – Web Design for News Content: Cr. 3
- COM 5700 – Political and Government Reporting: Cr. 3
- COM 6190 – Internship: Cr. 1-3 (Max. 6)
- COM 6540 – Media Operation and Management: Cr. 3
- COM 6560 – Journalism and New Media: Cr. 3
- COM 7330 – Advanced Layout and Design: Cr. 3
- COM 7400 – Media Arts Production: Cr. 3
- COM 7999 – Master's Essay Direction: Cr. 3

One elective from another department (e.g. Political Science, Anthropology, History, Sociology, Business or others), as may be appropriate for the concentration, selected in consultation with the advisor.

One of the following plan options:

Plan B: Thirty-three credits (minimum) including three credits in COM 7999 with an approved essay.

Plan C: Thirty-three credits (minimum) of coursework from the requirements listed above approved by the advisor and listed on the plan of work.

Media Arts

The Media Arts concentration is a professionally-oriented program that emphasizes production and other creative activity, with exposure to theory and research. The concentration is designed for those currently working in mass media and those who wish to pursue a career in that industry. Requirements include:

- COM 5270 – (WI) Screenwriting: Cr. 4 (Max. 8)
- COM 5380 – Video and Film Editing: Cr. 3
- COM 5400 – Techniques of Film and Video Production: Cr. 4
- COM 7000 – Introduction to M.A. Studies in Communication: Cr. 3

One of the following Theory Courses:

- COM 7520 – Theories of Media Effects: Cr. 3
- COM 7530 – Critical Mass Communication Theory: Cr. 3

One of the following Research Methods Courses:

- COM 6530 – Audience Measurement and Survey Techniques: Cr. 3
- COM 7260 – Quantitative Research Methods in Comm.: Cr. 3
- COM 7360 – Qualitative Research Methods in Comm.: Cr. 3

COM 7510 – Seminar in Research Methods: Cr. 3
COM 7580 – Content Analysis: Cr. 3
COM 7590 – Criticism of Mass Media: Cr. 3
COM 7600 – Media and Cultural Historiography: Cr. 3
COM 7610 – Feminist Media Theory and Criticism: Cr. 3

Two additional COM courses numbered 5000 or higher (appropriate to Media Arts concentration, selected in consultation with the advisor).

Additional elective courses selected in consultation with the advisor to total a minimum of 35 credits

One of the following plan options:

Plan B: Three credits in COM 7999 with an approved essay, in consultation with the advisor.

Plan C: Appropriate course work as approved by the advisor and listed on the plan of work

Media Studies

The Media Studies concentration is an academically-oriented program for students interested in radio, television, film, or other mass communication or related phenomena. This concentration is appropriate for students interested in areas such as media research, media effects, theory and criticism, film criticism, and writing about radio, television, or film. It is an appropriate preparatory degree for doctoral work. Requirements include:

COM 7000 – Introduction to M.A. Studies in Communication: Cr. 3

One of the following Theory Courses:

COM 7520 – Theories of Media Effects: Cr. 3
COM 7530 – Critical Mass Communication Theory: Cr. 3

One of the following Research Methods Courses:

COM 6530 – Audience Measurement & Survey Techniques: Cr. 3
COM 7260 – Quan. Research Methods in Communication: Cr. 3
COM 7360 – Qual. Research Methods in Communication: Cr. 3
COM 7510 – Seminar in Research Methods: Cr. 3
COM 7580 – Content Analysis: Cr. 3
COM 7590 – Criticism of Mass Media: Cr. 3
COM 7600 – Media and Cultural Historiography: Cr. 3
COM 7610 – Feminist Media Theory and Criticism: Cr. 3

Four additional COM courses numbered 5000 or higher (appropriate to Media Studies concentration)

One additional course numbered 7001 or higher

Additional elective courses selected in consultation with the advisor to total a minimum of thirty-five credits.

One of the following plan options:

Plan B: Three credits in COM 7999 with an approved essay, in consultation with the advisor.

Plan C: Appropriate coursework as approved by the advisor and listed on the plan of work.

Public Relations and Organizational Communication

The Public Relations and Organizational Communication concentration emphasizes the theory and application of communication in a variety of contexts. These include working in public relations, employee relations, media relations, public affairs, issue and crisis management, technical and employee communication, and related activities in business, industry, non-profit, and governmental settings. Requirements include:

COM 6250 – Organizational Communication: Cr. 3
COM 7000 – Introduction to M.A. Studies in Communication: Cr. 3
COM 7140 – Public Relations Campaigns and Issues Mgt.: Cr. 3
COM 7210 – New Media and Strategic Communication: Cr. 3

At least two of the following:

COM 6100 – Speech Writing: Cr. 3
COM 6200 – Theories of Small Group Processes: Cr. 3
COM 7150 – Micro-Level Organizational Communication: Cr. 3
COM 7160 – Crisis Communication: Cr. 3
COM 7165 – Communication and Issue Management: Cr. 3
COM 7240 – Communication Consulting and Training: Cr. 3
COM 7410 – Communication Theory: Cr. 3

At least one of the following Research Methods Courses:

COM 7250 – Rhetorical Criticism: Cr. 3
COM 7260 – Quantitative Research Methods in Comm.: Cr. 3
COM 7360 – Qualitative Research Methods in Comm.: Cr. 3

At least two additional courses from the following, chosen in consultation with the advisor:

COM 6180 – Principles of Health Comm.: Cr. 3
COM 6190 – Internship: Cr. 1-3 (Max. 6)
COM 6350 – Communication, Culture, and Conflict: Cr. 3
COM 6530 – Audience Measurement and Survey Technique: Cr. 3
COM 7110 – Theory of Argument: Cr. 3
COM 7120 – Contemporary Political Campaigns: Cr. 3
COM 7155 – Theories of Interpersonal Communication: Cr. 3
COM 7330 – Advanced Layout and Design: Cr. 3
COM 7340 – Interviewing: Cr. 3
COM 7580 – Content Analysis: Cr. 3
Other COM 6/7000 level courses, with advisor's approval

At least one 3-4 credit course outside the Department numbered 6000 or above from another department such as Economics, English, Management, Marketing, Political Science, or Psychology, approved by advisor.

One of the following plan options: (Plan C is highly recommended):

Plan B: COM 7999 – Master's Essay: Cr. 3

Plan C: COM 7220 – Professional Issues in Applied Comm.: Cr. 3

Dispute Resolution (M.A.D.R. Program)

Website: <http://comm.wayne.edu/ma/dispute-resolution.php>

The M.A. in Dispute Resolution is an interdisciplinary master's degree program housed in the Department of Communication.

The M.A.D.R. offers a challenging program, informed by a multicultural perspective, in the growing and recognized field of dispute resolution. As an interdisciplinary field, grounded in the fundamental idea that dispute resolution techniques are inherently democratic in giving voice to disputants, the program provides practical and academic experience that constitutes the range of dispute resolution activities: community, civil and school mediation, organizational and family dispute intervention, legal or business negotiation, and international peacemaking and diplomacy. The program is designed to provide relevant academic knowledge and professional skills for individuals interested or engaged in conflict resolution and peacemaking activities.

Admission: Applicants must meet the admission standards of the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, at least a 3.0 grade point average in the upper division of undergraduate coursework is required. Applicants must submit a personal statement of one-two pages outlining their interest in the program and three letters of recommendation.

Academic Scholarship: All course work must be done in accordance with the regulations of the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219. A 3.0 grade point average is required; if a grade below 'B' is received in any core course, the course must be repeated promptly and a grade of 'B' or above obtained. A grade of 'B' or below in any two graduate courses will constitute a sufficient basis for dismissal from the program.

DEGREE REQUIREMENTS

This master's degree is offered as a Plan C program only. It requires the completion of the core curriculum (twenty-four credits) plus a minimum of three approved elective courses (minimum of eight credits). All course work must be completed in accordance with the regulations of the Graduate School and the College of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219, respectively.

CORE CURRICULUM (Twenty-four credits):

- PCS 6100 – Intro. to Peace and Security Studies: Cr. 3
- COM 6350 – Communication, Culture, and Conflict: Cr. 3
- DR 6120 – Human Diversity and Human Conflict: Cr. 3
- DR 7100 – Roots of Social Conflict: Cr. 3
- DR 7210/MGT 7780 – Concepts & Processes of Dispute Resolution I: Negotiating Theory and Practice: Cr. 3
- DR 7220 – Concepts & Processes of Dispute Resolution II: Neutral Intervention Theory and Practice: Cr. 3
- DR 7310 – Practicum in Dispute Resolution (LEX 7660): Cr. 3
- DR 7890 – Final Seminar in Dispute Resolution: Cr. 3

Electives: Students must elect a minimum of three courses (minimum of eight credits). Electives are selected with the cooperation and approval of the Academic Director. Students must ordinarily satisfy any prerequisites for elective courses; waivers of any prerequisites must be obtained from the unit offering the course. M.A.D.R. students can only have one Sxxx level course offered for graduate credit on their plan of work. The following courses, PCS 5000, CRJ 5994, PS 5890, and PSY 5710, cannot be used as M.A.D.R. electives as their content is covered in M.A.D.R. core courses. Suggested areas of elective study include but are not limited to: workplace, community and urban studies, environmental and hazardous waste, family, gerontology, health care, theories of conflict, professional practice, and international relations.

Candidacy: Students are expected to file a Plan of Work upon successful completion of nine graduate credits. Upon approval of the Plan, the student's rank will be changed from 'applicant' to 'candidate,' provided the grade point average is at least 3.0

Dispute Resolution (M.A. / J.D. Joint Degree Program)

The Department of Communication Dispute Resolution Program in cooperation with the Law School offers a joint degree program leading to a Master of Arts degree in dispute resolution and a Juris Doctor (J.D.) degree. Students in this program must be admitted to both the Law School and the M.A. program in dispute resolution.

Admission: Students in this program must first be admitted to the Law School (see <http://law.wayne.edu/jd/index.php>) and then apply to the M.A. program in Dispute Resolution (M.A.D.R.). During their first year of Law School, joint degree seeking students should apply to the M.A.D.R. program using the online Application for Graduate Admission form (see admission requirements for M.A.D.R. listed above).

DEGREE REQUIREMENTS

This degree requires the completion of a minimum 102 credits with the master's degree part of the program offered only under Plan C. The first year of study is spent in the Law School. Following completion of the first year and after consultation with the Academic Director of M.A.D.R., students may elect one course per semester, up to a total of four courses, in the graduate M.A.D.R. program, credit for which is applicable toward the J.D. degree. In addition, Law School courses LEX 7016 (Alternative Dispute Resolution), and LEX 7616 (Negotiation) are considered equivalent to the M.A.D.R. core courses DR 7220 (Neutral Intervention) and DR 7210 (Negotiation), respectively, and their credit may be applied toward the M.A.D.R. Finally,

students in this program may apply one Law School course (three credits) toward the satisfaction of the M.A.D.R. elective requirement.

For further information, contact the Academic Director of M.A.D.R. or the Law School Admissions Office.

NOTE: The Law School has an academic calendar and registration process separate from those in the Graduate School. Students must ensure they meet all appropriate application requirements and deadlines.

Dispute Resolution (Graduate Certificate)

Website: <http://comm.wayne.edu/ma/dispute-resolution.php>

The Graduate Certificate program in Dispute Resolution is designed to provide professional study in the interdisciplinary field of dispute resolution for individuals holding or pursuing advanced degrees in other disciplines. The certificate is administered by the Academic Director.

Admission: Applicants must meet the admission standards of the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, at least a 3.0 grade point average in the upper division of undergraduate coursework is required. Applicants must submit a personal statement of one-two pages outlining their interest in the program and two letters of recommendation.

CERTIFICATE REQUIREMENTS

Students in the certificate program must complete a minimum of fifteen credits as outlined below and maintain a grade point average of at least 3.0. The certificate allows maximum six credits to count toward both the certificate and a relevant M.A. offered by this Department only when there is concurrent enrollment in the certificate and the M.A. programs. Transfer of credit from other institutions may NOT be applied toward the credits required for the certificate. All coursework must be completed in accordance with the regulations of the Graduate School and the College of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Degree and Certificate Requirements, Graduate, p. 36 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219, respectively. The certificate must be completed within three years. The following courses are required:

Four required core courses:

- PCS 6100: Introduction to Peace and Security Studies: Cr. 3
- DR 7210: Concepts & Processes of Dispute Resolution I: Negotiation: Cr. 3
- DR 7220: Concepts & Processes of Dispute Resolution II: Neutral Intervention Theory & Practice: Cr. 3
- DR 7890: Final Seminar in Dispute Resolution: Cr. 3

One course from the following:

- DR 6120: Human Diversity & Human Conflict: Cr. 3
- COM 6350: Communication, Culture & Conflict: Cr. 3
- DR 7100: Roots of Social Conflict: Cr. 3

Communication and New Media (Graduate Certificate)

The Communication and New Media Graduate Certificate emphasizes theory, production, and application of new media technology. The program reflects developments in communication, computer, and telecommunications technologies. Students completing the Certificate will be exposed to and have a basic understanding of the theoretical and applied aspects of new media and communication. Competencies achieved will include, but are not limited to:

1) Awareness of trends toward new media convergence and communication theories;

- 2) Knowledge of new media effects and audiences; uses of new communication modes; and
- 3) Recognition of multi-media methods used in online and mobile communications.

Additionally, the program will familiarize students with the design and evaluation of communication messages and software applications.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. In addition, at least a 3.0 grade point average in the upper division of undergraduate coursework and a personal statement of one-two pages regarding interest in the program and career goals are required. Eligibility for this program is limited to persons holding an undergraduate degree from an accredited education institution in communication or a related field.

CERTIFICATE REQUIREMENTS

The Certificate requires satisfactory completion of twelve credits from the curriculum outlined below. Courses must be completed with a minimum grade point average of 3.0 or better, and must be completed within three years of the enrollment. The Certificate allows maximum six credits to count toward both the Certificate and a relevant M.A. in the Department only when there is concurrent enrollment in the Certificate and the M.A. programs. Transfer of credit from other institutions may NOT be applied toward the credits required for the certificate. All coursework must be completed in accordance with the regulations of the Graduate School and the School of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate and Academic Regulations for the College of Fine, Performing, and Communication Arts, respectively.

REQUIRED COURSES

- COM 5280 – New Media Practices: Cr. 3
- COM 6270 – New Media Theory: Cr. 3

ELECTIVE COURSES

(Minimum six credits from the following):

- COM 5500 – Web Design for News Content: Cr. 3
- COM 6220 – Dispute Resolution and Comm. Technology: Cr. 3
- COM 6530 – Audience Measurement & Survey Techniques: Cr. 3
- COM 6560 – Journalism and New Media: Cr. 3
- COM 6680 – Directed Projects in Film and Media: Cr. 1-3
- COM 7330 – Advanced Layout and Design: Cr. 3
- IT 7130 – Facilitation of Online and Face-to-Face Learning: Cr. 3
- IT 7180 – Message Design and Display: Cr. 4
- IT 7210 – Foundations of Distance Education: Cr. 4

Health Communication (Graduate Certificate)

The Graduate Certificate program in Health Communication is designed to provide research-based, professional study for graduate students interested in the role of communication in the health professions. The twelve-credit certificate focuses on components of health communication and their influence on individuals and communities as well as on knowledge creation and research translation and publication. The program emphasizes the role of theory, methods, and strategies in developing messages designed to improve health outcomes for individuals and communities. The Certificate provides both depth in the study of health communication and breadth through the inclusion of a set of elective health-related courses in Anthropology, Family Medicine and Nursing. The program is sufficiently flexible to accommodate students with broad interests and diverse backgrounds.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, at least a 3.0 grade point average in the upper division of undergraduate coursework and a personal state-

ment of one-two pages regarding interest in the program and career goals are required.

Certificate Requirements

Twelve credits in the program as outlined below including a required three-credit communication course, six credits of electives and a three-credit elective health-related course. The Certificate allows maximum six credits to count toward both the Certificate and a relevant M.A. offered by the Department only when there is concurrent enrollment in the Certificate and the M.A. programs. Courses must be completed with a minimum grade point average of 3.0 or better, and must be completed within three years of the enrollment. Transfer of credit from other institutions may NOT be applied toward the credits required for the certificate. All coursework must be completed in accordance with the academic procedures of the College of Fine, Performing and Communication Arts and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219 and Academic Regulations, Graduate, p. 32.

One required course:

- COM 6180 – Principles of Health Communication: Cr. 3

Two courses from the following:

- COM 5130 – Communication and Social Marketing: Cr. 3
- COM 7010 – Special Topics: Cr. 3
- COM 7150 – Micro-Level Organizational Communication: Cr. 3
- COM 7170 – Health Communication: Cr. 3

One course from the following (or one other course approved by the advisor):

- ANT 5400 – Anthropology of Health and Illness: Cr. 3
- COM 6190 – Internship: Cr. 3
- FPH 7320 – Social Basis of Health and Health Care: Cr. 3

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning on under Financial Assistance, Graduate, p. 26; and the website: <http://wayne.edu/financial-aid>. See also the Academic Regulations of the College, above. The following information applies to the Communication Department.

Graduate Assistantships employ selected doctoral students in a variety of capacities, such as teaching undergraduate courses, coaching debate and forensics teams, and assisting with media production at University Television and Midtown Television Studio. Assistantships carry a stipend, health and dental insurance coverage, and a tuition scholarship, and are renewable for up to three years. Graduate Assistantships are covered by the Graduate Employee Organizing Committee Agreement. Graduate Assistantships are infrequently awarded to master's students.

The Thomas C. Rumble University Graduate Fellowship is the most prestigious award available from the Graduate School. The recipient receives a stipend, health and dental insurance coverage, and tuition scholarship with no teaching or other duties.

Other Graduate Financial Aid includes the Graduate Professional Scholarship and the King-Chavez-Parks Minority Fellowship. Graduate students may also be eligible for loans and the Federal College Work-Study Program. Contact the Graduate School for information: 313-577-2170.

Departmental Scholarships and Awards are listed below. Please contact the department for more information.

George Bohman-Rupert Cortright Award Fund: An award of \$100-\$500 open to any student specializing in debate.

Raymond and Alice Hayes Scholarship Fund: An award of \$150-\$500 open to any student specializing in debate.

George A. Kopp Memorial Scholarship Fund: An award of variable amount offered to full-time students, based on scholastic achievement, desirable qualities of leadership, and financial need.

Freedman Award: A \$1,000 scholarship for master's students, particularly those with an interest in broadcast journalism and/or political communication;

Communication Scholarship: The \$1,000 award is open to any master's student in the department with preference given to students in the Communication Studies area. More than one award may be given annually.

Skinner Award: The \$1,000 award is open to any master's student in the department.

Communication Courses (COM)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999, which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 History of Communication Technologies. Cr. 3

COM 1500 or graduate standing. Traces the historical development of communication technologies, industry players and government policies, and assesses impact of the technologies in their historical context. (Y)

5020 Studies in Film History. Cr. 3 (Max. 12)

Open only to department undergraduate and graduate majors. Prereq: COM 2010 or graduate standing. Analysis of the development of a specific film genre, a director, or other historical aspect of the motion picture. Topics to be announced in Schedule of Classes. Material Fee As Indicated In The Schedule of Classes (B)

5040 Cultures and Rhetorics. Cr. 3

Not open to graduate students except with written consent of instructor. Prereq: COM 2000 or COM 3400. Offered for undergraduate credit only. Analysis of philosophical, social and cultural foundations of rhetorical theory and practice in different cultures. Cultures may include: African, Asian, Native American, Latin American, Arab, or Jewish. (B)

5050 Special Topics. Cr. 3 (Max. 9).

No more than six credits may be elected in this special topics course in any graduate degree program. Selected topics in communication to be announced in the Schedule of Classes. (I)

5060 Documentary and Non-Fiction Film and Television. Cr. 4

Open only to department undergraduate and graduate majors. Prereq: COM 2010 or COM 2450 or graduate standing. Study of the non-fiction film made for a social, cultural, or political purpose; screening and analysis of selected films. Material Fee As Indicated In The Schedule of Classes (Y)

5080 History and Law of American Journalism. Cr. 3

Prereq: junior or senior standing. History of the press in America; emphasis on development of law relating to communication and development of the media's effect on the law. (T)

5120 Public Address. Cr. 3

Prereq: COM 2000. Landmark moments of public address. What constitutes public address; relevance of public address studies. (Y)

5130 Communication and Social Marketing. Cr. 3

Prereq: COM 4210 or graduate standing. Principles of social marketing; student-driven group project. (F,S)

5140 Public Relations and Social Media. Cr. 3

Offered for undergraduate credit only. Prereq: COM 3170. Examines social media strategies and how they can be constructed, implemented and evaluated in the context of public relations planning. (W)

5180 Family Communication. Cr. 3

Offered for undergraduate credit; exceptions require written consent of instructor. Prereq: COM 2000 or COM 3400. Message patterns and social signals in organized, systemic human units that are interdependent, usually due to blood connections, legal bonds, and/or explicit verbal commitments. (Y)

5270 Screenwriting. Cr. 4 (Max. 8)

Open only to department undergraduate and graduate majors. Prereq: COM 2210 and junior standing or above. Majors in Film must co-register for zero credit course (COM 5993) in order to earn credit for general education Writing Intensive requirement. Principles and techniques of writing for motion pictures. Analysis and study of professionally written scripts. Exercises in writing documentary and dramatic film scripts. Material Fee As Indicated In The Schedule of Classes (Y)

5280 New Media Practices. Cr. 3

Principles and practices of new media and interactive communication. Integrative applications include social networking, wikis, blogs, podcasting, websites and file sharing. Research projects. (F)

5300 Layout and Design. Cr. 3

Prereq: COM 2100. Practical skills course in publishing newsletters, magazines, newspapers and books; emphasis on new computer technology, desktop publishing; business aspects of publishing, including printing, promotion and marketing; skills in use of personal computer for publishing. Material Fee As Indicated In The Schedule of Classes (I)

5310 Investigative Reporting. Cr. 3

Prereq: COM 4410 or COM 5381. Advanced reporting techniques involving use of Freedom of Information Act and computer-assisted data base searches; accessing public records. (I)

5350 Media Arts Production. Cr. 3

No credit after COM 5380 or COM 5400. Prereq: graduate standing. Offered for graduate credit only. Key components of production for electronic media (field, audio, and television production). Production techniques, aesthetic understanding, directing skills. Material Fee As Indicated In The Schedule of Classes (F)

5380 Video Field Production and Editing. Cr. 3

Prereq: COM 1600 or COM 5350; and COM 2210. Open only to undergraduate and graduate majors in department. Theory and practical application of video location production and post-production techniques. Digital non-linear editing and post-production software as used in creative development of original content. Material Fee As Indicated In The Schedule of Classes (W)

5381 TV News Reporting and Digital Editing. Cr. 3

Prereq: COM 2230. Open only to majors in journalism and media arts and studies. Theory and practical application of aesthetics and journalistic values of TV news and feature storytelling. Emphasis on planning, location video and sound protection, editing, interviewing, writing skills, on-camera presentation. Material Fee As Indicated In The Schedule of Classes (Y)

5384 Topics in Production Design and Theory. Cr. 3 (Max. 6)

Prereq: COM 5380 or COM 4310 or COM 5350 Theory and practical application in the aesthetic and technical considerations of production design. Topics may include: cinematography/lighting, sound design/mixing, experimental film/video, performance production, documentary preproduction, film/video graphic design. Material Fee As Indicated In The Schedule of Classes (S)

5390 Digital Animation. Cr. 3

Prereq: COM 3380 or COM 5380. Introduction to animation techniques, 2D to 2-1/2D to 3D; includes use of Adobe products such as After Effects. Discussion of alpha channels, masks, rotoscoping, layering, keyframe and behavioral-based animation. (W)

5400 Techniques of Film and Video Production. Cr. 4

Open only to department undergraduate and graduate majors. Prereq: COM 4310 and COM 5380. Capstone course option for majors in Media Arts and Studies; should be taken in last 21 credits of program. Experience with the preparation, shooting and editing of video projects in film-style production. Material Fee As Indicated In The Schedule of Classes (T)

5410 Producer's Workshop. Cr. 3

Open only to department undergraduate and graduate majors. Prereq: COM 3380, or COM 3390, or COM 5380 or COM 5381 or AIN 3220. Examination of the business, managerial, and creative considerations and process of producing media programming from conception through distribution. Material Fee As Indicated In The Schedule of Classes (Y)

5420 Director's Workshop. Cr. 3 (Max. 6)

Prereq: COM 5400, production-ready script, and written consent of instructor. Organization and execution of the film and video director's tasks through production of a major creative project. Material Fee As Indicated In The Schedule of Classes (Y)

5440 Film, Cinematography and Lighting. Cr. 4

Prereq: COM 5400. An immersion into the cinematic practices and applied theory of film and digital cinema including the art and technology of cinematography, lighting design, and non-linear post-production. Students will apply an understanding of exposure and color temperature control, workflow management, NLE systems and color grading to the creation of short cinematic works designed for their portfolios and for exhibition. Material Fee As Indicated In The Schedule of Classes (B)

5460 Magazine Writing. Cr. 3

Prereq: COM 4100. Advanced feature writing: preparation of magazine features. Students focus on limited number of in-depth articles. Research, structure and writing techniques to produce publishable magazine-length articles. (Y)

5480 Special Topics in Media Studies. Cr. 3 (Max. 9)

Prereq: junior standing. Open only to media arts and studies, radio-TV, film, and journalism majors. Topics may include: studies and practices in media management, legal issues in media, media and globalization, new digital platforms. Material Fee As Indicated In The Schedule of Classes (Y)

5500 Web Design for News Content. Cr. 3

Prereq: COM 2100. Technique and goals of publishing on World Wide Web. Preparing graphics, learning HTML, uses of World Wide Web. Material Fee As Indicated In The Schedule of Classes (Y)

5510 Societal Effects of New Technologies. Cr. 3

Prereq: COM 1500. Capstone course; must elect in last 21 credits prior to graduation. Discusses the societal impact of traditional mass media and the evolving interactive technologies of computers and mobile networks as well as emerging technologies such as robotics. (Y)

5540 Film and Media Theory. Cr. 3

Undergrad. prereq: COM 23010 and COM 3010 or COM/AFS 3200 or COM 3400; grad. prereq: graduate standing. Introduction to the major classical and contemporary theoretical and critical approaches to the study of film and screen arts, inclusive of Third Cinema theory, in a globalized, multi-screen media environment. (F)

5600 Strategic Communication in Nonprofit and the Arts Organizations. Cr. 3

Prereq: graduate standing and written consent of instructor. An introduction to strategic communication theory and practice as it applies to non-profit organizations. Includes working with arts organizations to determine their public relations needs and developing a strategic communication campaign that addresses those objectives. (W)

5610 Advanced TV Production. Cr. 3

Prereq: COM 4410 or COM 5381. Students work on producing live, recorded TV programs and work on a professional-style TV production crew.† Positions include technical director, teleprompter operator, producers, audio, lighting, staging/set construction personnel, camera operators, editors. Material Fee as indicated in Schedule of Classes. (F,W)

5700 Political and Governmental Reporting. Cr. 3

Prereq: COM 3100. Covering politics, governmental and public affairs in the media. (Y)

5900 Senior Project in Communication Studies. Cr. 3

Open only to majors in communication studies. Offered for undergraduate credit only. Combination of lectures and workshops to assist students in carrying out a service learning or individual research project. (W)

6060 Teaching Communication at the Secondary Level. Cr. 3

Prereq: fifteen credits in communication. Philosophy, pedagogical issues, and methods for teaching speech in secondary schools. (B)

6070 Directing Forensics. Cr. 3

Prereq: COM 2110. Philosophy and methods of directing high school and college forensics programs; techniques of coaching for debate, oratory, extempore speaking and other reading and speaking contests. (B)

6100 Speech Writing. Cr. 3

Open only to graduate students. Preparation and presentation of speech manuscripts. Emphasis on style of writing, use of supporting materials and factors of interest. Special problems of ghost-writing considered. (B)

6180 Principles of Health Communication. Cr. 3

Open only to graduate students. Offered for graduate credit only. Graduate survey of theory, research and practice in communication; emphasis on collaborative patient-provider interactions and health campaigns. (F)

6190 Internship. Cr. 1-3 (Max. 6)

Prereq: junior standing or above and at least 12 credits in COM courses; written consent of instructor. On-the-job observations and work experience in business, service, social, governmental, and industrial organizations. Emphasis on journalism, public relations, and organizational communication. (T)

6200 Theories of Small Group Processes. Cr. 3

Open only to graduate students. Theory and research on communication in the small, task-oriented group. (F)

6220 Dispute Resolution and Communication Technology. Cr. 3

Conflict in online environments; development of Online Dispute Resolution (ODR). Hands-on work with state-of-the-art ODR technologies via several simulations. (B)

6250 Organizational Communication. Cr. 3

Open only to graduate students. Theoretical review of the structure process and function of communication within and between organizations. Analysis of current and emerging issues in the theory and research of organizational communication. (F)

6270 New Media Theory. Cr. 3

Analysis of new media and interactive communication processes. Emphasis on critical theory and cultural studies in relation to interpersonal, group and organizational contexts. Research projects. (Y)

6280 Reporting on Diversity. Cr. 3

Prereq: admission to M.A. program and written consent of instructor. Offered for graduate credit only. Recognition and acceptance of differences in culture, ethnicity, gender, and alternative lifestyles; sensi-

activities in writing and publishing; for students intending careers in the media. (Y)

6310 Allesee Lectures in Media. Cr. 1 (Max. 3)

Prereq: major in College of Fine, Performing and Communication Arts; upper division or graduate standing. Through public lectures, screenings and discussion sessions, this course provides critical and analytical approaches to the study of work by leading artists, professionals and/or scholars in the fields of film, media arts, or broadcast journalism. (Y)

6350 Communication, Culture, and Conflict. Cr. 3

Open only to graduate students. Overview of communication theory and practice as it relates to issues of culture, conflict and dispute resolution. (F)

6410 Allesee Master Class. Cr. 1-3 (Max. 3)

Prereq: major in College of Fine, Performing and Communication Arts; upper division or graduate standing; written consent of department; admission by competitive application. The Allesee Master Class provides students the opportunity to work with leading artists, professionals, and/or scholars in the fields of film, media arts, or broadcast journalism develop and refine professional and creative skills in a production environment. (Y)

6510 Michigan Creative Film Alliance. Cr. 3 (Max. 6)

Open only to majors in the College of Fine, Performing and Communication Arts. Prereq: upper division or graduate standing; written consent of instructor. Production company. Students develop expertise and gain experience in professional film practices while collaborating in the off-campus planning, production, promotion and distribution of significant film/media projects. Offered in conjunction with Michigan State University and University of Michigan. (I)

6530 Audience Measurement and Survey Techniques. Cr. 3

Open only to graduate students. Offered for graduate credit only. Theory and application of quantitative and qualitative research techniques in surveying audiences for electronic media. (Y)

6680 Directed Projects in Film and Media. Cr. 1-3

Prereq: COM 5400; written consent of instructor. Advanced individual projects. (T)

7000 Introduction to M.A. Studies in Communication Cr. 3

Required during first term of M.A. study. Fundamentals of scholarly research and writing at the graduate level. (F,S)

7010 Special Topics. Cr. 3 (Max. 6).

No more than six credits may be elected in special topics courses in any graduate degree program. Selected topics in communication to be announced in the Schedule of Classes. (B)

7011 Intro: Professional Practices in Media. Cr. 3

Prereq: graduate standing. Bridge course for new MA students who do not have a professional background or undergraduate degree in journalism or public relations. (F)

7040 Language and Power. Cr. 3

Ways in which language is used as a device of oppression and liberation. (B)

7110 Theory of Argument. Cr. 3

Advanced studies in argumentation, including the structure of reasoning, the organization of arguments, strategies of argument, and the nature of proof. (B)

7120 Contemporary Political Campaigns. Cr. 3 (Max. 6)

Study of methods for analyzing political campaigns; a critical evaluation of presidential campaigns from 1960 to the present. (B)

7130 Research in Social Movements. Cr. 3

Methods for analyzing social movements; critical evaluation of contemporary social movements such as: civil rights, feminist, gay and lesbian rights, white supremacy, and environmental. (B)

7140 Public Relations Campaigns and Issues Management. Cr. 3

Management functions of public relations campaigns: developing objectives, strategic planning, issues management, budgeting. Blends theoretical concepts with their professional and practical applications; emphasis on prominent critical rhetorical approaches to public relations planning and evaluations. (W)

7150 Micro-Level Organizational Communication. Cr. 3

Communicative processes and behaviors that affect individuals in organizations; quality and quantity of workplace communication at dyadic and group levels. (B)

7155 Theories of Interpersonal Communication. Cr. 3

Open only to graduate students. Survey of theory and research on interpersonal interaction, with special emphasis on social perception, self-presentation, and the formation of relationships in interaction. (B)

7160 Crisis Communication. Cr. 3

Prereq: COM 6250. Theoretical and case-study approach to communicative aspects of organizational crisis management. Topics include post-crisis response, crisis sensing, crisis planning. (B)

7165 Communication and Issue Management. Cr. 3

Prereq: COM 6250. Theoretical and case study approach to management of public policy issues facing organizations. Topics include: public relations, issue monitoring, environmental uncertainty. (B)

7170 Health Communication. Cr. 3

Theory and research in health communication; issues of patient-provider communication and health campaigns. (W)

7190 Classical Rhetorical Theory. Cr. 3

Critical analysis of the Sophists, Plato, Aristotle, Cicero, and others on rhetoric. (I)

7200 Rhetoric of Visual Culture. Cr. 3

Critical analysis of symbolic and performative dimensions of visual culture. Theoretical and material force of photography, architecture, landscape, museums, public memorials, and others. (B)

7210 New Media and Strategic Communication. Cr. 3

Prereq: graduate standing. Fundamental theories and practical applications of social media, and its strategic use in public relations and professional communication. (B)

7220 Professional Issues in Applied Communication. Cr. 3

Prereq: completion of all M.A. degree requirements or enrollment in last six credits. Open only to students in final semester of M.A. course work. Open to public relations/organizational communication majors only. (W)

7240 Communication Consulting and Training. Cr. 3

Prereq: COM 6250. Theoretical and pragmatic approaches to the design and implementation of strategic communication changes in organizations. Topics: role of change, change strategies, behavioral and structural change, design of communication audits, communication training methods, and relations with client organizations. (B)

7250 Rhetorical Criticism. Cr. 3

Principles of criticism as applied to public address; analysis of standards and methods of evaluation; readings in modern criticism of public address. Research project. (F)

7260 Quantitative Research Methods in Communication. Cr. 3

Methods of data collection and analysis in communication research, approaches to measurement, research design, and other quantitative methods of communication research. (W)

7270 Advanced Screenwriting. Cr. 4

Prereq: COM 5270. Research and writing for creation of full-length dramatic or documentary film and television scripts. Material Fee As Indicated In The Schedule of Classes (Y)

7280 The Rhetoric of Kenneth Burke. Cr. 3

Kenneth Burke's theory of rhetoric as it evolved through his literary, social criticism, dramatism, and logology periods. (I)

7290 Contemporary Rhetorical Theory. Cr. 3

Exploratory analysis of a broad spectrum of recent works relevant to the art of discourse. (B)

7300 Feminist Rhetorical Criticism. Cr. 3

Prereq: COM 7250. Investigation of philosophical and practical issues inherent in feminist approaches to rhetorical theory and criticism. (B)

7310 Rhetoric and Contemporary Intellectual Developments. Cr. 3

Intersection, nature, and relationship between rhetorical theory and recent intellectual developments in such areas as: cultural studies, social semiotics, postmodernism, neo-Marxism, feminism, critical theory. (B)

7330 Advanced Layout and Design. Cr. 3

Prereq: COM 5300 and COM 5500. Advanced planning, development and production processes essential to creation of corporate publications; including brochures, newsletters, annual reports, marketing collateral materials, grant and proposal documents. Writing and strategic communication emphasis. Material Fee As Indicated In The Schedule of Classes (I)

7340 Interviewing. Cr. 3

Theory and research on interviewing across a range of contexts. Topics include: constructing questions and protocols, listening, role, self-presentation, social understanding. Contexts may include screening, counseling, legal, journalism and research. (B)

7350 Rhetoric of Citizenship and National Identity. Cr. 3

Theoretical examination of the structure and force of national identity and citizenship discourse. Analysis of current and emerging issues in citizenship studies. (I)

7360 Qualitative Research Methods in Communication. Cr. 3

Prereq: graduate standing. Theoretical bases of qualitative research in communication and the development of skills in conceptualizing/ designing qualitative research projects in communication, gathering data, analyzing data (using online software), and writing qualitative research. (Y)

7365 Ethnographic Methods for Communication Research. Cr. 3

Prereq: Graduate standing. Design, implementation and evaluation of ethnographic and participant/observation research studies in communication. (B)

7380 Advanced Media Editing. Cr. 3

Prereq: written consent of instructor. Principles of video and film editing; exercises and assignments covering pace, meaning, special effects; styles of editing related to genres; non-linear editing software programs. Material Fee As Indicated In The Schedule of Classes (F,W)

7410 Communication Theory. Cr. 3

Systematic analysis of major twentieth century theories of communication, with a discussion of their historical and philosophical founda-

tions. Discussion and critical review of recent developments in communication theory. (Y)

7420 Seminar in Directing Film and Video. Cr. 4

Prereq: COM 5420, production-ready script, written consent of instructor. Research and production of film and videotapes for professional distribution and exhibition. Material Fee As Indicated In The Schedule of Classes (F,W)

7500 Seminar in Mass Media Cr. 3 (Max. 9)

Prereq: graduate standing. Advanced topics in mass communication theory and research. (B)

7510 Seminar in Research Methods. Cr. 4 (Max. 9)

Prereq: graduate standing. Advanced and focused methods of research in communication, journalism and media studies. (B)

7520 Theories of Media Effects. Cr. 3

Survey of research and theory in mass communication effects on individuals and social systems. Processes of mass media influence; role of mass communications in society. (Y)

7530 Critical Mass Communication Theory. Cr. 3

Foundational readings and concepts; theoretical perspectives of critical theory and cultural studies. (F)

7580 Content Analysis. Cr. 3

Theory and practice in quantitative techniques for analyzing texts. (B)

7590 Seminar in Television Criticism. Cr. 3

Theory and practice in the aesthetic analysis of media content and form. (B)

7610 Feminist Media Theory and Criticism. Cr. 3

Prereq: COM 7590. History of feminist film and television theory and criticism since the 1970s; methods for textual analysis, the theories that inform these methods, and media scholarship other than textual analysis. (B)

7700 Mass Media and Political Communication. Cr. 3

Mass media research methods for political communication studied and applied. (I)

7810 Seminar in Communication Education. Cr. 3

Philosophy and approaches to teaching communication on the college level. Topics include objectives, evaluation, motivation and teaching strategies. (F)

7840 Studies in Communication Education. Cr. 3

Prereq: COM 7810. Research in communication education: issues, trends and controversies as reflected in major journals. (I)

7990 Directed Study: M.A. Cr. 1-4 (Max. 6)

Prereq: written consent of advisor and director of graduate studies. (T)

7991 Directed Study: Ph.D. Cr. 1-4 (Max. 6)

Prereq: written consent of advisor and director of graduate studies. Open only to doctoral students. Research in major field for advanced graduate students. (T)

7999 Master's Essay Direction. Cr. 1-3

Prereq: written consent of advisor and director of graduate studies. (T)

8000 Introduction to Ph.D. Studies. Cr. 3

Introduction to perspectives, approaches and methods of communication research. Required during first term of Ph.D. study in the Communication Department. (Y)

8170 Seminar in Interpersonal Communication. Cr. 3

Prereq: doctoral standing. Various topics in interpersonal communication. Taught on a term-specific basis; see Schedule of Classes for current offerings. (I)

8290 Seminar in Communication Studies Cr. 3 (Max. 9)

Prereq: doctoral standing. Advanced topics in communication and rhetorical theory. (I)

8350 Advanced Study in Rhetorical Criticism. Cr. 3

Prereq: Prereq: doctoral standing and COM 7250 or equiv. Study of important decisions in rhetorical criticism; two critical projects refined throughout the term in context of critical process, perspectives and approaches. (B)

8520 Seminar in Film. Cr. 3 (Max. 9)

Prereq: doctoral standing. Topics vary with instructor. Consult the Departmental office. (B)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor and director of graduate courses. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (Y)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (Y)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: COM 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following COM 9991. Offered for S and U grades only. (Y)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: COM 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following COM 9992. Offered for S and U grades only. (Y)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: COM 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following COM 9993. Offered for S and U grades only. (Y)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in COM 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (Y)

Dispute Resolution Courses (DR)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level coursework will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6120 Human Diversity and Human Conflict. Cr. 3

Relationship of human differences and conflict, and ways to nonviolently confront and work with them; differences as defined by ethnicity, race, gender, class, age, etc. (W)

6992 Special Topics in Dispute Resolution. Cr. 3

Dispute settlement in numerous contexts: business, family, legal system, community, education, church, and employment. History of dispute resolution; current trends as applied to topic areas. (I)

7100 Roots of Social Conflict. (PS 7850) Cr. 3

Prereq: graduate standing. Background and immediate causes of social conflict, from interpersonal to national to international settings, from ethnic to gender conflict; review of destructive and constructive aspects of conflict. (F)

7210 (MGT 7780) Concepts and Processes of Dispute Resolution I: Negotiation Theory and Practice. Cr. 3

Prereq: graduate standing. Theoretical foundations of processes of negotiation and multi-party collaborative problem solving. Skill building simulation to integrate theory and practice. (Y)

7220 Concepts and Processes of Dispute Resolution II: Neutral Intervention Theory and Practice. Cr. 3

Prereq: MGT 7780 or DR 7210. Dispute resolution growth and methods; mediation, facilitation, conciliation, fact-finding, arbitration; hybrids; dispute resolution institutions and practitioners. (W)

7310 Practicum in Dispute Resolution. (LEX 7660) Cr. 3

Prereq: DR 7210 and DR 7220 required; DR 7100 recommended; written consent of academic advisor. Training in facilitative mediation with opportunity to practice skills in a variety of settings. Material fee as indicated in Schedule of Classes. (F)

7890 Final Seminar in Dispute Resolution. Cr. 3

Prereq: completion of all core courses except DR 7310. Capstone seminar for Dispute Resolution program. Critical issues and assumptions in the practice and research spheres. (W)

7990 Directed Study in Dispute Resolution. Cr. 1-4

Advanced independent readings and writing under supervision of graduate faculty member, in areas of special interest. (Y)

Music

Office: 1321 Old Main; 313-577-1795; e-mail: music@wayne.edu

Chairperson: Norah Duncan IV

Interim Associate Chairperson: Douglas Bianchi

B.A. Advisor and Graduate Officer: Mary A. Wischusen

Academic Advisor: Maurice Draughn

Academic Services Officer: Paul Bishop

Departmental Scholarships and Student Records: Tinley Daniel

Academic and Student Personnel: Evelyn Williams

Website: <http://www.music.wayne.edu>

Professors

Christopher Collins, Norah Duncan IV, Kypros L. Markou, John D. Vander Weg

Associate Professors

Douglas Bianchi, Karl Braunschweig, Frances Brockington, Abigail Butler, Robert Conway, Russell Miller, Laura Roelofs, Mary A. Wischusen

Assistant Professors

Jon Anderson, Joshua Duchan, Wendy Matthews, Emery Stephens

Lecturers

Thomas Court, Noah Horn, Hal Weary, Matthew Younglove,

Honorary Adjunct Professor

David DiChiera

Emeriti Faculty

Lillian J. Cassie, Carol J. Collins, James J. Hartway (Distinguished), Bohdan J. Kushnir, Joseph Labuta, Doris L. Richards, Dennis J. Tini (Distinguished Professor), Terese Tuohey

Area Coordinators

Douglas Bianchi (Instrumental), Karl Braunschweig (Composition, Theory, and History), Abigail Butler (Voice/Choral and Music Education), Christopher Collins (Jazz Studies), Hal Weary (Music Business and Music Technology)

Adjunct Faculty

Dwight Adams (jazz trumpet), Gerrie Ball (accompanist and piano), Kazimierz Brzozowski (piano), Glenn Burdette (harpsichord), Neal Campbell (tuba), Marcy Chanteaux (cello, DSO), Clifford Chapman (music education), Keith Claeys (percussion and percussion ensemble), Gerald Custer (composition and theory), Sean Dobbins (jazz percussion) Joseph Dobos (band), Gordon Finlay (voice), Mark Flegg (trumpet), Natasha Kelly Foreman (history), Gail Gebhart (piano), Edward Gooch (jazz big band), Gary Hellick (trombone), Larry Hutchinson (bass, DSO), Brian Ivan (class guitar), David Jennings (trumpet), Paul Keller (jazz bass), Ronald Kischuk (trombone and jazz trombone), Ann Marie Koukios (choral conducting, piano and theory), Betty Lane (voice), Laura Larson (flute, MOT), John Madison (viola, MOT), Steven Mastrogiacomo (piano), Eldonna May (history), Clifford Monear (jazz piano), Charles Newsome (jazz guitar and jazz guitar ensemble), Shannon Orme (clarinet, DSO), Mary Pacquette-Abt (history), Gene Parker (jazz saxophone), Robert Piphoo (jazz theory), Karl Pituch (horn, DSO), Donald Platter (woodwinds), Ronald Prowse (organ), Richard Rattner (music business), Brian Roberts (guitar), James Ryan (jazz percussion), Matthew Schoendorff (composition and theory), Marcus Schoon (bassoon and contrabassoon, DSO), Stephanie Shapiro (oboe), Sharon Sparrow (flute, DSO), Marian Tanau (violin, DSO), David Taylor (jazz percussion), Patricia Terry-Ross (harp and music education), Kenneth Thompkins (trombone, DSO), Judith Vander Weg (cello), James Van Valkenburg (viola, DSO), Stanley Waldon (piano), James Walters (music education), Robert Williams (bassoon, DSO), Hai Xin Wu (violin, DSO), Johanna Yarborough (horn, DSO)

Graduate Degrees

MASTER OF ARTS with a major in music

MASTER OF MUSIC with a concentration in composition/theory, conducting, performance, jazz performance, and music education

GRADUATE CERTIFICATE IN ORCHESTRAL STUDIES

Mission Statement

The Department of Music cultivates music as a contemporary and global art, grounded in a long historical tradition, by combining higher education with professional training and experience for its undergraduate and graduate/professional students.

The Department offers serious students of music opportunities to learn, grow, and develop their skills and disciplines in an urban cultural setting. With close proximity to Detroit's cultural center, students have access to the resources of such premiere institutions as the Detroit Institute of Arts, the Detroit Public Library, the Detroit Opera House, and Orchestra Hall. The long historical relationship between the Detroit Symphony Orchestra and the Department allows students to study and coach with exceptional guest artists and resident artist-faculty who are specialists in all musical styles and media.

Building on the strengths of its geographic and cultural setting, the Department maintains public access to its performances and degree programs, offers high-level professional and academic standards, as well as unique creative and scholarly opportunities appropriate to a large research university. The Department also cultivates a deep aesthetic understanding of music in our students and the larger urban arts community.

Master's Degrees

The Master of Arts degree is designed for students who wish to pursue an academic career in music through a broad liberal arts curriculum. The Master of Music degree provides a program for talented students pursuing a professional concentration in 1) composition/theory, 2) conducting, 3) performance, 4) jazz performance, or 5) music education.

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, all master's degree applicants in music must:

- 1) apply to the Graduate School as a Music Major;
- 2) possess an undergraduate degree in the same field for which he or she wishes to pursue graduate study, or its equivalent in course work, private study, or experience;
- 3) complete pre-admission auditions or interviews. Audition and interview requirements are available from the Department of Music's website at <http://www.music.wayne.edu/auditions.php>.

All students admitted to Master's degrees are required to pass departmental diagnostic examinations in theory and history. Information about the diagnostic examinations is available on the Department's website at http://www.music.wayne.edu/graduate_curr.php.

DEGREE REQUIREMENTS

The master's degree is offered under the following options:

Plan A: Twenty-four credits in course work, plus an eight-credit thesis, available to students enrolled in the M.A. or the M.Mus. with a concentration in Composition/Theory or Music Education. An original composition approved by the Composition/Theory Area Coordinator substitutes for the thesis in the M.Mus. degree with a concentration in Composition/Theory.

Plan B: Twenty-nine credits in course work, plus a three-credit essay, available to students enrolled in the M.Mus. with a concentration in Music Education only.

Plan C (Conducting, Performance, and Jazz Performance): Thirty-two credits in course work, plus a graduate recital with program notes. Guidelines for the program notes requirement are available from the Department of Music's website at http://music.wayne.edu/graduate_curr.php

Plan C (Music Education only): Thirty-two credits in course work, plus an oral presentation and written examination. (Music Education students may elect Plan A, B, or C – consult the Degree Requirements section, below).

Oral Examination: An oral examination is required of all students in the M.A. or the M.Mus. program concentrating in Composition/Theory, Conducting, Jazz Performance, or Performance. Music Education students who choose *Plan C* must complete an oral presentation and undertake a written examination in the area of concentration.

Candidacy must be established by the time twelve credits have been earned toward the master's degree. Applicants become degree candidates only upon recommendation of the Departmental Graduate Officer and submission of an approved *Plan of Work*. Before a student can be admitted to candidacy in the Master of Arts curriculum, satisfactory completion of a reading examination in a foreign language (preferably German or French) is required.

Academic Scholarship: The University requires that each student achieve a minimum grade point average of 3.0, in order to be eligible for a graduate degree. All courses in the student's major must be completed with a grade of 'B' or higher to be counted towards program credit. Grades below 'B' (including 'B-minus') are unsatisfactory and constitute valid cause for dismissing a student from a graduate program. However, the Department of Music permits a student to accumulate a maximum of six credits of 'B-minus' grades (in courses other than the area of concentration) as long as they are offset by higher grades so that a 3.0 grade point average is maintained at all times. Additionally, credits of B-minus and below in excess of six credits will result in dismissal from the program, regardless of whether the courses are included on the student's Plan of Work. All course work must be completed in accordance with the academic procedures of the College of Fine, Performing and Communication Arts and the Graduate School; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219.

Music (M.A. Program)

Prerequisite: Prospective students should present a minimum of forty-five acceptable undergraduate credits in music distributed according to the requirements for the Bachelor of Arts degree with a major in music or its equivalent in course work, study, and experience. All students applying to the M.A. must complete a pre-admission interview or audition.

DEGREE REQUIREMENTS

MUSIC HISTORY AND THEORY (total credits: 18)

MUH 5300 – Music Research: Cr. 3

MUH 73XX: 6-9 credits chosen in consultation with the program advisor

MUH 8999 – Thesis: Cr. 8

MUT 7XXX: 6-9 credits chosen in consultation with the program advisor

Music electives or cognates: Cr. 6

Oral Examination: Cr. 0

Total: 32 credits

Music: Composition/Theory (M.Mus. Program)

Prerequisite: Bachelor of Music with a concentration in composition/theory or its equivalent in coursework, background, or experience. As part of the pre-admission interview, applicants must present scores

and/or theory research materials as evidence of preparation for graduate work in composition or theory.

DEGREE REQUIREMENTS

MUSIC HISTORY

- MUH 5300 – Music Research: Cr. 3
- MUH 7XXX (selected in consultation with program advisor): Cr. 6

MUSIC THEORY AND COMPOSITION (Twelve credits selected in consultation with the program advisor from MUT 7020 - MUT 7992)

- MUT 7020 – Seminar in Schenkerian Analysis: Cr. 3
- MUT 7040 – Seminar in Twentieth Cent. Music: Cr. 3
- MUT 7050 – Seminar in Music Theory Pedagogy: Cr. 3
- MUT 7085 – History of Theory: Cr. 3
- MUT 7100 – Graduate Composition: Cr. 3 (Max. 12)
(Composition Focus students must elect 9 credits of MUT 7100)
- MUT 7200 – Special Topics in Theory: Cr. 3
- MUT 7992 – Directed Study in Theory: Cr. 3 (Max. 6)
- MUT 8999 – Thesis (see below): Cr. 8
- Music or Non-music Electives: Cr. 3
- Oral Examination: Cr. 0

Total: 32 credits

THESIS: an original composition in one of the larger forms with a minimum duration of twelve minutes, separate from the work completed in MUT 7100, and with approval of advisor required; or a substantial written thesis drawing on current research in theory and analysis, applied toward a project of the student's choice

Music: Conducting (M.Mus. Program)

Prerequisite: Bachelor of Music with a concentration in music education, organ/church music, or performance, or the equivalent in course work, training, or experience. All applicants must successfully complete a pre-admission audition and interview that will include demonstrating proficiency in the areas of score reading and piano.

DEGREE REQUIREMENTS

MUSIC HISTORY

- MUH 5300 – Music Research: Cr. 3
- MUH 7370 – Advanced Literature for Conductors: Cr. 3
(Note: one additional MUH 73XX may substitute for MUH 7370 with the approval of the program advisor)
- MUH 73XX (chosen in consultation with program advisor): Cr. 6

MUSIC THEORY

- MUT 7020 – Seminar in Schenkerian Analysis: Cr. 3
- MUT 7XXX (chosen in consultation with program advisor): Cr. 3

CONDUCTING AND ENSEMBLE

- MUA 7800, 7810, 7840, or 7850: (Major Ensemble): Cr. 1 (Req. 2)
- MUP 739X – (Major Private Instr. in Conducting): Cr. 9 (Max. 12)
- MUP 8290 – Graduate Recital with Program Notes: Cr. 1
- Music or Non-music Electives: Cr. 2
- Oral Examination: Cr. 0
- Total: 32 credits

Music: Jazz Performance (M.Mus. Program)

Prerequisite: Bachelor of Music with a concentration in jazz studies or jazz performance or the equivalent in course work, private study, or experience. All applicants must successfully complete a pre-admission audition.

DEGREE REQUIREMENTS

MUSIC HISTORY

- MUH 5300 (Music Research): Cr. 3
- MUH 5360 and MUH 7390 (Jazz History): Cr. 6

MUSIC THEORY

- MUT 7070 – Advanced Jazz Theory and Analysis: Cr. 3
- MUT 7XXX (chosen in consultation with the program advisor): Cr. 3

PERFORMANCE AND ENSEMBLES

- MUA 7820 – Jazz Big Band: Cr. 1 (Req. 3)
- MUA 7822, 7824, or 7826 (Small Jazz Ensembles): Cr. 1 (Max. 2)
- MUP 73XX (Major Private Instruction): Cr. 9 (Max. 12)
- MUP 8290 (Graduate Recital with Program Notes): Cr. 1
(Program must include original compositions/arrangements.)
- Music or Non-music Electives: Cr. 3
- Oral Examination: Cr. 0
- Total: 32 Credits

Music: Instrumental Performance (M.Mus. Program)

Prerequisite: Bachelor of Music with a concentration in instrumental performance or equivalent in course work, study, or experience. All applicants must successfully complete a pre-admission audition.

DEGREE REQUIREMENTS

MUSIC HISTORY AND THEORY

- MUH 5300 – Music Research: Cr. 3
- MUH 73XX (chosen in consultation with program advisor): Cr. 6
- MUT 70XX (chosen in consultation with program advisor): Cr. 6

PERFORMANCE AND ENSEMBLES (Note: Large Ensembles and Chamber Music must total a minimum of 3 credits.)

- MUA 7800, 7810, 7840, or 7850 (Large Ensemble): Cr. 1 (Max. 2)
- MUA 7880 (Chamber Music): Cr. 1 (Max. 2)
- MUP 7XXX (Major Private Instruction): Cr. 9 (Max. 12)
- MUP 8290 (Graduate Recital with Program Notes): Cr. 1
- Music or Non-music Electives: Cr. 4
- Oral Examination: Cr. 0

Total: 32 credits

Music: Vocal Performance (M.Mus. Program)

Prerequisite: Bachelor of Music with a concentration in vocal performance or its equivalent in course work, study, or experience. All applicants must successfully complete a pre-admission audition.

DEGREE REQUIREMENTS

MUSIC HISTORY AND THEORY

- MUH 5300 (Music Research): Cr. 3
- MUH 73XX (chosen in consultation with the program advisor): Cr. 6
- MUT 7XXX (chosen in consultation with the program advisor): Cr. 3

PERFORMANCE AND ENSEMBLES

- MUA 7730 (Advanced Diction): Cr. 3
- MUA 7840, 7850, or 7860 (chosen in consultation with program advisor): Cr. 1 (Max. 3)
- MUA 7880 (Chamber Music): Cr. 1
- MUP 722X (Major Private Instruction): Cr. 9 (Max. 12)
- MUP 8290 (Graduate Recital with Program Notes): Cr. 1
- Music or Non-music Electives: Cr. 3
- Oral Examination: Cr. 0
- Total: 32 credits

Music Education (M.Mus. Program)

Note: The M. Mus. degree in music education is currently under revision with plans for updating the curriculum to accommodate recent reforms in education while addressing the needs of practicing teachers. Consequently there is new student admissions moratorium in effect for this program. For current information, please contact the Department of Music, (313) 577-1795.

Prerequisite: Bachelor of Arts, Science, or Music with concentration in Music Education. All applicants must successfully complete a pre-admission interview.

DEGREE REQUIREMENTS

Plan A: Twenty-four credits in course work, plus an eight-credit thesis. (MED 8999)

Plan B: Twenty-nine credits in course work, plus a three-credit essay. (MED 7999)

Plan C: Thirty-two credits in course work, plus an oral presentation and written examination (includes one-credit directed study, MED 7990)

MUSIC HISTORY AND THEORY

MUH 5300 (Music Research): Cr. 3

MUH 73XX (chosen in consultation with the program advisor): Cr. 3

MUT 7XXX (chosen in consultation with the program advisor): Cr. 3

MUSIC EDUCATION

MED 8510 (Foundations of Music Education I): Cr. 3

MED 8520 (Foundations of Music Education II): Cr. 3

MED 8540 (Music Education Research): Cr. 3

And courses selected from

MED 5560, 5590, or 65XX-85XX (chosen with advisor):

Cr. 4-12 total (depending on Plan chosen)

Music or Non-music Electives: Cr. 3-7 (depending on Plan chosen)

Oral Examination: Cr. 0 (Plans A and B only)

Total: 32 credits

Orchestral Studies Graduate Certificate Program

The Orchestral Studies Graduate Certificate Program is currently under revision with plans for updating the curriculum. Consequently, there is a new student admissions moratorium in effect for this program. For current information, please contact the Department of Music (313) 577-1775.

The Graduate Certificate Program in Orchestral Studies is intended for instrumentalists with an interest in pursuing advanced and intense training in the art of orchestral playing. Even though it is primarily intended for musicians with an undergraduate or graduate degree in music, candidates with degrees in other fields will be considered if they can demonstrate extensive musical experience, including highly advanced performance skills on an orchestral principal instrument.

Admission to this program is contingent upon admission to the Graduate School, see Admission, Graduate School, p. 17. Candidates should possess either an undergraduate degree in music or its equivalent in course work, private study, and experience.

Prerequisite: Bachelor of Music with a concentration in instrumental performance or its equivalent as described above. All applicants must successfully complete a pre-admission audition.

CERTIFICATE REQUIREMENTS

MUA 7810 (University Symphony Orchestra): Cr. 3 (Max. 3)

MUA 7875 (Orchestral Repertory): Cr. 1 (2 Req.; Max. 3)

MUA 7880 (Chamber Music / Special Ensembles): Cr. 1 (Max. 3)

(Note: MUA 7875 and MUA 7880 elections must total 3 credits; if 7875 is repeated for 3 credits, 7880 is not required.)

MUP 72XX (Major Private Instruction on principal instrument):

Cr. 9 (Max. 12)

Total: 15 credits

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning on under Financial Assistance, Graduate, p. 26. See also the Academic Regulations of the College, above. The following information applies to the Music Department.

Recipients of the following scholarships are chosen in May by the Music Faculty and awarded during the following academic year.

Detroit Federation of Musicians/David Kaplan Scholarship: Awarded to an outstanding undergraduate or graduate instrumentalist.

Edward P. Frohlich Endowed Piano Scholarship: Awarded to an outstanding music major with piano as a major or principal instrument.

Robert A. Harris Excellence in Choral Music Award: Awarded for excellence in choral performance.

Louise Hodgson Memorial Endowed Scholarship: Awarded to an outstanding music major.

Bernard Katz Endowed Scholarship: Awarded to an outstanding music major in piano or voice.

Rebecca Katzman Froman Piano Scholarship: Awarded to an outstanding piano student.

Lawrence LaGore Endowed Memorial Scholarship: Awarded to an outstanding keyboard major or principal; minimum 3.0 g.p.a. required.

Harry M. Langsford Endowed Scholarship: Awarded to an outstanding choral or vocal student.

Robert F. Lawson Endowed Memorial Scholarship: Awarded to an outstanding music major; minimum 3.0 g.p.a. required.

Alice R. LeFevre Scholarships: Awarded to any music major.

Loughead-Eldridge Endowed Piano Scholarship: Awarded to an outstanding piano principal or major.

Music Study Club of Metropolitan Detroit Endowed Scholarship: Awarded to an outstanding graduate student.

Mark Otis Endowed Scholarship: Awarded to an outstanding graduate student in performance or music education.

Chester E. Puchalski Endowed Scholarship: Awarded to an outstanding graduate or undergraduate instrumentalist.

Joan Katherine Rossi Endowed Memorial Scholarship: Awarded to any full-time music major who is an outstanding vocal performer.

Robert Stawski Endowed Scholarship: Awarded to an outstanding music major in voice.

Mel Wanzo Endowed Jazz Trombone Scholarship: Awarded to an outstanding jazz trombonist or brass player.

Music Private Instruction Courses (MUP)

The following courses are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

Private Instruction (MUP courses) in conducting, instruments, or voice are required of all students in the M.Mus. concentrations in conducting, performance, or jazz performance and students in the Graduate Certificate program in Orchestral Studies. In addition, students in the M.A. program or the M.Mus. concentrations in Composition/Theory or Music Education may elect private instruction in a principal instrument or voice to fulfill music elective requirements. All students enrolled in private instruction are required to perform a jury.

MUP Sequence Tables: The courses listed in the tables below as MUP 6XXX: Principal and Secondary Private Instruction Courses, p. 255 are available for one credit each. Courses listed as MUP 7XXX: Major Private Instruction Courses, p. 255 are available for three credits each.

Limitation: graduate standing in music; departmental permission required.

Corequisite: All graduate students enrolled in MUP Private Instruction must register for a minimum of four graduate credits, including the MUP credit.

Material Fees: MUP courses have material fees as listed in the schedule of classes.

6201 Organ: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6202 Organ: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6203 Organ: Principal and Secondary Instruction. Cr. 1 (Max. 2)

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6211 Piano: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6212 Piano: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6213 Piano: Principal and Secondary Instruction. Cr. 1 (Max.2)

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6221 Voice: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6222 Voice: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6223 Voice: Principal and Secondary Instruction. Cr. 1 (Max. 2)

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6231 Strings: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6232 Strings: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6233 Strings: Principal and Secondary Instruction. Cr. 1 (Max. 2)

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6241 Woodwinds: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6242 Woodwinds: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6243 Woodwinds: Principal and Secondary Instruction. Cr. 1 (Max. 2)

Prereq: graduate standing in music and consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6251 Brasswinds: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6252 Brasswinds: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6253 Brasswinds: Principal and Secondary Instruction. Cr. 1 (Max. 2)

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6261 Percussion: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

6262 Percussion: Principal and Secondary Instruction. Cr. 1

Prereq: graduate standing in music and written consent of department. Offered for graduate credit only. Material Fee As Indicated In The Schedule of Classes (F,W)

Principal and Secondary Private Instruction Courses

Instrument			
Organ	6201	6202	6203
Piano	6211	6212	6213
Voice	6221	6222	6223
Strings	6231	6232	6233
Woodwinds	6241	6242	6243
Brasswinds	6251	6252	6253
Percussion	6261	6262	6263
Harp	6271	6272	6273
Classic Guitar	6281	6282	6283
Conducting	6291	6292	6293
Jazz Piano	6321	6322	6323
Jazz Strings	6331	6332	6333
Jazz Woodwinds	6341	6342	6343
Jazz Brasswinds	6351	6352	6353
Jazz Percussion	6361	6362	6363
Jazz Guitar	6371	6372	6373

Major Private Instruction Courses

Instrument				
Organ	7201	7202	7203	7204
Piano	7211	7212	7213	7214
Voice	7221	7222	7223	7224
Strings	7231	7232	7233	7234
Woodwinds	7241	7242	7243	7244
Brasswinds	7251	7252	7253	7254
Percussion	7261	7262	7263	7264
Harp	7271	7272	7273	7274
Classic Guitar	7281	7282	7283	7284
Conducting	7291	7292	7293	7294
Jazz Piano	7321	7322	7323	7324
Jazz Strings	7331	7332	7333	7334
Jazz Woodwinds	7341	7342	7343	7344
Jazz Brasswinds	7351	7352	7353	7354
Jazz Percussion	7361	7362	7363	7364
Jazz Guitar	7371	7372	7373	7374

Music Theory Courses (MUT)

The following courses are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5060 Advanced Orchestration. Cr. 3

Prereq: MUT 3000. No credit for the M.Mus. in composition/theory degree. Arranging and scoring for orchestra in all forms of ensemble structure. (I)

5110 Jazz Arranging and Composition I. Cr. 3

Prereq: MUT 2160 and 2170. No credit for M.Mus. in jazz performance degree. Creative writing for small jazz and pop ensembles. Arranging for three to five pieces including "head" arrangements, block chord technique and contrapuntal writing. (F)

5120 Jazz Arranging and Composition II. Cr. 3

Prereq: MUT 5110. No credit for M.Mus. in jazz performance degree. Creative writing for larger jazz and pop ensembles; jazz arranging for six to eighteen pieces combining various textures and timbres. (W)

5130 Jazz Arranging and Orchestration. Cr. 3

Prereq: MUT 5120. No credit for M.Mus. in jazz performance degree. Arranging pieces with concentration on orchestrating for large jazz ensembles. (F)

5280 Interactive Electronic Music Composition. Cr. 3

Explores basic interactive electronic music composition using computer music software for sound. (Y)

5997 Analytical Techniques. Cr. 3

Prereq: MUT 2160, MUT 2170; MUH 3330. Credit not applicable to graduate degrees in music. Capstone course for Music Department. Structural analysis of tonal music in historical perspective. (W)

7020 (MUT 5220) Seminar in Schenkerian Analysis. Cr. 3

Prereq: graduate standing in music. Aesthetic premises and basic analytic procedures of tonal music, viewed from a Schenkerian perspective. Applications of graphic technique to short phrases and to larger forms (e.g., sonata) from a wide repertory (1700-1900). (B)

7040 (MUT 5240) Seminar in Twentieth Century Music. Cr. 3

Prereq: graduate standing in music. Analysis of twentieth-century music using current applications of post-tonal theories. (B)

7050 Seminar in Music Theory Pedagogy. Cr. 3

Prereq: graduate standing in music. Study of materials, teaching techniques, philosophy and organization of music theory classes. (I)

7070 Advanced Jazz Theory and Analysis. Cr. 3

Prereq: graduate standing in music. Analysis and application of advanced harmonic, rhythmic and melodic concepts used in jazz improvisation and composition. (B)

7085 (MUT 5085) History of Theory. Cr. 3

Prereq: junior standing for MUT 5085; graduate standing in music for MUT 7085. Theoretical writings from Plato to Rameau to Schenker, in historical contexts. (I)

7100 Graduate Composition. Cr. 3 (Max. 12)

Prereq: MUT 4110 or graduate standing in music. Advanced creative work in all of the idioms of twenty-first century musical composition. (F,W)

7200 (MUT 5200) Special Topics in Theory. (MUT 7200) Cr. 3 (Max. 6)

Prereq: graduate standing in music. In-depth study of such topics as set or serial theories, aesthetics and philosophies of music, and recent theoretical developments. Student may repeat course when topic changes. (I)

7992 Directed Study in Theory. Cr. 3 (Max. 6)

Prereq: written consent of instructor, program advisor, and graduate officer. (F,W)

8999 Master's Thesis Direction. Cr. 1-8 (8 req.)

Open only to master's candidates with concentration in composition/theory. Prereq: nine credits in graduate music theory and written consent of advisor. Preparation of M.M. thesis project in composition/theory. (T)

Music History Courses (MUH)

The following courses are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5300 Music Research. Cr. 3

Prereq: graduate standing in music. Offered for graduate credit only. Music bibliography and research techniques. (F)

5340 Survey of World Music. Cr. 3

Prereq: upper division or graduate standing. No credit for graduate degrees in music. Musical expressions of five or six non-European cultures en route to a better understanding of the peoples themselves. Attention given to biases, culturally-determined learning patterns, and aesthetics. (F,W)

5350 Performance Literature and Pedagogy. Cr. 3

Prereq: performance major in music. No credit for graduate degrees in music. Survey of solo and chamber repertoire from the Renaissance to the present, for students' major performance areas. (Y)

5360 (MUH 3360) Jazz History. Cr. 3

Open only to post bachelor and graduate students. Offered for graduate credit only. Survey of major developments in jazz from its beginnings to the present. (F)

5370 Diction and Song Literature I. Cr. 3

Open to music and theatre majors only. No credit for M.Mus. degree in vocal performance. Singers' diction in Italian, Latin, French and Spanish; methodologies, solo and chamber repertoire in these languages. (B)

5380 Diction and Song Literature II. Cr. 3

Open to music and theatre majors only. Prereq: MUH 5370. No credit for M.Mus. degree in vocal performance. Singers' diction in German, Hebrew, Russian and English; methodologies, solo and chamber repertoire in these languages. (B)

7315 (MUH 5315) Special Topics in Music History. Cr. 3 (Max. 6)

Prereq: graduate standing in music. In-depth study of such topics as the historical development of opera and oratorio, symphonic or chamber music styles, or specialized study of individual composers. Course may be repeated when topics change. (I)

7320 Studies in Renaissance Music. Cr. 3

Prereq: MUH 5300. Fifteenth and sixteenth centuries, from Burgundian School through Palestrina. Special reports; research projects. (B)

7330 Studies in Baroque Music. Cr. 3

Prereq: MUH 5300. From Monteverdi to 1750. Special reports; research projects. (B)

7340 Studies in Classical Music. Cr. 3

Prereq: MUH 5300. From 1750 to 1825. Special reports; research projects. (B)

7350 Studies in Romantic Music. Cr. 3

Prereq: MUH 5300. Nineteenth century. Special reports and research projects. (B)

7360 Studies in Twentieth Century Music. Cr. 3

Prereq: MUH 5300. Special reports and research projects. (B)

7370 Studies in Advanced Literature for Conductors. Cr. 3

Prereq: MUH 5300; graduate standing in music. Open only to students in the M.M. in conducting program. Literature for various instrumental and choral ensembles from the Renaissance to the present; emphasis on stylistic characteristics, rehearsal techniques, and authenticity of performance. (Y)

7390 Studies in Jazz History. Cr. 3

Prereq: MUH 5360. Continuation of MUH 5360. (Y)

7991 Directed Study in Music History. Cr. 1-3 (Max. 6)

Research investigations in historical musicology. (T)

8999 Master's Thesis Direction. Cr. 1-8 (8 req.)

Prereq: nine credits in graduate music history and written consent of advisor. Open only to M.A. candidates in music. (T)

Music Ensembles and General Studies Courses (MUA)

The following courses are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5600 Music Business II. Cr. 3

Open only to music majors. Prereq: MUA 2400. Continuation of MUA 2400. Basic aspects of the music business. Topic coverage will include legal issues, copyright and fair use, songwriting, publishing, licensing, artist management, the recording industry, recording contracts, unions and guilds, use of agents, attorneys, and managers, and an introduction to various forms of business entities and related tax issues in the music business. (F)

5730 Harpsichord Class. Cr. 2 (Max. 8)

Open only to music majors. (F,W)

7730 Advanced Diction. Cr. 3

Prereq: MUH 5370 and MUH 5380 or equiv.; graduate standing in music. In-depth study of diction for singers. (I)

7800 University Bands. Cr. 1 (Max. 3)

Material Fee As Indicated In The Schedule of Classes (F,W)

7802 (MUA 2802) Chamber Winds. (MUA 7802) Cr. 1

Material Fee As Indicated In The Schedule of Classes (F,W)

7810 University Symphony Orchestra. Cr. 1 (Max. 3)

Material Fee As Indicated In The Schedule of Classes (F,W)

7820 Jazz Big Band. Cr. 1 (Max. 3)

Material Fee As Indicated In The Schedule of Classes (F,W)

7822 Jazz Guitar Ensemble. Cr. 1 (Max. 2)

Open only to graduate music majors. Large ensemble for jazz guitar majors/principals. Material Fee As Indicated In The Schedule of Classes (T)

7824 Jazztet. Cr. 1 (Max. 2)

Open only to graduate music majors. Select ensemble for jazz majors. Material Fee As Indicated In The Schedule of Classes (T)

7826 Jazz Combos. Cr. 1 (Max. 2)

Open only to graduate music majors. Small ensemble for jazz majors. Material Fee As Indicated In The Schedule of Classes (T)

7830 Men's Chorus. Cr. 0-1 (Max. 4)

Music majors must enroll for one credit to satisfy degree requirements. Material Fee As Indicated In The Schedule of Classes (F,W)

7840 Choral Union. Cr. 1 (Max. 3)

Material Fee As Indicated In The Schedule of Classes (F,W)

7850 Concert Chorale. Cr. 1 (Max. 3)

Material Fee As Indicated In The Schedule of Classes (F,W)

7860 (MUA 7860) Opera Workshop. Cr. 1 (Max. 4)

Material Fee As Indicated In The Schedule of Classes (F,W)

7870 Women's Chorale. Cr. 1 (Max. 4)

Material Fee As Indicated In The Schedule of Classes (F,W)

7875 Orchestral Repertory. Cr. 1 (Max. 3)

Open only to students in the graduate certificate in orchestral studies program. Individual and small group instruction in orchestral repertory, audition preparation, and mock auditions. Material Fee As Indicated In The Schedule of Classes (F,W)

7880 Chamber Music and Special Ensembles. Cr. 1 (Max. 3)

Prereq: graduate standing in music. All forms including piano and string trios and quartets, and small wind groups. Material Fee As Indicated In The Schedule of Classes (F,W)

Music Education Courses (MED)

The following courses are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5520 Marching Band Techniques. Cr. 2-3

Planning, charting, and rehearsal techniques for marching band; emphasis on contemporary, computer-generated drill designs; practical projects in developing a complete marching band program. Material Fee As Indicated In The Schedule of Classes (Y)

5550 Choral Conducting and Rehearsal Techniques. Cr. 3

Prereq: MUA 3670 or equiv. No credit for M.Mus. in conducting or music education. Conducting and rehearsal methods and materials for secondary schools. (W)

5560 Secondary School Music Workshop. Cr. 2 (Max. 4)

Group participation in the study of class materials and teaching procedures for secondary music teachers. (S)

5590 Applications of Technology in Music Teaching. Cr. 2

Open only to music majors in instrumental or vocal music education concentrations. Presentation of techniques and strategies for utilizing various hardware and software applications in classroom music instruction. Emphasis on evolving technologies, including collaborative media, smart technology, and interactive smart board class materials. Material Fee As Indicated In The Schedule of Classes (F)

6520 Elementary School Music Workshop. Cr. 2 (Max. 4)

Group participation in the study of class materials and teaching procedures for elementary music teachers. (S)

6530 Conducting and Operating the School Band. Cr. 2-3 (Max. 6)

Classroom and individual instruction in conducting, score study, and rehearsal techniques for the middle school or high school band. (S)

6540 Instrumental Music Workshop. Cr. 2 (Max. 4)

Current problems, procedures and materials pertaining to development of the instrumental music program in the schools. (S)

7560 Contemporary Trends in Music Education. Cr. 3

Open to all graduate students. Role of music in the school. Philosophy, trends and issues in music education on all grade levels. (B)

7990 Directed Study in Music Education. Cr. 1-3 (Max. 6)

Prereq: written consent of advisor. Open only to master's candidates in music education. (T)

7999 Master's Essay Direction. Cr. 3

Prereq: written consent of advisor. Open only to master's candidates in music education. (T)

8510 Foundations of Music Education I. Cr. 3

Historical and philosophical foundations of music education; important trends, innovations and leaders in the development of music in American schools; and the influence of educational philosophers and aesthetic theories. (B:S)

8520 Foundations of Music Education II. Cr. 3

Psychological and sociological foundations of music education; the application of learning theories to music teaching and evaluation of school music programs. (B:S)

8540 Music Education Research. Cr. 3

Basic skills in music education research; research reading and criticism; problem statement formulation; literature review; data gathering techniques; statistics and data analysis; manuscript development and report writing; research methodologies in music education. (B)

8999 Master's Thesis Direction. Cr. 1-8 (8 req.)

Open only to M.Mus. candidates in music education electing Plan A. Prereq: nine credits in graduate music education and written consent of advisor. Preparation of M.M. thesis project in music education. (T)

Theatre and Dance

Office: 3226 Old Main; 313-577-3508
Email: theatredance@wayne.edu
Chairperson: John Wolf
Theatre Website: <http://www.theatredance.wayne.edu>

Professors

David J. Magidson, Doug Risner, Thomas H. Schraeder, James Thomas, John Wolf

Associate Professors

Blair Anderson, Mary Elizabeth Anderson, Michael Barnes, Fred Florkowski, Lavinia Hart, Eva Powers, Jeffrey M. Rebudal, John Woodland

Assistant Professors

Thomas Aulino, Brian Dambacher, Billicia Hines, Sarah Pearline, Cheryl Turski

Senior Lecturer

Dana Gamarra, Mary Cooney

Lecturers

Mary Copenhagen, Josephe Kvorciak, Karen Prall, Mary Paul

Support Staff

Jessica Chavez, Michael Donohue, Patrick Field, Matthew Gribbin, Mary Leyendecker, Patricia Moore, Maria Paglia-Militello, Lynnetta Smith

Emeriti Faculty

Nira Pullin, Anthony B. Schmitt, Russell E. Smith Ann Zirulnik

Graduate Degrees

MASTER OF FINE ARTS with a major in Theatre and specializations in acting, theatre stage design, stage costume design, stage lighting design, theatre management and stage management

MASTER OF ARTS with a major in Theatre and Dance

Theatre (M.F.A. Program)

The Master of Fine Arts curriculum in theatre is a three-year program of intensive professional training in the student's area of specialization and is offered in acting, theatre stage design, stage costume design, stage lighting design, theatre management or stage management.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants must satisfy the following criteria.

Students with a bachelor's degree are eligible to enroll in the M.F.A. program if they have successfully completed an audition or personal interview with the theatre arts faculty.

Students must declare their area of specialization upon entry into the program. The M.F.A. program is open only to members of the Hilberry Repertory Theatre Company.

DEGREE REQUIREMENTS

The Master of Fine Arts with a Major in Theatre is offered only as a Plan C master's program, requiring sixty credits in the area of specialization. All programs require a final project and a final oral examination relevant to the degree specialization. All course work must be completed in accordance with the regulations of the Graduate School

and the School of Fine, Performing, and Communication Arts governing graduate scholarship and degrees; see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Fine, Performing, and Communication Arts, p. 219, respectively. Major requirements are as follows:

ACTING: *Sixty Credits. (Open only to members M.F.A. in Theatre.)*

THR 5812 – Development of the Drama II: Cr. 3 (Max. 3)
THR 6211, 6215, 7211, 7215, 8211, 8215 – Acting Studio I-VI: Cr. 1-3 (Max. 12)
THR 6231, 6235, 7231, 7235, 8231, 8235 – Voice and Speech I-VI: Cr. 1 (Max 6)
THR 6221, 6225, 7221, 7225, 8221, 8225 - Theatrical Movement and Dance Styles I-VI: Cr. 1 (Max. 6)
THR 5721 – Playwriting: Cr. 3
THR 7271 – Acting for the Camera: Cr. 3
THR 7281 – Theatre Aesthetics: Cr. 3
THR 7581 – Repertory Theatre: Cr 1-4 (Max. 18)
THR 7741 – Dramaturgy: Cr. 3
THR 8995 – M.F.A. Acting Exit Project: Cr. 3

THEATRE MANAGEMENT: *Sixty Credits.*

THR 6651 – Public Relations and the Arts: Cr. 3
THR 6661 – Marketing the Theatre: Cr. 3
THR 6671 – Interpersonal Dynamics: Cr. 2
THR 6675 – Board Governance in the Theatre: Cr. 2
THR 7584 – Repertory Theatre Management: Cr. 2 (Max. 12)
THR 7651 – Leadership in the Arts: Cr. 3
THR 7661 – Market Data and Decisions in the Arts: Cr. 2
THR 7655 – Human Resources and Financial Mgt. for the Arts: Cr. 3
THR 7671 – Funding and Grant Writing for the Arts: Cr. 3
THR 7665 – Sourcing and Managing Project Funds: Cr. 2
THR 8651 – Entrepreneurship in Theatre: Cr. 3
THR 8661 – The Media and Theatre: Cr. 2
THR 8665 – Managing Groups and Teams: Cr. 2

Business/Theatre Coursework: Two three-credit courses selected from the following; other courses may be substituted with advisor approval:

BUSINESS ELECTIVES:

BA 7040 – Managing Organizational Behavior: Cr. 3
COM 5300 – Layout and Design: Cr. 3

THEATRE ELECTIVES:

THR 5841, 5811, 5842, 5812, 7741, 7281
THR 8991 – M.F.A. Theatre Management Exit Project: Cr. 3

STAGE MANAGEMENT: *Sixty Credits:*

THR 6601,6605,7601,7605,8601,8605 – Studio I-VI: Cr. 2 (Max. 12)
THR 6301 – Foundations of Graduate Design: Cr. 3
THR 7583 – Repertory Theatre: Stage Management: Cr. 2 (Max 12)
THR 8991 – MFA Management Exit Project: Cr. 3

THEATRE ELECTIVES:

History and Criticism Sequence: 12 credits

THR 5821 – Black Dramatic Literature: Cr. 3
THR 5831 – Pioneers of Modern Theatre: Cr. 3
THR 5721 – Playwriting I: Cr. 3
THR 5812 – Development of Drama II: Cr. 3
THR 7741 – Dramaturgy: Cr. 3
THR 7281 – Theatre Aesthetics: Cr. 3

Theatre Arts & Crafts Sequence: (12 credits)

THR 5321 – Theatre Costuming I: Cr. 3
THR 5325 – Theatre Costuming II: Cr. 3
THR 5721 – Directing I: Cr. 3
THR 5331 – Stage Lighting: Cr. 3
THR 5311 – Stage Design: Cr. 3
THR 5422 – Introduction to Scene Painting: Cr. 3

THR 5335 – Advanced Stage Lighting Design: Cr. 3
THR 7381 – Architecture and Decor: Cr. 3
THR 8941-8945 – Teaching Internship (in connection with THR 2180 Stage Management Laboratory): Cr. 3
Other Electives with advisor's approval.

THEATRE STAGE DESIGN: Sixty Credits.

THR 5315 – Advanced Stage Design: Cr. 3
THR 5422 – Introduction to Scene Painting: Cr. 3
THR 5426 – Advanced Scene Painting: Cr. 3
THR 6301 – Foundations of Graduate Design: Cr. 2
THR 6381 – Styles of Design: Cr. 3
THR 6311 – Professional Scenic Design I: Cr. 3
THR 6315 – Professional Scenic Design II: Cr. 3
THR 6361, 6365, 8301, 8305 – Design Studio I - IV: Cr. 2 (Max. 8)
THR 7582 – Repertory Theatre: Design: Cr. 12
THR 7381 – Architecture and Decor: Cr. 3
THR 8992 – M.F.A. Design Exit Project: Cr. 2
Design Cognates (with advisor's approval): Cr. 6
Theatre Studies (with advisor's approval): Cr. 9

STAGE LIGHTING DESIGN: Sixty Credits.

THR 5335 – Advanced Stage Lighting Design: Cr. 3
THR 6301 – Foundations of Graduate Design: Cr. 2
THR 6331 – Professional Lighting Design I: Cr. 3
THR 6335 – Professional Lighting Design II: Cr. 3
THR 6361, 6365, 8301, 8305 – Design Studio I - IV: Cr. 8
THR 6381 – Styles of Design: Cr. 3
THR 7582 – Repertory Theatre: Design: Cr. 1-4 (Max. 18)
THR 7381 – Architecture and Decor: Cr. 3
THR 8992 – M.F.A. Design Exit Project: Cr. 2
Design Cognates (with advisor's approval): Cr. 6
Theatre Studies (with advisor's approval): Cr. 9

STAGE COSTUME DESIGN: Sixty Credits.

THR 5315 – Advanced Stage Design: Cr. 3
THR 5331, 5311, 5335 (select two) – Lighting and Stage Design.: Cr. 6
THR 6301 – Foundations of Graduate Design: Cr. 2
THR 6321 – Professional Costume Design I: Cr. 3
THR 5451 – Advanced Stage and Film Makeup: Cr. 2
THR 6325 – Professional Costume Design II: Cr. 3
THR 6361, 6365, 8301, 8305 – Design Studio I - IV: Cr. 2 (Max 8)
THR 6381 – Styles of Design: Cr. 3
THR 7321 – Costume History and Design I: Cr. 3
THR 7325 – Costume History and Design II: Cr. 3
THR 7381 – Architecture and Decor: Cr. 3
THR 8992 – M.F.A. Design Exit Project: Cr. 2
Design Cognates (with advisor's approval): Cr. 6
Theatre Studies (with advisor's approval): Cr. 9
Electives (with advisor's approval): Cr. 10

Theatre and Dance (M.A. Program)

The Master of Arts degree includes a three-year program of advanced studies in theatre and dance, designed to provide specialized training in research methods and assessment, pedagogical foundations of teaching artistry, artistic practice and inquiry, and community engagement.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. In addition, applicants must satisfy the following criteria.

Curriculum Requirements The program requires a total of thirty two (32) credits, and can be completed in one of two options:

- Plan A (Thesis): Includes 24 credits of coursework and 8 credits of Master's Thesis Research and Direction
- Plan B (Essay): Includes 28 credits of coursework and 4 credits of Master's Essay Direction

DEGREE REQUIREMENTS

PLAN A: Thesis

Three-Year Part-time Plan

THR 7951 – Foundations of Theatre and Dance Pedagogy: Cr. 3
THR 7901 – Research Methods in Theatre and Dance: Cr. 3
THR 8951 – Arts and Human Development: Cr. 3
THR 8961 – Artistic Praxis: Cr. 3 (6)
THR 8875 – Seminar: Research Topics in Theatre and Dance: Cr. 3
THR 8965 – Principles of Teaching Artistry: Cr. 3 (6)
THR 8999 – Master's Thesis Research and Direction Cr. 4 (8)

PLAN B: Essay

Three-Year Part-time Plan

THR 5200 – Performance Studies: Cr. 3
THR 5731 – Applied Theatre: Community Possibilities: Cr. 3
THR 5738 – Applied Theatre Practicum: Cr. 1
THR 7741 – Dramaturgy: Cr. 3
THR 7951 – Foundations of Theatre and Dance Pedagogy: Cr. 3
THR 7901 – Research Methods in Theatre and Dance: Cr. 3
THR 7999 – Master's Essay Direction Cr. 2 (4)
THR 8875 – Seminar: Research Topics in Theatre and Dance: Cr. 3
THR 8951 – Arts and Human Development: Cr. 3
THR 8961 – Artistic Praxis: Cr. 3
THR 8965 – Principles of Teaching Artistry: Cr. 3

Financial Aid

Sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning on under Financial Assistance, Graduate, p. 26. See also the Academic Regulations section of the College, above. The following information applies to the Theatre and Dance Department.

Assistantships

Each year a number of graduate assistantships are awarded to qualified students. Hilberry Repertory Theatre student assistantships are awarded annually on the basis of auditions. For information, write to the Chairperson of the Department or the Chairperson of the Departmental Graduate Committee.

Dance Courses (DNC)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Performance Tour. Cr. 2 (Max. 8)

Prereq: DNC 5610 or DNC 6610. Open by audition only. Development and performance of touring dance performances off campus including regional, national, and international festivals; productions for elementary, middle and secondary school audiences. (W)

5110 Study in Dance Styles. Cr. 1 (Max. 16)

Examination of a particular dance or movement style; i.e., historic period, technique, somatic, tap, ballroom and social dance forms; Pilates mat, reformer. Material Fee As Indicated In The Schedule of Classes (T)

5560 Choreography III. Cr. 2

Prereq: DNC 2500, DNC 3500. Open only to dance majors. Continuation of DNC 3500; more advanced experience in choreographic forms and exploration of collaborative and technological approaches to choreography; part of Digital Dance Literacy curriculum. Material Fee As Indicated In The Schedule of Classes (F)

5600 Improvisation. Cr. 2

Spontaneous movement exploration in response to a variety of stimuli: literal, visual, kinesthetic, auditory, verbal, and tactile. Material Fee as indicated in Schedule of Classes. (F)

5610 Dance Company I. Cr. 1 (Max. 8)

Prereq: admission by audition. Coreq: DNC 2010, 3010, 4010 or 6010. Performing company. Open to students interested in performing and/or choreographing. Material Fee As Indicated In The Schedule of Classes (F,W)

5700 Performance Studies. (THR 5700) Cr. 3

Prereq: ENG 3010. The study of performance studies' interdisciplinary genealogy, which draws from anthropology, theatre, dance, and visual, rhetorical, gender, and cultural studies. Application of how performance theory/praxis operates as both object of study and critical lens. Material Fee announced in Schedule of Classes. (F)

5710 Dance Techniques. Cr. 1-6 (Max. 12)

A concentrated period of advanced dance study in technique, composition and repertory, often with a visiting artist. (F,W)

5800 Repertory. Cr. 1 (Max. 12)

Prereq: admission by audition. Learning, for performance, of dance repertory, dances previously choreographed by faculty, Labanotated dance, or work of artist-in-residence. (F,W)

5810 Teaching Creative Dance for Children. (TED 5810) Cr. 3

Approaches to creative dance experiences for children stressing the development of aesthetic and kinesthetic awareness. Focus on comprehensive arts and curriculum related materials. (F)

5830 Field Work in Creative Dance. (TED 5830) Cr. 2-8

Prereq: DNC 5810. Open only to dance majors. Supervised professional study in field settings. (T)

5990 Independent Study in Dance. Cr. 1-4 (Max. 12)

Open only to dance majors. Independent work in dance under faculty guidance. (T)

6010 Technique Laboratory III. Cr. 1 (Max. 8)

Prereq: DNC 3010 or equiv. Modern Dance technique, advanced level. (F,W)

6610 Dance Company II. Cr. 2 (Max. 8)

Prereq: DNC 5610 or equiv. Required for students in the choreography and performance emphasis. Admission by audition. Performing company. Performing, choreographic and/or production responsibilities. (F,W)

Theatre Course Number Changes (THR)

Effective with the fall term 2015 almost all Theatre (THR) course numbers will be changed as reflected in the following schedule. This table shows the transition from former numbers to new numbers and titles and includes all THR listings, both undergraduate and graduate. The new THR numbers and course contents may be found in the official Departmental list below this table.

PREVIOUS NUMBER	NEW NUMBER	TITLE
5010	5321	Theatre Costuming I.
5020	5325	Theatre Costuming II.
5050	5711	Play Direction.
5070	5331	Stage Lighting.
5080	5311	Stage Design.
5090	5315	Advanced Stage Design.
5100	5841	Theatre History I.
5120	5811	Development of the Drama I: Greek to Eighteenth Century.
5130	5725	(ENG 5890) Writing for Theatre.
5140	5422	Introduction to Scene Painting.
5150	5426	Advanced Scene Painting.
5210	5842	Theatre History II.
5220	5821	(THR 5220) Black Dramatic Literature and Performance. (AFS 5220)
5230	5831	Pioneers of the Modern Theatre.
5250	5721	Playwriting.
5300	5335	Advanced Stage Lighting Design.
5410	5731	Applied Theatre Studies: Community Possibilities
5460	5735	Applied Theatre Studies: Theatre in Education
5490	5738	Applied Theatre Practicum.
5500	5995	Special Topics in Theatre.
5550	5651	Case Writing of Creative Ventures.
5600	5751	Study Abroad: Moscow Art Theatre School.
5650	5755	(THR 5650) Study Abroad: Directed Study in Russian Theatre. (THR 7650)
5700	5700	(DNC 5700) Performance Studies
6000	6301	Foundations of Graduate Design
6010	6211	Acting Studio I: Fundamentals of Stanislavski System
6010	6601	Studio I
6020	6215	Acting Studio II: Introduction to Michael Chekhov Technique
6020	6605	Studio II
6050	6231	Voice and Speech I - Foundations of Voice for the Actor
6060	6321	Professional Costume Design I
6070	6221	Theatrical Movement I - Introduction to Physical Awareness
6080	5451	Advanced Stage and Film Makeup
6090	6331	Professional Lighting Design I
6100	6235	Voice and Speech II - Speech Foundations

6110	6225	Theatrical Movement II - Introduction to Movement Analysis
6120	5812	Development of the Drama II: Nineteenth Century to Modern.
6160	6325	Professional Costume Design II
6190	6335	Professional Lighting Design II
6210	6361	Design Studio I
6220	6365	Design Studio II
6290	6311	Professional Scenic Design I
6320	7651	Leadership in the Arts
6350	7655	Human Resources and Financial Management for the Arts
6390	6315	Professional Scenic Design II
6400	6381	Styles of Design
6500	6651	Public Relations and the Arts
6550	6661	Marketing the Theatre.
6600	7321	Costume History and Design I
6610	7325	Costume History and Design II
6710	6711	World Performance Studies I
7010	7231	Voice and Speech for the Stage III
7020	7221	Theatrical Movement III - Dance Techniques
7040	7741	Dramaturgy
7050	7211	Acting Studio III: Advanced Michael Chekhov Technique
7050	7601	Studio III
7060	7215	Acting Studio IV: Advanced Study of Active Analysis and Physical Approach to Acting
7060	7605	Studio IV
7070	7581	Repertory Theatre: Acting
7075	7584	Practicum for Theatre Management
7080	8581	Advanced Theatre Laboratory
7090	7235	Voice and Speech for the Stage IV
7100	7225	Theatrical Movement IV - Musical Theatre & Singing Techniques
7110	8211	Acting Studio V: Preparation for the Profession
7110	8601	Studio V
7120	8215	Acting Studio VI: Audition and Composition
7120	8605	Studio VI
7130	7381	Architecture and Décor
7140	8221	Theatrical Movement V - Acrobatics
7150	8225	Theatrical Movement VI - Composition and Physical Devising
7160	8688	Internships in Theatre Promotion
7170	8689	Internships in Theatre Management
7180	8231	Voice and Speech V - Accents and Dialects for Stage and Media
7190	8235	Voice and Speech VI - Media Techniques
7200	7281	Theatre Aesthetics
7210	8301	Design Studio III
7220	8305	Design Studio IV
7230	7389	Design Internship

7300	7671	Funding and Grant Writing for the Arts
7320	8651	Entrepreneurship in the Theatre
7330	7661	Market Data and Decisions in the Arts
7340	7665	Sourcing and Managing Project Funds
7360	8661	The Media and the Theatre
7370	8665	Managing Groups and Teams
7380	6671	Interpersonal Dynamics
7385	6675	Board Governance in the Theatre
7390	7951	Foundations of Theatre and Dance Pedagogy
7400	7901	Research Methods in Theatre
7650	7751	Study Abroad: Directed Study in Russian Theatre
7890	7891	Seminar: Dramatic Literature
7990	7990	Directed Study
7991	7991	Ph.D. Directed Study
7999	7999	Master's Essay Direction
8010	8580	Advanced Theatre Practicum
8020	8991	M.F.A. Management Exit Project
8050	8992	M.F.A. Design Exit Project
8100	8901	Seminar: Theatre History
8190	8941	Teaching Internship I
8200	8945	Teaching Internship II
8300	8951	Art and Human Development
8400	8961	Artistic Praxis
8500	8711	Seminar: Directing
8600	8871	Seminar: Dramatic Theory and Criticism
8700	8875	Seminar: Research Topics in Theatre and Drama
8750	8965	Principles of Teaching Artistry
8810	8701	Seminar: Performance Studies
8890	8890	Proseminar.
8999	8999	Master's Thesis Research and Direction
NEW	5121	Active Analysis for Actors, Directors, and Designers
NEW	7582	Repertory Theatre - Design
NEW	7583	Repertory Theatre - Stage Management
NEW	8998	MFA Theatre Management Exit Project

Theatre Courses (THR)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

THR COURSE NUMBER CHANGES: Effective with the fall term 2015 almost all Theatre (THR) course numbers have been changed as reflected in the schedule printed above showing the transition from former numbers to new numbers and titles. The following course listings reflect these changes and cite all particulars for graduate theatre courses.

5121 Active Analysis for Actors, Directors, and Designers. Cr. 3

Instruction in the Method of Active Analysis, which comprised the final work of Konstantin Stanislavsky on rehearsal, performance, and production. The course is intended for actors and designers as well as directors. Lectures, readings, discussions, and practical work leading toward staging of scenes. (W)

5311 Stage Design. Cr. 3 (Max. 6)

Prereq: THR 1411. The scenic designer's multiple analysis of a play. Practice in evolving a technique of scenic design by study of selected plays with execution of sketches and working drawings. Material Fee as Indicated in Schedule of Classes. (I)

5315 Advanced Stage Design. Cr. 3 (Max. 6)

Prereq: THR 5080 or THR 5311. Studio theory course in stylistic characteristics of modern stage designs. Advanced problems in scenic design. Material Fee as Indicated in Schedule of Classes. (I)

5321 Theatre Costuming I. Cr. 3

Prereq: THR 1411. Studio projects coordinated with University Theatre productions. Material Fee as Indicated in Schedule of Classes. (F)

5325 Theatre Costuming II. Cr. 3

Prereq: THR 5010 or THR 5321. Open only theatre majors in upper division or above. Advanced costume design projects concentrating on the expression of character through design principles. Further development of drawing and rendering skills. Material Fee as Indicated in Schedule of Classes. (W)

5331 Stage Lighting. Cr. 3

Prereq: THR 1461. Theory and practice in stage lighting. Examination of lighting in composition and the aesthetics of light through projects in the stage lighting laboratory. Discussion of applications of lighting instrumentation and control equipment to theatrical production. Participation in lighting University Theatre productions is required. Material Fee as Indicated in Schedule of Classes. (F)

5335 Advanced Stage Lighting Design. Cr. 3

Prereq: THR 5070 or THR 5331. Examination of situations and responsibilities encountered in professional lighting design. Project work based on large-scale, complex requirements. (Formerly THR 5300.) Material Fee as Indicated in Schedule of Classes. (I)

5422 Introduction to Scene Painting. Cr. 3

Prereq: upper division standing or above. Studio and demonstration course as an introduction to painting for the stage, with an emphasis on the materials, texturing techniques, three-dimensional effects and

the beginning work from painter's elevations. Material Fee as Indicated in Schedule of Classes. (I)

5426 Advanced Scene Painting. Cr. 3

Prereq: THR 5422 or THR 5140. Studio and demonstration course for the design or technical theatre student. Materials, techniques, styles of scene painting. Material Fee as Indicated in Schedule of Classes. (I)

5451 Advanced Stage and Film Makeup. Cr. 2

Prereq: THR 3050 or THR 1451. Open only to theatre majors. Continuation of basic principles applied in THR 3050 or THR 1451; emphasis on new makeup materials; experimentation with prosthesis and design for problem makeup. Material Fee as Indicated in Schedule of Classes. (I)

5651 Case Writing of Creative Ventures. Cr. 3

Team activity of researching and writing a business case study for an organization in the Detroit region that is engaged in a service learning activity with community and/or University partners. (F,W)

5700 (DNC 5700) Performance Studies. Cr. 3

Prereq: ENG 3010. The study of performance studies' interdisciplinary genealogy, which draws from anthropology, theatre, dance, and visual, rhetorical, gender, and cultural studies. Application of how performance theory/praxis operates as both object of study and critical lens. Material Fee as Indicated in Schedule of Classes. (F)

5711 Play Direction. Cr. 3

Open only theatre majors in upper division or above. Principles and theories of stage movement, blocking, casting, rehearsing. Students required to direct scenes and one-act plays for class presentation. Material Fee as Indicated in Schedule of Classes. (F)

5721 Playwriting. Cr. 3

Prereq: upper division or graduate status. Introduction to the craft of writing for the stage. Students required to write a full-length dramatic script. Material Fee as Indicated in Schedule of Classes. (B)

5725 (ENG 5890) Writing for Theatre. Cr. 3 (Max. 6)

Prereq: ENG 3830. Advanced study, in a workshop setting, of dramatic structure and writing for the theatre, terminating in the writing of an original stage play. (I)

5731 (THR 3731) Applied Theatre Studies: Community Possibilities. Cr. 3

Open only to graduate students. Fundamental theory and practical technique of applied theatre work, especially process drama and play-building. Focus on community situations including intergenerational dynamics, community health and social work effectiveness, and areas of outreach involvement. (Y)

5735 (THR 3735) Applied Theatre Studies: Theatre in Education. Cr. 3

Open only to graduate students. Fundamentals of applied theatre work, especially story drama, process drama, and theatre-in-education (TIE). Focus on the artist as teacher; the visiting artist in the classroom, after-school drama programming, performing as a member of a TIE team. (Y)

5738 Applied Theatre Practicum. Cr. 1-4 (Max. 8)

Prereq: Offered for graduate credit only. Supervised students work in schools, with youth programs, and in community service settings, implementing applied theatre projects. (Y)

5751 Study Abroad: Moscow Art Theatre School. Cr. 3

Prereq: audition and/or interview. Intensive training in acting or another branch of theatre. Study is conducted on-site at the Moscow Art Theatre School, Moscow, Russia. (S)

5755 Study Abroad: Directed Study in Russian Theatre. (THR 7751) Cr. 1-3

Coreq: THR 5600 or THR 5751. Open only to theatre majors. Focused studies on Russian theatre, performance, design and production; directed studies in contemporary Russian. (Formerly THR 5650.) (S)

5811 Development of the Drama I: Greek to Eighteenth Century. Cr. 3

Prereq: upper division standing or above. Plays from the Greek through the eighteenth century, including Shakespeare; relation of drama to an era and its theatre. Material Fee as Indicated in Schedule of Classes. (F)

5812 Development of the Drama II: Nineteenth Century to Modern. Cr. 3

Prereq: upper division standing or above. Plays and theories of the theatre from the nineteenth century to modern times; relation of drama to an era and its theatre. Material Fee as Indicated in the Schedule of Classes. (W)

5821 Black Dramatic Literature and Performance. (AFS 5220) Cr. 3

Prereq: upper division or graduate status. Critical study of significant black dramatists of the American stage: Willis Richardson, Marita Bonner, Randolph Edmonds, Langston Hughes, Alice Childress, Lorraine Hansberry, Ed Bullins, Amiri Baraka, Ntozake Shange, and August Wilson. (Formerly THR 5220.) Material Fee as Indicated in the Schedule of Classes. (Y)

5831 Pioneers of the Modern Theatre. Cr. 3

Prereq: upper division standing or above. Stanislavski, Meyerholdt, Artaud, Gordon Craig, Brecht; lectures and creative projects. Material Fee as Indicated in the Schedule of Classes. (B)

5841 Theatre History I. Cr. 3

The development of the physical theatre and the evolution of production methods in Greek, Medieval, Renaissance, and English Restoration theatres with the correlation of the cultural environment of each period. Material Fee as Indicated in the Schedule of Classes. (F)

5842 Theatre History II. Cr. 3

Prereq: THR 5100 or THR 5841. Continuation of THR 5100 or THR 5841. Theatre from English and continental eighteenth century to contemporary European and American theatres. Material Fee as Indicated in the Schedule of Classes. (W)

5995 Special Topics in Theatre. Cr. 3 (Max. 6)

Open only to theatre majors. Specialized studies in theatre performance, history, criticism, management, design, and technology. Topics to be announced in Schedule of Classes. (T)

6211 Acting Studio I: Fundamentals of the Stanislavski System. Cr. 2

Open only to Hilberry Company members in the M.F.A. Acting Program. Offered for graduate credit only. A study of the Method of Active Analysis through Physical Action, a post-1991 understanding and practice of the teachings of Konstantin Stanislavski. Subject matter to be chosen from modern texts ñ Anton Chekhov through Eugene O'Neill. Material Fee as Indicated in the Schedule of Classes. (W)

6215 Acting Studio II: Introduction to the Michael Chekhov. Cr. 2

Prereq: THR 6211. Understanding and application of the principles and tools of the Technique: Psycho-physical approach; Imagination and Incorporation of Images; Improvisation and Ensemble work; Atmosphere; and Psychological Gesture. Subject matter to be chosen from the plays of William Shakespeare. Clues from First Folio renditions of the plays will be identified on all analysis assignments. Material Fee as Indicated in the Schedule of Classes. (W)

6221 Theatrical Movement I - Introduction to Physical Awareness. Cr. 1

Open only to Hilberry company members in M.F.A. theatre program. Pilates Method of body conditioning; learning and perfecting movements of the body at beginning and intermediate levels. Material Fee as Indicated in the Schedule of Classes. (F)

6225 Theatrical Movement II - Introduction to Movement Analysis. Cr. 1

Prereq: THR 6221. Open only to Hilberry company members in M.F.A. theatre program. Yoga; Laban Movement Analysis for analyzing and further strengthening the body. Material Fee as Indicated in the Schedule of Classes. (W)

6231 Voice and Speech I - Foundations of Voice for the Actor. Cr. 1

Open only to Hilberry company members in M.F.A. theatre program. Offered for graduate credit only. Studies in vocal physiology and production using Fitzmaurice, Linklater, and Lessac techniques. Material Fee as Indicated in the Schedule of Classes. (F)

6235 Voice and Speech II - Speech Foundations. Cr. 1

Prereq: THR 6231. Open only to Hilberry company members in M.F.A. theatre program. Offered for graduate credit only. Studies in speech and phonetics through physiology, articulatory improvement, and phonetics with application to text. Material Fee as Indicated in the Schedule of Classes. (W)

6301 Foundations of Graduate Design. Cr. 2

Open only to theatre students in M.F.A. program. Introduction to the design process and expectations for graduate-level study in theatrical design. Review of responsibilities of each portion of design team, examination of traditional and electronic methods of research. (F)

6311 Professional Scenic Design I. Cr. 3

Prereq: THR 6000 or THR 6301. Open only to M.F.A. design students in theatre. Offered for graduate credit only. Development of rendering techniques and personal aesthetics of scene design. Use of tools, materials, methods and applications for professional presentation of renderings. Studio projects. Material Fee as Indicated in the Schedule of Classes. (B:W)

6315 Professional Scenic Design II. Cr. 3

Prereq: THR 6290 or THR 6311. Continuation of THR 6290 or THR 6311. Advanced study for opera, ballet, children's theatre and divergent genres and styles. Material Fee as Indicated in the Schedule of Classes. (B:F)

6321 Professional Costume Design I. Cr. 3

Prereq: THR 6000 or THR 6301. Open only to theatre majors in M.F.A. program. Offered for graduate credit only. Advanced exploration of the principles of costume design as it relates to Western theatrical literature. Material Fee as Indicated in the Schedule of Classes. (I)

6325 Professional Costume Design II. Cr. 3

Prereq: THR 6060 or THR 6321. Open only to graduate theatre students in M.F.A. program. Advanced exploration of elements, genres, and styles of costume design as it relates to Western theatrical literature and conventions. Significant project work and research. Material Fee as Indicated in the Schedule of Classes. (B:F)

6331 Professional Lighting Design I. Cr. 3

Prereq: THR 5300 or THR 5335. Open only to theatre majors in M.F.A. program. Examination of the responsibilities and skills needed to function as a professional lighting designer. Varied styles of theatrical production, the lighting designer's communication with other professionals, use of computers in lighting design process, graphic presentation of lighting design concepts. Material Fee as Indicated in the Schedule of Classes. (Y)

6335 Professional Lighting Design II. Cr. 3

Prereq: THR 5300 or THR 5335. Open only to graduate theatre students in M.F.A. program. Continuation of THR 6090 or THR 6331. Employment of theatrical lighting techniques in non-theatrical applications such as film and video; preparation and presentation of a lighting design portfolio; roles of unions in theatrical lighting design. Material Fee as Indicated in the Schedule of Classes. (B:W)

6361 Design Studio I. Cr. 2

Prereq: THR 6000 or THR 6301. Open only to M.F.A. design students in theatre. Studio study and application of graphics which support development and representation of the design idea. Rendering techniques, presentational styles, computer graphics. (W)

6365 Design Studio II. Cr. 2

Prereq: THR 6210 or THR 6361. Continuation of THR 6210 or THR 6361. (F)

6381 Styles of Design. Cr. 3

Prereq: THR 6000 or THR 6301. Open only to M.F.A. design students in theatre. Survey and analysis of theatrical styles of production in European and American theatre, related to historical theory and practice. Research and comparative analysis; some laboratory project work. (W)

6601 Studio I. Cr. 2

Open only to Hilberry company members in M.F.A. theatre program. Examination and analysis of a specific dramatic genre, style or historic period as it relates to acting, directing, or management. Correlative performance or other practical projects. Subject matter coordinated with the repertory of Hilberry Theatre. (F)

6605 Studio II. Cr. 2

Prereq: THR 6010 or THR 6601. Open only to Hilberry company members in M.F.A. theatre program. Continuation of THR 6010 or THR 6601. (W)

6651 Public Relations and the Arts. Cr. 3

Open only to M.F.A. theatre management students. Press writing and public relations for arts organizations. Topics include: writing, media relations, controlling public image. Material Fee as Indicated in the Schedule of Classes. (I)

6661 Marketing the Theatre. Cr. 3

Open only to M.F.A. theatre management students. Marketing strategies for arts organizations. Topics include: subscription and membership sales, individual ticket sales. Material Fee as Indicated in the Schedule of Classes. (I)

6671 Interpersonal Dynamics. Cr. 1-2

Prereq: M.F.A. candidate in theatre management. Relationships between individuals in the work environment; understanding differing behavioral styles amongst employees in the theatre. (T)

6675 Board Governance in the Theatre. Cr. 1-2

Prereq: M.F.A. candidate in theatre management. How boards of directors govern theatres; how dynamics operate between management and boards. (T)

6711 (THR 3710) World Performance Studies I. Cr. 3

Prereq: open by audition. Offered for graduate credit only. Research/studio course examining styles of the late twentieth century to the present; includes spoken word, dance, and multi-media performance art. Introduction to directors and performers such as: Robert Wilson, Spalding Gray, Sekou Sundiata, Robert LePage, Peter Brook. Emphasis on creating ensemble performance work. (F)

7211 Acting Studio III: Advanced Michael Chekhov Technique. Cr. 2

Prereq: THR 6215 and Graduate Standing. Exploration of characterization through study of archetypes, centers, imaginary body, creative individuality, composition of space and connection to the audience. Subject matter will be supported by mask work and the techniques of

Jacques LeCoq; and the study of High Comedy. Material Fee as Indicated in the Schedule of Classes. (F)

7215 Acting Studio IV: Advanced Study of Active Analysis and Physical Approach to Acting. Cr. 2

Prereq: THR 7211 and graduate standing. Advanced Stanislavski practices and exploration of other approaches to the study of physical theatre. Subject matter will explore contemporary, post-modern and devised texts. Material Fee as Indicated in the Schedule of Classes. (W)

7221 Theatrical Movement IV ñ Dance Techniques. Cr. 1

Prereq: THR 6225. Open only to Hilberry company members in M.F.A. theatre program. Broadway and social dance techniques. Material Fee as Indicated in the Schedule of Classes. (F)

7225 Theatrical Movement IV - Ensemble Physicality. Cr. 1

Prereq: THR 7221. Open only to Hilberry company members in the M.F.A. theatre program. Viewpoints; ensemble-generated expressive movement. Material Fee as Indicated in the Schedule of Classes. (W)

7231 Voice and Speech III - Vocalizing Heightened Language & Shakespeare. Cr. 1

Prereq: THR 6235. Open only to Hilberry company members in M.F.A. theatre program. Application of voice and speech techniques to Shakespeare and heightened language, with additional studies in verse analysis. Material Fee as Indicated in the Schedule of Classes. (F)

7235 Voice and Speech IV ñ Musical Theatre & Singing Techniques. Cr. 1

Prereq: THR 7231. Open only to Hilberry company members in M.F.A. theatre program. Improving the singing voice and applying the work to musical theatre performance. Continuation of Narrow phonetic transcription and Shakespearean phrasing; alliteration, antithesis, inflections, music; developing vocal power. Material Fee as Indicated in the Schedule of Classes. (W)

7271 Acting for the Camera. Cr. 3

Prereq: Written consent of faculty advisor. Acting technique and practice with an emphasis on developing the technical and emotional adjustments required for success in Film, TV and industry acting. Units include adjusting theatre acting technique for Film and TV; learning to "hit marks" and to understand frame sizes; and developing video auditions. Material Fee as Indicated in the Schedule of Classes. (W)

7281 Theatre Aesthetics. Cr. 3

Prereq: open only to graduate students in theatre. Contemporary and classical theories of performance in drama, musical theatre, and dance. Interactions of acting, design, music, dance, script, and audience. Material Fee as Indicated in the Schedule of Classes. (Y)

7321 Costume History and Design I. Cr. 3

Prereq: THR 6000 or THR 6301. Historical trends in fashion from ancient Egypt to Elizabethan England, as it pertains to theatre arts and its literature. Study of various periods and genres; design of costumes for plays of these periods based on a historical approach. (B:W)

7325 Costume History and Design II. Cr. 3

Prereq: THR 6600 or THR 7321. Continuation of THR 6600 or THR 7321. Historical trends in fashion from Jacobean England through the 21st Century. (B:F)

7381 Architecture and Decor. Cr. 3

Historical study of the form and elements of architecture and decoration; emphasis on theatrical design. (Formerly THR 7130.) Material Fee as Indicated in the Schedule of Classes. (Y)

7389 Design Internship. Cr. 3

Open only to M.F.A. students in Scenery, Costumes, and Lighting Design. Students are involved with the creative process and execution of a design element for a production at a commercial theatre in the Detroit Metro area. (Y)

7581 Repertory Theatre: Acting. Cr. 1-4 (Max. 18)

Prereq: Open only to theatre students in the M.F.A. program. Supervised experience in the Classic Theatre repertory program. (T)

7582 Repertory Theatre: Design. Cr. 1-4 (Max. 18)

Prereq: open only to students in the M.F.A. design program. Supervised experience in practical application of design and technology specific to the design and implementation required to produce classical and contemporary theatre in a repertory model. Material Fee as Indicated in the Schedule of Classes. (W)

7583 Repertory Theatre: Stage Management. Cr. 1-4 (Max. 18)

Prereq: open only to students in the M.F.A. stage management program. Supervised experience in practical application of stage management techniques and processes required to produce classical and contemporary theatre in a repertory model. Material Fee as Indicated in the Schedule of Classes. (W)

7584 Repertory Theatre Management. Cr. 1-3 (Max. 18)

Prereq: open only to students in M.F.A. theatre management program. Supervised experience in various management assignments for WSU and for public relations activities for the Theatre Department. (I)

7601 Studio III. Cr. 2

Prereq: THR 6020 or THR 6605. Continuation of THR 6020 or THR 6605. (F)

7605 Studio IV. Cr. 2

Prereq: theatre major in M.F.A. program; THR 7050 or THR 7601. Open only to members of Hilberry Company. Continuation of THR 7050 or THR 7601. (W)

7651 Leadership in the Arts. Cr. 3

Prereq: M.F.A. candidate in theatre management. Modern leadership skills and techniques in theatre and in external environments. Topics include visioning, team building, consensus building, leadership communications, distinctions and similarities between leadership and management. (T)

7655 Human Resources and Financial Management for the Arts. Cr. 3

Prereq: open only to M.F.A. theatre management students. Topics include: leadership, group dynamics, staffing, employment and production-related contracts, accounting and budgeting for non-profit. Material Fee as Indicated in the Schedule of Classes. (I)

7661 Market Data and Decisions in the Arts. Cr. 2

Prereq: M.F.A. candidate in theatre management. Market data and analyzing techniques used in theatre; making informed short-term and long-term decisions. Material Fee as Indicated in the Schedule of Classes. (T)

7665 Sourcing and Managing Project Funds. Cr. 2

Prereq: M.F.A. candidate in theatre management. Using a theatre project as a collateral source (investment or social enterprise) for financial support; attaining support through sponsorships, grants, personal relationships, and investors in the theatre. Material Fee as Indicated in the Schedule of Classes. (T)

7671 Funding and Grant writing for the Arts. Cr. 3

Prereq: M.F.A. candidate in theatre management. Fund-raising strategies and the arts. Topics include: individual (annual and planned) giving, corporate giving, grant-making. Material Fee as Indicated in the Schedule of Classes. (I)

7741 Dramaturgy. Cr. 3

Study and preparation of dramatic texts for production; historical, socio-political and theoretical perspectives for production dramaturgy and literary management. Material Fee as Indicated in the Schedule of Classes. (I)

7751 (THR 5755) Study Abroad: Directed Study in Russian Theatre. Cr. 1-3

Prereq: open only to graduate theatre students. Focused studies on Russian theatre, performance, design and production; directed studies in contemporary Russian. (S)

7891 Seminar: Dramatic Literature. Cr. 3

Prereq: open only to graduate theatre students. Study of selected dramatic genres, styles, periods, or playwrights. (B)

7901 Research Methods in Theatre and Dance. Cr. 3

Prereq: graduate standing in theatre and dance degree program. Principles and methods of research and documentation; use of research aids and guides in theatre study and practice. (Y)

7951 Foundations of Theatre and Dance Pedagogy. Cr. 3

Prereq: graduate standing in theatre and dance degree program. Historical, philosophical, cultural, and ethical dimensions of teaching and learning in multiple dance and theatre environments. Web course. (B)

7990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: written consent of chairperson and graduate officer. Open only to graduate theatre students. (T)

7999 Master's Essay Direction. Cr. 1-4

Prereq: written consent of advisor. Open only to Master of Arts degree candidates in the Department of Theatre and Dance. (T)

8211 Acting Studio V: Preparation for the Profession. Cr. 1-4

Prereq: THR 7215. Preparation and development of the professional head shot and resume; creation of personal website, and scene selection for the industry showcase. Subject matter will explore camera acting techniques, utilizing television scripts and screenplays. Material Fee as Indicated in the Schedule of Classes. (W)

8215 Acting Studio VI: Audition and Composition. Cr. 2

Prereq: THR 8211. Development and execution of the industry showcase; performance and interviews with industry specialists. Subject matter will focus on character types for the individual actor and development of an original solo piece or group devised work. Material Fee as Indicated in the Schedule of Classes. (W)

8221 Theatrical Movement V - Acrobatics Cr. 1

Prereq: THR 7225. Open only to Hilberry company members in M.F.A. theatre program. Partner Russian Movement (acrobatics) and etude work. Material Fee as Indicated in the Schedule of Classes. (F)

8225 Theatrical Movement VI - Composition and Physical Devising. Cr. 1

Prereq: THR 8221. Open only to Hilberry company members in M.F.A. theatre program. Physical composition class building on previous techniques, working toward original devised performance pieces. Material Fee as Indicated in the Schedule of Classes. (W)

8231 Voice and Speech V ñ Accents & Dialects for Stage and Media. Cr. 1

Prereq: THR 7235. Open only to Hilberry company members in M.F.A. theatre program. Studies in analyzing, learning, and performing accents & dialects for stage and film. Material Fee as Indicated in the Schedule of Classes. (F)

8235 Voice and Speech VI - Media Techniques. Cr. 1

Prereq: THR 8231. Open only to Hilberry company members in M.F.A. theatre program. Studies in the techniques needed for performance in voice-overs and camera. Material Fee as Indicated in the Schedule of Classes. (W)

8301 Design Studio III. Cr. 2

Prereq: THR 6220 or THR 6365. Open only to M.F.A. students in theatre design. Continuation of THR 6220 or THR 6365. (W)

8305 Design Studio IV. Cr. 2

Prereq: THR 7210 or THR 8301. Open only to M.F.A. students in theatre design. Continuation of THR 7210 or THR 8301. (F)

8580 Advanced Theatre Practicum. Cr. 1-2 (Max. 11)

Prereq: open only to theatre graduate students. Public performances in the dramatic productions of the University's Bonstelle Theatre. Credit determined by complexity of dramatic role performed. (T)

8581 Advanced Theatre Studio. Cr. 1-3 (Max. 3; max. 9 for M.F.A. students with written consent of instructor)

Prereq: open only to theatre students in M.F.A. program. Supervised laboratory practice in technical theatre and theatre management. (T)

8601 Studio V. Cr. 2

Prereq: THR 7060 or THR 7605. Open only to members of Hilberry Company in M.F.A. theatre program. Continuation of THR 7060 or THR 7605; further practical studies in various theatre crafts. (F)

8605 Studio VI. Cr. 2

Prereq: THR 7110 or THR 8601. Open only to members of Hilberry Company in M.F.A. theatre program. Continuation of THR 7110 or THR 8601; further practical studies in various theatre crafts. (W)

8651 Entrepreneurship in the Theatre. Cr. 3

Prereq: M.F.A. candidate in theatre management. Elements involved in new theatre development, including business plan, municipal coordination, financing of new projects, creation of a theatre business office, long-term strategic planning, creation of a 501(c)(3), and board development. Material Fee as Indicated in the Schedule of Classes. (T)

8661 The Media and the Theatre. Cr. 2

Prereq: M.F.A. candidate in theatre management. Writing and working with the media: press releases, public service announcements, magazine queries, radio and television spot writing; using print and electronic media through features and interviews. (T)

8665 Managing Groups and Teams. Cr. 1-2

Prereq: M.F.A. candidate in theatre management. Relationships between teams; how teams can be utilized to improve work performance. Practices used to strengthen confidence in supervisory skills. Material Fee as Indicated in the Schedule of Classes. (T)

8689 Internships in Theatre Management. Cr. 1-4

Open only to M.F.A. candidates in theatre management. Planning and execution of projects in theatre management; evaluation of project effectiveness. (W)

8701 Seminar: Performance Studies. Cr. 3

Open only to theatre graduate students. Study of performance as an organizing principle for analysis of a wide range of behaviors and situations. (B)

8711 Seminar: Directing. Cr. 3

Open only to theatre graduate students. Discussion of selected topics in directing theory. Development and class presentation of directing concepts for plays in diverse styles, conceived for existing and theoretical theatre spaces; coordination of directing with design. (B)

8871 Seminar: Dramatic Theory and Criticism. Cr. 3

Open only to theatre graduate students. Major documents and principles of dramatic critics and theorists. (Formerly THR 8600.) (B)

8875 Seminar: Research Topics in Theatre and Drama. Cr. 3

Open only to graduate students in the Department of Theatre and Dance. In-depth research on selected topics in theatre and dance. (B)

8890 Proseminar. Cr. 1 (Max. 2)

Open only to theatre graduate students. Departmental expectations are presented for doctoral core classes, qualifying examination, reading list, dissertation, and teaching assistant assignments. (Y)

8901 Seminar: Theatre History. Cr. 3

Open only to theatre graduate students. Selected topics in theatre history. (B)

8941 Teaching Internship I. Cr. 1-3

Open only to third year Hilberry fellows in M.F.A. theatre program. Assisting faculty members in teaching first-semester undergraduate-level courses. (F)

8945 Teaching Internship II. Cr. 1-3

Open only to third year Hilberry fellows in M.F.A. theatre program. Assisting faculty members in teaching second-semester undergraduate-level courses. (W)

8951 Art and Human Development. Cr. 3

Prereq: graduate standing in theatre and dance degree program. Integrated approaches for the arts for early childhood, youth and adolescents, and older adults. Web class. (B)

8961 Artistic Praxis. Cr. 3 (Max. 6)

Prereq: graduate standing in theatre and dance degree program. Research and analysis of artistic practice leading to informed action; particular emphasis on the role of critical reflection in aesthetic development and evaluation of outcomes. Web class. (B)

8965 Principles of Teaching Artistry. Cr. 3 (Max. 6)

Prereq: graduate standing in theatre and dance degree program. Research-based seminar on aspects of management administration, integrated arts, and assessment in multiple dance and theatre teaching artist environments. Web course. (B)

8991 M.F.A. Management Exit Project. Cr. 1-3

Prereq: last semester standing; prior written consent by graduate supervisor and faculty advisor. Open only to members of Hilberry company in M.F.A. theatre program. (T)

8992 M.F.A. Design Exit Project. Cr. 2

Prereq: THR 6000 or THR 6301. Open only to students in M.F.A. theatre design program. Demonstration in the specific design area in the skills developed by the student designer. Portfolio presentation developed in consultation between the student and the design area advisor. (W)

8995 M.F.A. Acting Exit Project. Cr. 3

Prereq: Written consent of faculty advisor. Open only to students in the M.F.A. acting program. Course designed to bridge from academia to the professional world. Selection, research and execution of seven monologues from a variety of period texts; development of a professional website; research and documentation of the artist's job market in a chosen geographic area. The course culminates in a final Oral Examination by each student's M.F.A. Exit Committee. Material fee as Indicated in the Schedule of Classes. (W)

8998 M.F.A. Theatre Management Exit Project. Cr. 3

Prereq: Graduate standing. Last semester standing; written consent of faculty advisor. Open only to students in the M.F.A. acting program. Course designed to bridge from academia to the professional world. Development of a professional website and portfolio; research and documentation of the manager's job market in a chosen geographic area. The course culminates in a final Oral Examination by each student's M.F.A. Exit Committee. Material fee as Indicated in the Schedule of Classes. (W)

8999 Master's Thesis Research and Direction. Cr. 1-8

Prereq: written consent of advisor. Open only to Master of Arts degree candidates in the Department of Theatre and Dance. (T)

Law School

Dean: Jocelyn Benson

Calendar, Law School: 2016 - 2018

The following calendar is for the Law School curriculum.
For the general University Academic Calendar, see Calendar, Academic 2016 - 2018, p. 5.

Fall Term: 2016

Priority Registration for Fall Term 2016: TBD - Sat., Aug. 20
Open Registration for Fall Term 2016: Mon., Aug. 22 - Sat., Aug. 27
Orientation and Legal Writing Program Begins for:
All First Year Students (Day, Evening & Combined Program):
Mon., Aug. 22
Law Classes Begin for All Law Students: Mon., Aug. 29
Late Registration for Fall Term 2016: Mon., Aug. 29 - Mon., Sept. 12
Labor Day Recess: Mon., Sept. 5
Last Day to Add/Drop Courses for Tuition refund: Mon., Sept. 12
Last Day for Filing Degree Application: Fri., Sept. 30
Deadline to file Election of Pass-No Credit Grading forms: Mon., Oct. 10
Deadline to file Upperclass Writing Requirement Certificate forms: Mon., Oct. 10
Priority Registration for Winter Term 2017: Wed., Nov. 2 (tentative) - Sat., Dec. 31
Day Scheduled as Thursday: Tues., Nov. 22
Day Scheduled as Friday: Wed., Nov. 23
Thanksgiving Recess: Thurs., Nov. 24 to Sat., Nov. 26
Classes End: Wed., Nov. 30
Review and Reading Period: Thurs., Dec. 1 - Wed., Dec. 7
Law School Examination Period: Thurs., Dec. 8 - Wed., Dec. 21
Holiday Recess: Sunday., Dec. 25 - Sunday., Jan. 1
Fall Term Ends: Sat., Dec. 31

Winter Term: 2017

Winter Term Begins: Sun., Jan. 1
Open Registration for Winter Term 2017: Mon., Jan. 2 - Sat., Jan 7
Classes Begin: Mon., Jan. 9
Late Registration for Winter Term 2017: Mon., Jan. 9 - Mon., Jan. 23
Martin Luther King Holiday - University Holiday: Mon., Jan. 16
Last Day to Add/Drop Courses for Tuition refund: Mon., Jan. 23
Last Day for Filing Degree Application: Fri., February 10
Deadline to file Election of Pass-No Credit Grading forms: Mon., Feb. 20
Deadline to file Upperclass Writing Requirement Certificate forms: Mon., Feb. 20
Priority Registration for Spring/Summer Term 2017: To be determined - Sat., May 6
Law School & University Spring Recess: Mon., Mar. 13 - Sat., Mar. 18
Classes Resume: Mon., Mar. 20
Priority Registration for Fall Term 2017: To be determined - Sat., Aug. 29
Open Registration for Spring/Summer Term 2017: Mon., May 8 - Sat., May 20
Classes End: Mon., April 17
Class make-up days if needed: Tues., April. 18 and Wed., April. 19
Review and Reading Period: Thurs., April 20 - Wed., April 26
Law School Examination Period: Thurs., April 27 - Wed., May 10
Law School Term Ends: Wed., May 10
Law School Commencement: TBD

Summer Term: 2015

Memorial Day: Mon., May 29
Classes begin: Mon., May 22
Late registration for summer term 2017: Mon., May 22 - Sat., May 27
Independence Day recess: Tues., July 4
Day Scheduled as Monday: Fri., Jun. 2
Day Scheduled as Tuesday: Fri. Jun. 30
Classes end**: Wed., July 5
Law School examination period.: Mon., July 10 - Fri., July 14
Summer term ends: Fri., Aug. 25

Fall Term: 2017*

Priority Registration for Fall Term 2017: TBD - Sat., Aug. 19
Open Registration for Fall Term 2017: Mon., Aug. 21 - Sat., Aug. 26
Orientation and Legal Writing Program Begins for:
All First Year Students (Day, Evening & Combined Program):
Mon., Aug. 21
Law Classes Begin for All Law Students: Mon., Aug. 28
Late Registration for Fall Term 2017: Mon., Aug. 28 - Mon., Sept. 11
Labor Day Recess: Mon., Sept. 4
Last Day to Add/Drop Courses for Tuition refund: Mon., Sept. 11
Last Day for Filing Degree Application: Fri., Sept. 29
Deadline to file Election of Pass-No Credit Grading forms: Mon., Oct. 9
Deadline to file Upperclass Writing Requirement Certificate forms: Mon., Oct. 9
Priority Registration for Winter Term 2018: Wed., Nov. 1 (tentative) - Sat., Dec. 30
Day Scheduled as Thursday: Tuesday, Nov. 21
Day Scheduled as Friday: Wednesday, Nov. 22
Thanksgiving Recess: Thurs., Nov. 23-Sat., Nov. 25
Classes End: Wednesday, December 29
Review and Reading Period: Thurs., Nov. 30 - Wed., Dec. 6
Law School Examination Period: Thurs., Dec. 7 - Wed., Dec. 20
Holiday Recess: Mon., December 25 - Mon., Jan. 1
Fall Term Ends: Sun., December 31

Winter Term: 2018*

Winter Term Begins: Mon., Jan. 1
Open Registration for Winter Term 2018: Mon., Jan. 1 - Sat., Jan 6
Classes Begin: Mon., Jan. 8
Late Registration for Winter Term 2018: Mon., Jan. 8 - Mon., Jan. 22
Martin Luther King Holiday - University Holiday: Mon., Jan. 15
Last Day to Add/Drop Courses for Tuition refund: Mon., Jan. 22
Last Day for Filing Degree Application: Fri., February 9
Deadline to file Election of Pass-No Credit Grading forms: Mon., Feb. 19
Deadline to file Upperclass Writing Requirement Certificate forms: Mon., Feb. 19
Priority Registration for Spring/Summer Term 2018: To be determined - Sat., May 5
Law School & University Spring Recess: Mon., Mar. 12 - Sat., Mar. 17
Classes Resume: Mon., Mar. 19
Priority Registration for Fall Term 2018: To be determined - Sat., Aug. 18

Open Registration for Spring/Summer Term 2018: Mon., May 7 - Sat., May 19
Classes End: Mon., April 16
Make-up Class Days (if needed): Tues., April 17 - Wed., April 18
Review and Reading Period: Thurs., April 19 - Wed., April 25
Law School Examination Period: Thurs., April 26 - Wed., May 9
Law School Term Ends: Wed., May 9
Law School Commencement: TBD

Summer Term: 2018*

Classes Begin: Mon., May 21
Late Registration for Summer Term 2018: Mon., May 21 - Sat., May 26
Memorial Day: Mon., May 28
Day Scheduled as Monday: Fri., June 1
Independence Day Recess: Wed., July 4
Classes End: Thur., July 5
Law School Examination Period: Mon., July 9 - Fri., July 13
Summer Term Ends: Fri., July 24

* Calendar dates are tentative. This Calendar applies to the Law School ONLY. The general University Calendar appears under 4.

** To make up for class days lost due to the observance of holidays, substitute class days are scheduled.

Foreword to the Law School

Introduction

Wayne State University Law School, founded in 1927, is located in the heart of Detroit's historic cultural center, offering a unique urban experience. Detroit's vibrant legal market - including government offices, state and federal courts, multinational corporations, unions and major law firms - provides students with a wide range of opportunities for employment and externships. Our students are bright, mature, conscientious and altruistic. They come from unique backgrounds and professions, some having previously served as doctors, musicians, actors, engineers and law enforcement officers before pursuing the law. Wayne Law also offers a network of more than 11,000 living alumni, including established leaders of the legal community, practicing throughout the nation and in more than a dozen foreign countries. Our expert faculty's nationally and internationally recognized scholarship adds depth to our students' understanding of legal theory, doctrine and practice. Wayne Law students, faculty and alumni are deeply engaged in the community and profession.

Accreditation, national recognition

Wayne State University Law School is accredited by the American Bar Association and is a member of the Association of American Law Schools. The Law School has a chapter of the Order of the Coif, the national honorary society dedicated to the highest standards of legal scholarship.

Setting, facilities

The Law School is a flagship unit of Wayne State University, a major metropolitan research university located in the heart of Midtown, about four miles from downtown Detroit. Within blocks of the Law School are the Detroit Public Library, Detroit Institute of Arts, Charles H. Wright Museum of African American History, Detroit Science Center and other cultural attractions. The city of Detroit shares an international border with Canada and offers access to Michigan's largest concentration of law firms and state and federal courts.

The Law School complex includes four buildings - Classroom Building, Damon J. Keith Center for Civil Rights, Law Building and Arthur Neef Law Library - with lounges, gathering areas and meeting rooms. The three-floor Arthur Neef Law Library offers print and digital resources, a computer lab, 14 study rooms and wireless access. Special collections cover antitrust law, international law, Jewish law and Michigan law.

Degrees

The Law School offers academic programs leading to the degrees of Juris Doctor (J.D.) and Master of Laws (LL.M.). The J.D. is a graduate degree requiring a baccalaureate degree as a prerequisite. The LL.M. is a graduate degree offered by the Law School in the fields of and corporate and finance law, labor and employment law, and taxation which requires the J.D. or its equivalent as a prerequisite. The Law School also participates in joint degree programs with other Schools and Colleges within the University.

JURIS DOCTOR

MASTER OF LAWS in Corporate and Finance Law

MASTER OF LAWS in Labor and Employment Law

MASTER OF LAWS in Taxation

MASTER OF LAWS in United States Law

Damon J. Keith Center for Civil Rights

The Damon J. Keith Center for Civil Rights at Wayne Law is a regional hub for civil rights teaching, research and advocacy, training and inspiring the next generation of civil rights leaders in honor of the legacy of Judge Damon J. Keith. At the center, stakeholders gather to analyze policy, law students teach a civil rights curriculum to high school students and leaders dive into the issues of the day, such as tax foreclosures, water shutoffs and police-community relations. The center welcomes the public for lectures by civil rights icons, supports community-based organizations and publishes scholarship about how the law and social justice impact one another. The center offers the nation's first and only repository dedicated to African-American legal history, along with a traveling exhibit about the 14th Amendment's guarantee of equal protection under the law.

In summer 2014, WSU was awarded a three-year, \$1.3 million grant from the W.K. Kellogg Foundation to launch the Detroit Equity Action Lab at the Keith Center. Through this initiative, 60 leaders working in the many dimensions of racial equity, including arts and media, community development, education, environment, food security, health care and housing, will address issues of structural racism in Detroit.

For more information about the Keith Center, visit law.wayne.edu/keithcenter.

Arthur Neef Law Library

The Arthur Neef Law Library provides a major legal research center for Wayne Law students and faculty. Its special collections include the Alwyn V. Freeman International Law Collection, Driker Antitrust Law Collection, Jewish Law Collection and a comprehensive collection of current and historical Michigan law materials that include the Michigan Supreme Court Records and Briefs, Michigan probate court opinions and Michigan Superfund site documents. The law library is a selective depository for U.S. government publications. The law library's extensive print and digital resources are accessible at library.wayne.edu/neef.

Databases and other e-resources are easily discoverable and remotely accessible.

The law library building was designed to make optimal use of natural light in reading and study areas. Tables, carrels and soft-seating areas are available throughout the law library and offer wired and wireless access to networked resources. Our students may reserve any of the 14 study rooms through an online reservation system. A computer lab featuring desktop computers, printers and scanners is reserved for the exclusive use of Wayne Law students.

Faculty

The Law School has 113 full- and part-time expert faculty members. Read about them at law.wayne.edu/faculty.

Directory

Wayne State University Law School
471 W. Palmer St.
Detroit, MI 48202

General information: 313-577-3933

Website: <http://www.law.wayne.edu>

Law (J.D. Program)

Admissions

For a complete statement of the admissions procedures and requirements for the J.D. degree as well as recommended preparation for the study of law see Admissions Policies and Procedures (J.D. Program), p. 279.

Degree Requirements (J.D.)

Students should consult Section I of the Law School Academic Regulations (law.wayne.edu/academicregs) for a complete list of the requirements for the J.D. degree. Following are some of the most important requirements:

- **Total credits required.** You must complete 86 credits with a cumulative grade point average of 2.0 or better.
- **Required courses.** You must successfully complete Civil Procedure A & B, Constitutional Law I, Contracts A & B, Criminal Law, Legal Research and Writing, Property and Torts in the first year of law school and Professional Responsibility and the Legal Profession as an upper level student.
- **Upper-class writing requirement.** To satisfy the upper-class writing requirement you must participate in a class or activity offering a rigorous writing experience after your first year. Qualifying activities include Criminal Appellate Practice Clinic, Appellate Advocacy, a directed study paper, and participation on Wayne Law Review, The Journal of Law in Society or Moot Court. You also may satisfy the requirement by taking any other course, clinic, workshop or seminar with a substantial writing requirement but only if you submit to the Records Office a signed certificate by the appropriate deadline.
- **Professional skills and experiential learning requirement.** If you started at the Law School between the fall 2005 semester and the summer 2013 semester, you must complete the professional skills requirement by taking a curricular offering of two or more credits that provides substantial instruction in professional skills beyond traditional legal research, writing and analysis.

If you started at the Law School in the fall 2013 or thereafter, you must complete the professional skills and experiential learning requirement by taking at least six credits of curricular offerings that provide substantial instruction in professional skills beyond traditional legal research, writing and analysis. At least three of these required credits must be a clinic, externship practicum or externship colloquium offering three or more credits that provides substantial instruction in professional skills beyond traditional legal research, writing and analysis.

The courses that meet this requirement are:

- Clinics – Asylum and Immigration Law Clinic, Business and Community Law Clinic, Civil Rights and Civil Liberties Clinic, Criminal Appellate Practice Clinic, Legal Advocacy for People with Cancer Clinic, Patent Procurement Clinic, Practicum in Dispute Resolution and Transnational Environmental Law Clinic.
- Externships – Criminal Justice Externship: Practicum, Criminal Justice Externship: Colloquium, Corporate Counsel Externship: Practicum, Corporate Counsel Externship: Colloquium, Judicial Externship: Practicum, Judicial Externship: Colloquium, Public Interest Externship: Practicum and Public Interest Externship: Colloquium.

- Courses and seminars – Alternative Dispute Resolution, Business Planning: A Transactional Approach, Contract Drafting Seminar, Criminal Pretrial Advocacy, Effective Oral Communication for Lawyers Seminar, Negotiation, Patent Application Preparation, Pretrial Advocacy and Trial Advocacy.

You may not use the same course, seminar or clinic to satisfy both the upper-class writing requirement and the professional skills requirement.

- **Residence credit requirement.** You must complete three years in residence. A student who completes 10 credits or more in a given semester will receive one-half year of residence credit. A student who completes fewer than 10 credits in a semester will receive residence credit based on the ratio of the number of credits completed and 10 credits. You may not earn more than one-half year of residence credit during one semester, and credits earned in one semester cannot be applied to residence credit in any other semester.
- **Time limit for completing graduation requirements.** While transfer between programs is possible, a J.D. student who enters the Law School as a full-time student must complete the requirement for the J.D. degree within five years of starting the program, and a student who enters as a part-time student must complete the requirements within six years.
- **Limitation on clinical and externship courses.** Students may take not more than 14 credits of clinical and externship courses toward completion of degree requirements.
- **Transfer credits.** The Law School will transfer credits from all American Bar Association-approved law schools for courses in which the student received a grade of "C" or better. If a course is graded on a Pass/Fail or No Credit scale, the Law School only will transfer credits with a certification from the institution that a Pass is equal to a grade of "C" or better. The Law School will transfer the credits upon receipt of an official transcript sent directly from the credit-granting institution. Transfer credits are reviewed by the assistant dean of student affairs in conjunction with the registrar. The student's Law School transcript will show credit, but not grades, for courses carried and completed at other law schools. A transfer student only may receive credit for a course taken at the Law School that substantially overlaps with coursework taken at another school with the advance permission of the assistant dean of student affairs.

The above represents only a summary of the requirements for graduation. To be sure you understand all of the requirements you should carefully consult the Law School Academic Regulations.

Academic Regulations, Law School

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the Law School.

The faculty of the Law School has adopted academic regulations which cover degree requirements, examinations and other academic matters. Compliance with the regulations is required of all law students. The Academic Regulations are available in the Law School Records Office or on the Law School website: law.wayne.edu/academicregs

First-year program

Wayne Law offers three program options for the first year of study to meet the various needs of a diverse student body. They include a full-time day program, a combined day and evening program, and a part-time evening program.

- **Full-time day program** – students take all courses during the day, completing 30 credits in their first year, 15 credits each semester
- **Combined day/evening program** – students take three courses at night, as well as one or two day courses each semester, completing 22 to 30 credits in their first year, 11 to 15 credits each semester
- **Part-time evening program** – students take three courses all at night, completing 16 credits in their first year, eight credits each semester

First-year students learn fundamental legal theory, as well as how to identify and analyze legal issues, through introductory courses including:

- Civil Procedure
- Constitutional Law
- Contracts
- Criminal Law
- Legal Research and Writing
- Property
- Torts

Upper-class program

Wayne Law offers a wide range of courses that prepare graduates for an evolving legal environment. Our faculty's extensive knowledge and experience allow the Law School the flexibility to adapt courses and programming to shifting legal trends. From health law, public interest law and international law to corporate law, environmental law and more, you'll find what you're looking for at Wayne Law.

Visit law.wayne.edu/courses for more information about our diverse programs and specializations.

Clinics

Wayne Law's client clinics are directed by full-time expert faculty members and help bridge the gap between theory and practice. Located on or close to campus and offered for credit, our clinics provide hands-on casework to law students while simultaneously assisting residents of the Detroit metropolitan community.

The Law School offers eight clinics:

- Asylum and Immigration Law Clinic
- Business and Community Law Clinic
- Civil Rights and Civil Liberties Clinic
- Criminal Appellate Practice Clinic
- Disability Law Clinic
- Legal Advocacy for People with Cancer Clinic
- Patent Procurement Clinic
- Transnational Environmental Law Clinic

For more information about the Law School's clinics, visit law.wayne.edu/clinics.

Externships

Externships are an integral part of the experiential learning program at Wayne Law. Students who elect to complete an externship earn academic credit while gaining practical experience outside the Law School walls. Externships develop students' professional skills, values and judgment as they learn about professionalism, the practice of law and the legal system, while becoming reflective practitioners with the capacity for self-directed professional growth.

Wayne Law offers four externship programs:

- Corporate Counsel Externship
- Criminal Justice Externship
- Judicial Externship
- Public Interest Externship

For more information about the Law School's externship programs, visit law.wayne.edu/externships.

Co-curricular programs

Wayne Law students gain an edge through a number of co-curricular programs designed to sharpen minds and heighten capabilities. Students gain hands-on experience through a number of organizations dedicated to promoting a friendly yet competitive atmosphere and shaping legal minds.

Co-curricular programs are:

- Free Legal Aid Clinic
- The Journal of Law in Society
- Mock Trial
- Moot Court
- Wayne Law Review

For more information about co-curricular programs, visit law.wayne.edu/co-curricular.

Intellectual Property Law Institute

Since several Wayne State University Law School faculty members are experts in areas of intellectual property law, the Law School is able to offer a remarkable variety of courses in such areas as patent, copyright and trademark law.

In addition to these courses, Law School students have the opportunity to take courses at another Detroit law school and at a law school across the border in Canada through the Intellectual Property Law Institute. The Institute was created in 1987 as a cooperative effort of the law faculties of Wayne State University, University of Detroit Mercy and University of Windsor in Ontario. The institute offers an exceptional, rich curriculum for law students with courses and seminars in patents, copyrights, trademarks, trade secrets and know-how, computers and related technology, communications and media, entertainment, technology transfer, trade regulation and the arts. Full-time students at each of the three law schools may register for any institute course and will pay the tuition required at their home institution. The course will be credited toward their law degree.

Levin Center at Wayne Law

Established in 2015, the Levin Center at Wayne Law educates future attorneys, business leaders, legislators and public servants on their role overseeing public and private institutions and using oversight as an instrument of change. Through academic programming, training and research, the Center will equip future lawyers, legislators and leaders with an understanding of how effective legislative oversight can lead to significant and meaningful changes in public policy.

The Center hopes to inspire and train a new generation to embrace their responsibility to ensure public and private institutions operate with integrity, transparency and accountability to the general public in honor of former U.S. Sen. Carl Levin's distinguished career in public service.

Program for Entrepreneurship and Business Law

The Program for Entrepreneurship and Business Law coordinates Wayne Law's broad array of business law courses, clinics, externships, and extracurricular/co-curricular and community engagement activities.

The breadth of the field of business and corporate law is reflected in Wayne Law's extensive business curriculum, taught by widely recognized full-time faculty.

Wayne Law also offers numerous experiential learning and extracurricular and co-curricular activities designed to prepare students to represent entrepreneurs - or to become entrepreneurs themselves - while supporting entrepreneurship and business development in metro Detroit. In addition, the Law School offers students the chance to represent real clients on real legal matters through the Business and Community Law Clinic and Patent Procurement Clinic.

The Program for Entrepreneurship and Business Law helps aspiring business owners in underserved communities participate in the economic revival of Detroit. The program offers early-stage legal assistance to participating local startups and creates forums for entrepreneurs to receive general legal guidance, access community resources and share their own business experience.

Program for International Legal Studies

International law cuts across all aspects of a Wayne Law legal education. One-third of the faculty teaches and writes on international subjects, and faculty members enjoy world-wide reputations as innovative and prolific scholars. Classes are available on a remarkable range of global topics. Wayne Law's Jessup International Law Moot Court Team has won the Midwest championship two of the past three years.

The Program for International Legal Studies offers students the opportunity to explore international law through classes, summer internships abroad and co-curricular activities. It hosts an annual lecture series that brings renowned international law experts to campus. The program also hosts conferences on critical issues in international law. In addition, the program sponsors opportunities for students to work on international legal issues first hand.

Joint Degree Programs

The Law School offers, in conjunction with other colleges of the university, six joint degree programs that allow students to earn both a J.D. degree and a master's degree in one of the following disciplines:

- Business administration (M.B.A.)
- Criminal justice (M.S.)
- Dispute resolution (M.A.D.R.)
- Economics (M.A.)
- History (M.A.)
- Political science (M.A.)

Bar Admission

Wayne Law is committed to helping our students succeed in law school and pass the bar examination. We believe this journey starts in your first year of law school, as students begin to master the first-year law courses, and continues through the middle and final years at Wayne Law. Our programs are designed to provide additional bar support, using diagnostic exams to predict areas that students should focus on as well as free programs to enhance essay writing skills.

In addition to our programs, we provide expert individual advice and guidance. Wayne Law students graduate with the tools and support

to start bar examination preparation and ultimately to be successful in the bar exam.

Student Affairs encourages students to begin preliminary bar preparation in their first year. Our director of academic success and bar preparation can help students create a bar exam plan for each of their years at Wayne Law.

For more information about the bar exam, visit <http://law.wayne.edu/barexam>.

Admissions Policies and Procedures (J.D. Program)

Preparation for law study

The Law School has no requirements with respect to the content of an applicant's undergraduate education, but the Admissions Committee will take into account the nature of college work completed as well as the grades achieved. Proficiency in the English language, both written and spoken, and in analytical skills is essential to the study of law. The suggestions for pre-law preparation in the ABA-LSAC Official Guide to ABA-Approved Law Schools are excellent. The book may be ordered from the Law School Admission Council at lsac.org and is available in most bookstores and libraries.

Admissions Policy

The Law School enrolls one class per year. Each class begins in August. Applications are accepted from Oct. 1 through July 1. Admission to Wayne Law is selective, and there is a great deal of competition to be a member of an entering class.

The Admissions Office uses rolling admissions. As applications become complete they are evaluated for a decision. Applicants are strongly encouraged to apply early as the class fills rapidly as the deadline approaches.

An applicant for admission to the J.D. program must have a bachelor's degree from an accredited college or university or pursuant to an articulation agreement with an undergraduate institution that grants the degree upon successful completion of all required first year courses in the Law School. A final official transcript must be sent to the Law School before enrolling.

Each applicant also must take the Law School Admission Test (LSAT) and register with the Law School Data Assembly Service (LSDAS). The Law School requires that students educated in a foreign country submit their transcripts through the Law School Admission Council J.D. Credential Assembly Service. Applicants who completed any post-secondary work outside of the United States, its territories or Canada must use this service for the evaluation of foreign transcripts. The one exception to this requirement is any foreign work completed through a study abroad, consortium or exchange program sponsored by a U.S. or Canadian institution where the work is clearly indicated as such on the home campus transcript.

Applicants must take the LSAT no later than June of the year in which they intend to enroll. The Admissions Office will accept LSAT test scores that are up to five years old.

Admissions decisions

At Wayne Law, we use a holistic approach in evaluating applicants. Every application is thoroughly read by an admissions professional and members of the Faculty Admissions Committee. The Admissions Committee considers positively the following factors in reaching admissions decisions:

- 1) an applicant's academic achievement and potential, as shown by his/her LSAT score and Grade Point Average;
- 2) an applicant's demonstrated capacity to overcome or persevere against:
 - socioeconomic disadvantage, whether the applicant would be the first generation of his/her family to attend or graduate from col-

lege or a professional program and whether he/she was employed or raising a family while attending school; or

- substantial obstacles such as family or personal adversity, attendance at an under-performing school (elementary, middle or high school), and prejudice or discrimination;

3) any special circumstances suggesting that the applicant's LSAT score or academic record doesn't accurately reflect his/her current academic potential, such as the age of the applicant's GPA; a marked improvement in grades shown in the later years of college; or other special circumstances the candidate conveys in his or he personal statement or elsewhere in the application; and

4) other factors that foster a diverse and engaged law school environment, such as geographic residence (including in the city of Detroit), work and volunteer experience, leadership qualities, commitment to community and public service, communication skills, multilingual proficiency, and experience of life in a foreign country or on a Native American tribal reservation.

Deferred admissions

The Law School does not defer admissions except for persons called to military service. Any admittee who withdraws from the class must submit a new application and fee for the next year for which he or she seeks admission.

Reduced program

The first-year day program curriculum is mandatory, but day students who have child care responsibilities or significant health care concerns may be permitted to take a slightly reduced course load. The applicant must submit a written request to the assistant dean of admissions prior to registration setting forth the personal circumstance justifying the request for admission as a reduced load student.

Reconsideration

An applicant may request reconsideration of an adverse admissions decision by writing a letter to the assistant dean of admissions stating the specific reasons why reconsideration is merited. The application then will be reviewed by the Admissions Committee. In the past, applicants who have successfully petitioned for reconsideration are those who have submitted updated information, such as improved test scores or additional grades.

Application procedures (J.D. applicants)

Admission to the J.D. program at Wayne Law is highly competitive. Wayne Law receives a large number of applications. Every application receives careful, individualized attention by the Wayne Law Admissions Office and our faculty Admissions Committee. A variety of factors are taken into consideration. Typically, only about 40 percent of applicants are offered admission.

Note: Wayne Law will accept the June 2016 LSAT score for the class entering in fall 2016.

First-year applicants

Application requirements for those seeking admission as first-year students are as follows:

1. Complete the online application form (<https://os.lisac.org/Release/Logon/Access.aspx>) with an electronic signature. The deadline for application is July 1. To receive priority consideration for scholarships, your application must be complete by Jan. 15.
2. Include with your application a brief personal statement, written by you in your own words. You can use this statement to convey to the Admissions Committee any experiences, interests, unusual circumstances or other information you believe may

help the committee evaluate your potential for success at the Law School. Because we don't conduct individual interviews, your personal statement is the best way for you to tell us what you would most like us to know about you.

3. Have the Law School Admission Council submit a copy of your JD-CAS report (which includes copies of transcripts from all U.S. undergraduate schools) to the Law School. If you earned your bachelor's (or equivalent) degree from a college or university outside the United States, its territories or Canada, you must use a credential evaluation service. We prefer use of the JD-CAS, but we also will accept evaluations from organizations that are members of the National Association of Credential Evaluation Services or Association of International Credentials Evaluators.
4. Arrange for the submission of two letters of recommendation. The letters should be from individuals such as college professors or others who can comment on your intellectual abilities and academic performance. If you have been out of school for a number of years, you may submit letters of recommendation from an employer. Letters of recommendation should be sent directly to the Law School Admission Council. Additionally, two Law School Admission Council evaluations are recommended but not required.

Transfer applicants

A transfer applicant must have completed all of the first-year day or evening courses required by his or her ABA-accredited law school. Transfer students are admitted to the fall term only. The application deadline for transfer applicants is July 1.

A transfer applicant's file will be ready for review when the Admissions Office has received all of the following:

1. The Law School application with an electronic signature for online applications or a paper application that is signed and dated.
2. An official transcript sent directly from the applicant's law school with all grades posted for the academic year.
3. A letter of good standing from the applicant's law school.
4. A JD-CAS report.

Guest student applicants for fall and/or winter terms

The transfer applicant requirements and procedures outlined above apply to a law student who wishes to enroll at Wayne Law for one or two terms as a guest student. Application deadline is July 1 for fall term and Nov. 1 for winter term.

In the case of a guest student, the letter of good standing also should include a statement granting permission for the applicant to attend Wayne Law for the semester(s) indicated and an agreement to accept credits earned at the Law School and any other requirements or limitations from the "home" law school.

The application deadline for fall is July 1. The application deadline for winter is Nov. 1.

Guest student for summer term

A student from another ABA-accredited law school may take one or two summer courses at Wayne Law provided the student is in good standing and receives permission from his or her "home" law school. Application should be made by submitting the Law School summer guest application form. Application deadline is May 15 for summer term.

Law (LL.M. Program)

Lawyers who already have received a J.D. degree from an accredited U.S. law school or an equivalent degree in another country and satisfy Wayne Law's LL.M. admissions criteria are eligible to undertake advanced legal studies for a master of laws (LL.M.) degree at Wayne Law.

Majors

Domestic and international students seeking specialized legal knowledge and skills may undertake an LL.M. degree with a major in one of the following substantive law areas:

- Corporate and finance law
- Labor and employment law
- Taxation

International students who seek a general understanding of the U.S. legal system to enhance their home country practice may undertake an LL.M. degree with a major in U.S. law.

Degree requirements, courses, scheduling

The requirements and expectations for the LL.M. degree are set forth in the Master of Laws Academic Regulations (law.wayne.edu/llmregs), which should be read in conjunction with the Wayne Law Academic Regulations (law.wayne.edu/academicregs).

The LL.M. curriculum includes day and evening courses taught by nationally recognized faculty and expert practitioners. Each LL.M. major requires that a student take specified core courses and allows a student to select electives from a large list of law courses approved for credit toward that particular major. In addition, LL.M. students majoring in one of the substantive law areas may select electives from among approved courses for their majors in other university departments or schools, such as business, finance and industrial relations. (Certain restrictions apply if equivalent courses are offered in the Law School in the same academic year.) LL.M. students other than those majoring in U.S. law also must complete a master's thesis, written and researched in collaboration with a faculty adviser, as the capstone of their studies.

Courses are offered during three terms with the broadest offerings in the fall semester (beginning in late August) and winter semester (beginning in January). Additional courses are offered in the summer/spring term (beginning in mid-May). Course scheduling changes from year to year depending on faculty teaching commitments, but tentative schedules for two-year cycles are available on the website so that students can plan their pathways to the degree. Students should consult with the LL.M. program director and faculty in their major areas to determine reasonable schedules of courses.

Although students may initiate their LL.M. degree studies in the winter semester, students are encouraged to enroll in the fall semester so they can participate in the fall orientation program for new students (generally offered in the week prior to the commencement of the fall semester) and register for core courses (such as Taxation for tax majors, Corporations for corporate and finance law majors or Survey of U.S. Law for U.S. law majors) that may not be offered in the winter semester and are often prerequisites for more advanced study.

LL.M. students are permitted to take up to six years to complete their degree. Full-time students usually can complete their LL.M. coursework in one year (often including work on the master's thesis over the summer), while part-time study generally requires two or more years.

Admission requirements

The basic requirement for admission to the LL.M. program is a demonstration of sufficient ability to be a successful student. This ability may be demonstrated by a record that includes the following:

- 1) A J.D. (or LL.B.) degree from a law school that is approved by the American Bar Association and is a member of the Association of American Law Schools.
- 2) A J.D. (or LL.B.) degree from a law school that is approved by the American Bar Association but is not a member of the Association of American Law Schools, but only if the applicant has compiled a distinguished academic record at that law school.
- 3) The equivalent of a J.D. or LL.B. degree from a law school outside the United States at which the applicant compiled a distinguished academic record. Applicants must receive a score of 600 or above on the Test of English as a Foreign Language (TOEFL), or 250 or above on the computer-based TOEFL, or 100 or above on the internet-based TOEFL, or 7.0 or above on the International English Language Testing System (IELTS) exam, although a waiver of this requirement may be granted based on other evidence of English language competency. Individuals are ineligible for admission to the United States Law LL.M. Program if they have received a J.D. degree from a U.S. law school.
- 4) In extraordinary cases, the Graduate Committee, on the recommendation of the director of graduate studies, may admit to the LL.M. degree program an applicant who has graduated from a United States law school that is not approved by the American Bar Association if the applicant has been admitted to practice without limitation in one of the states of the United States and has clearly demonstrated by experience, academic performance and other qualifications the ability to perform well in the LL.M. program. The director of graduate studies shall sign and place in the student's file a statement of the considerations that led to the decision to admit the applicant.

Each state applies its own criteria for allowing applicants to take the bar examination and for admitting attorneys to practice law. Completion of the LL.M. degree does not qualify a student to apply for permission to take the bar exam in every state. Lawyers from other countries seeking to practice law in the United States should obtain information regarding the requirements for admission to the bar in the state(s) in which they wish to practice.

How to apply

Detailed instructions for applying are included in the Application process overview at <http://wayne.edu/admissions/graduate/applying/app-instructions>.

Important: Among the required documents are "official transcripts." Official transcripts are those issued directly by your previous institution. They usually include a school imprint, seal, or original signature and stamp of the registrar or senior school official. Transcripts cannot be transmitted via the applicant and must be sent by the institution to Wayne State University and cannot read "issued to student." Electronic transcripts will be accepted if they are delivered securely from the registrar of the issuing institution directly to the Office of Graduate Admissions.

Specific questions about the program may be directed to the director of graduate studies by email to llmprogram@wayne.edu.

LL.M. application deadlines are:

- Nov. 1 - winter term
- March 15 - spring/summer term
- July 1 - fall term

Applicants from abroad are encouraged to apply substantially earlier to allow sufficient time to obtain the necessary visa and other documents.

Tuition, Financial Aid and Scholarships

Tuition and fees

Tuition and fees cited are in effect as of the publication of this bulletin and are subject to change at any time without notice by action of the WSU Board of Governors.

TUITION FOR J.D. AND LL.M. PROGRAMS:

For 2015-16, tuition and fees are as follows:

- Resident tuition - \$937.95 per credit hour
- Non-resident tuition - \$1,030.70 per credit hour
- Registration Fee - \$274.60 per semester
- Student Service Fee - \$47.45 per credit hour

NOTE: J.D. And LL.M. students who elect graduate-level courses in other University schools and colleges pay regular graduate resident or nonresident fees, see Tuition and Fees.

For additional information regarding fees, payment of tuition, and residency see statements in the General Information section of this Bulletin, beginning under Tuition and Fees.

Financial aid

Wayne Law students who want to be considered for financial aid must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA must be completed every year at fafsa.ed.gov. It is required to determine eligibility for federal student loans and the federal work-study program. New students don't need to wait until admission acceptance to submit the form. Parent information isn't required for J.D. or LL.M. students.

The FAFSA becomes available Jan. 1 for the upcoming school year. However, students are strongly encouraged to use the IRS Data Retrieval option to file the form. The IRS Data Retrieval tool will immediately upload tax data to the FAFSA. This tool cannot be used until one to two weeks after electronically filing a tax return. List the WSU federal code, 002329, in the school release section on the FAFSA. Your application information will be electronically transmitted to the Wayne Law Office of Student Financial Aid. You can check the status of your aid application, awards and outstanding requirements in academica.wayne.edu. You will receive financial aid correspondence via your WSU email address. Activate your WSU email account as soon as you receive an AccessID from the Admissions Office.

Visit law.financialaid.wayne.edu for more information about financial aid programs and resources. Also available on the site are financial aid FAQs, forms, a financial aid checklist and details about the various types of financial aid.

Scholarships

Last year we disbursed more than \$5.1 million in merit and need-based scholarships.

Scholarships for incoming students

Wayne Law is committed to providing an affordable legal education and consistently has offered the lowest tuition rates of any law school in the state.

Wayne Law offers a wide range of scholarships, including those that offer up to full tuition. Millions of dollars in merit- and need-based scholarships are provided to help cover tuition expenses, making Wayne Law the most affordable law school in Michigan.

When you submit your Wayne Law admissions application and file a Free Application for Federal Student Aid (FAFSA), you're automatically considered for generous scholarships for new students. No separate application form is required for these scholarships.

Scholarships for continuing students

Wayne Law offers scholarship opportunities for continuing students. For more information about these awards and scholarships, visit law.wayne.edu/scholarships or call the scholarship office at 313-577-3996.

Student Services

Career Services

Career Services provides comprehensive career planning assistance through individual counseling, mock interviews, networking receptions, on-campus recruitment programs, panel presentations and skills workshops. We also maintain an online job bank that allows our students and graduates to search for full-time, part-time and summer employment opportunities.

Our goal is to help you market yourself confidently and professionally throughout your career and develop lifelong strategies for professional advancement.

With the Law School's urban location and proximity to law firms, courts, government offices and nonprofit agencies, our students have a wide variety of employment options. Among graduates of the class of 2014, 86.3 percent were employed within 10 months after graduation.

About 60 area law firms participate in Wayne Law's on-campus interview program annually.

For more information about Career Services, visit law.wayne.edu/careers.

Student Affairs

Student Affairs is a one-stop resource dedicated to assisting you and answering all your needs - academic, personal or professional. Typical inquiries from students include questions about academic program planning, academic success and bar preparation programming, Americans with Disabilities Act accommodations, character and fitness, dual degree options, group workshops, health insurance and student life. All students are encouraged to visit Student Affairs upon arrival at the Law School.

In addition to the resources offered by Student Affairs, you also can take advantage of encouragement and assistance from peers and advisers through a number of student organizations. More than 30 student organizations add greatly to the quality of life at the Law School by organizing social events, sponsoring speakers and debates on topics of current interest, volunteering their time to public service and collaborating to produce programs with area practitioners.

For more information about Student Affairs, visit law.wayne.edu/studentaffairs.

Alumni Activities

Alumni Affairs

The Office of Development and Alumni Affairs helps our more than 11,000 alumni stay connected to Wayne Law and to each other.

Wayne Law alumni get involved and play an active role in the life of the Law School by:

- Attending and participating in alumni events
- Sharing expertise with student organizations
- Joining reunion host committees and attending reunions
- Participating in Career Services programs, such as mock interviews or panel discussions
- Serving as judges for various student legal competitions
- "Staying connected through the Law School's Raising the Bar monthly e-newsletter, The Wayne Lawyer twice-yearly magazine and Facebook, Instagram, LinkedIn, Twitter and YouTube

For more information, visit law.wayne.edu/alumni.

Board of Visitors

Distinguished Wayne Law alumni and prominent members of the legal community provide guidance and expertise to the dean and the Law School through their service on the Wayne Law Board of Visitors. Through their guidance and advice they work to advance the quality and standing of the Law School.

Law Alumni Association

The Law Alumni Association is an independent organization of the graduates of Wayne State University Law School. Governed by graduates who serve as the executive committee and officers, the organization provides service to the Law School and its graduates through social events and support projects.

Law Courses (LEX)

For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6100 Civil Procedure A. Cr. 3

Structure of the judicial system in the United States and the process of civil litigation from the commencement of an action through appeal. Subjects considered include jurisdiction, the relationship between state and federal courts, pleading, discovery and other pre-trial devices, trial and appellate review. (Y)

6101 Civil Procedure B. Cr. 3

Structure of the judicial system in the United States and the process of civil litigation from the commencement of an action through appeal. Continuation of LEX 6100. (Y)

6200 Contracts A. Cr. 3

General principles of the law of contracts; definitions of contract; illegality, mistake, frustration, the parol evidence rule; performance and breach; rescission; repudiation and discharge. Remedies, including damages, specific performance, injunction and restitution. All topics considered from viewpoints of both common law and statute. (Y)

6201 Contracts B. Cr. 3

General principles of the law of contracts; definitions of contract; illegality, mistake, frustration, the parol evidence rule; performance and breach; rescission; repudiation and discharge. Remedies, including damages, specific performance, injunction and restitution. All topics considered from viewpoints of both common law and statute. Continuation of LEX 6200. (Y)

6300 Criminal Law. Cr. 3

General doctrines of criminal liability as they relate to the moral and social problems of crime; definitions of principal crimes and defenses to criminal prosecution, both common law and statutory; limitations on the use of criminal sanctions. (Y)

6400 Legal Research and Writing. Cr. 2 (4 req.)

Analysis of legal problems and the use of legal materials, through discussion, written assignments, and personal conferences. Preparation of an appellate brief and oral argument on a selected civil or criminal case before a court composed of faculty or members of the local bench and Bar. (Y)

6500 Property. Cr. 4

Basic course in real property, which will include selected materials from some of the following areas: historical introduction to real property; personal property transfers by gift, finding, adverse possession; modern law of possessory estates, including non-freehold estates, and landlord and tenant relationships; concurrent estates; restraints upon the use of land; conveyancing and effects of the Recording Acts. (Y)

6600 Torts. Cr. 4

Legal principles underlying wrongs not based on contract, arising from intentional or negligent conduct and including strict liability; the nature of particular wrongs, including injuries to the person, to reputation, to real or personal property, and to interference with business or family relations. (Y)

6700 Constitutional Law I. Cr. 3

Problems arising under the Constitution of the United States, with particular attention to the nature of judicial review in constitutional cases and to the role of the judiciary in umpiring the federal system. (Y)

6800 Professional Responsibility and the Legal Profession. Cr. 2

Conflicts of interest; the attorney's standard of care, fiduciary duty, the organization of bar associations, the attorney's duty to the court and the community; the attorney's responsibilities in trial, and in unilateral actions and negotiations. The duty of disclosure of adverse data, the development of group legal services, and of legal services to the poor, and the responsibility of the Bar in these areas. (Y)

6900 The Regulatory State. Cr. 3

Introduction to statutes and agency decisions and the central role they play in modern government. Nature of statutes and agency regulations, how they are generated, and how they are interpreted and applied. Justifications for modern regulation, the modern administrative state, the incentives that influence the behavior of the various actors, and the legal rules that help structure the relationships among legislatures, agencies and courts. (Y)

7001 Accounting for Lawyers. Cr. 2

May not be taken for credit by those who completed two or more undergraduate accounting courses or a graduate course in financial accounting. Basic concepts of bookkeeping and generally-accepted accounting principles; background to help read and interpret financial statements; auditor's role and accounting issues that arise in business planning, in litigation, and in managing financial investments. (Y)

7006 Administrative Law. Cr. 3-4

Functions and behavior of administrative agencies; constitutional and statutory constraints on agency operation. Government formulating and enforcing policy, administering of public benefit programs, and awarding of licenses. (Y)

7009 Advanced Bankruptcy. Cr. 3

Prereq: LEX 6500, LEX 7051, LEX 7756. Students will become familiar with the chapter 11 business reorganization process. By reviewing mock bankruptcy schedules, and cash collateral, relief from stay, and chapter 11 plan and disclosure statement proceedings, the students will develop the necessary substantive knowledge and hone their negotiation and trial advocacy skills. A problem-oriented approach will be used, with students and instructors participating in resolving situations commonly encountered in a business bankruptcy. (Y)

7011 Agency and Partnership. Cr. 2-3

The relationship of principal and agent; the rights, duties, powers, and fiduciary responsibilities associated with acting for the benefit of others. The legal principles associated with conducting business in the partnership form under the Uniform Partnership Act. When offered in a three-credit version, class will also include extensive treatment of Limited Liability Companies and Limited Liability Partnerships and other alternative forms of unincorporated business associations. (Y)

7014 Taxation of Corporations: Acquisitions and Restructuring. Cr. 4

Prereq: LEX 7821 or LEX 7061 (second semester of the two-semester course can be taken concurrently). Satisfies the professional skills requirement. Explores the tax rules for corporate stock or asset acquisitions and restructurings (including reorgs, spins and loss carryovers), and S corporations or consolidated returns through the lens of a simulated firm tax group working on a series of client projects (using an actor as client). Each student will work on at least two team projects during the semester, preparing written and oral presentations for, and briefing the client on, issues related to the team project topic. Team projects include: prepping a client for and negotiating an acquisition, drafting a private letter ruling request, preparing an internal memorandum outlining the pros and cons of restructuring choices, researching and writing a tax opinion letter, and outlining advantages of various entity choices for future transactions. (Y)

7015 Advanced Torts. Cr. 2

Focus on torts not involving physical injury, such as misrepresentation, defamation, invasion of privacy, interference with business relations, and misuse of legal procedure. (F,W)

7016 Alternative Dispute Resolution. Cr. 2

Forms of non-trial dispute resolution: arbitration, mediation, and negotiation—their various permutations and substantive applications. Factors affecting choice between dispute resolution processes, differences in design and structure, relative costs, quality of participant performance, accountability for results, privacy of proceedings, role of legal norms and lawyers, due process considerations, availability of judicial review; tactics and strategies employed in arbitration, mediation and negotiation. (B)

7021 American Indian Law. Cr. 3

Unique status of native Americans and tribes in the American legal system. Relationship between tribes and federal and state governments as outlined by the U.S. Constitution; federal treaties and statutes, and federal common law, as well as the unique rights and obligations of individual native Americans under federal law. (I)

7023 Animal Law. Cr. 3

Animal law encompasses human-animal interactions and evaluation of competing interests within the context of traditional areas of law (e.g., veterinary malpractice, expansion of anti-cruelty statutes to include farm animals, damage for death of / injury to companion animals, disputes over custody of companion animals in divorce or separation, landlord-tenant housing disputes, the inclusion of animals in wills and trusts, and constitutional issues such as standing). It also encompasses the current legal status of animals as living property and explores whether this status is antiquated and needs re-evaluation to reflect societal beliefs and values. Course will consider these traditional areas of law, groundbreaking laws enacted by other countries, as well as theories for the expansion of consideration and rights. (Y)

7026 Antitrust. Cr. 2-4

Government control of trade practices and industrial market structures which inhibit the competitive process; monopoly, oligopoly, mergers, cartel practices, distribution arrangements, resale price control, franchising patent licensing, foreign commerce and price discrimination under the Sherman, Clayton, Federal Trade Commission, and Robinson-Patman Acts. (Y)

7045 Banking Law. Cr. 2

Legal environment of the banking industry. Topics include: history and scope of banking in the United States, statutory requirements for chartering and operating banks, regulatory oversight at the Federal and State level, commercial and consumer lending, deposit insurance, lender liability, bank failures, and recent developments in banking regulation and legislation. (Y)

7051 Bankruptcy and Creditors' Rights. Cr. 3

Prereq: LEX 6500; prereq. or coreq: LEX 7756. Problems arising when debtors are in financial difficulty, including the principal state remedies of unsecured creditors such as attachment, garnishment, and enforcement of judgments; Chapter 7 bankruptcy liquidations; Chapter 13 wage-earner plans; and Chapter 11 reorganizations. (Y)

7058 Bioethics and the Law. Cr. 3

Role of law in shaping, analyzing and resolving conflicts that arise in the interplay between medicine, biotechnology, ethics, social history, and cultural evolution. Topics include reproductive rights and genetic technologies, maternal fetal decision making, medical decision making, definitions of death, death and dying decisions, regulation of research on humans, interdisciplinary decision making, and access to health care. (I)

7060 Business Planning. Cr. 4

Prereq: LEX 7156, 7816, 7146; LEX 7151 or 7203 or 7821; LEX 7761. Not open to students who are taking or have taken LEX 7603.

Problems involving common business transactions, including choice of entity to conduct business; organization, financing, and operation of a corporation; restructuring of business enterprises. Corporate, tax, securities law, and financial matters; role of business lawyer in counseling and planning business transactions. Relationship between the corporation and its shareholders. (Y)

7061 Business Planning: A Transactional Approach. Cr. 4-8 (8 req.)

Prereq: LEX 7156 and 7816. Not open to students who have taken JDC 7280, LEX 7821, 7761, 7146, or 7151. Credit only on completion of two terms. Organizational problems for the closely-held and the public corporation; operational problems such as stock distributions, issuance of new securities, constructive dividend problems, and stock redemptions; corporate acquisitions, other reorganizations, contested take-overs, and liquidation and termination problems. (Y)

7070 Child Abuse and Neglect. Cr. 2

Introduction to state and federal laws governing the child protection and child welfare systems. Topics include: defining abuse and neglect; mandatory reporting; child protection investigations and limitations thereon; emergency removal and less burdensome alternatives; adjudicatory hearings and proof of use and neglect; dispositional hearings and powers; permanency planning and long-term placements; termination of parental rights; right to counsel; duties of lawyers for children in abuse and neglect cases. (Y)

7075 Child, Family, and State. Cr. 3

Aspects of children in legal system. Legal relationship between children, their parents, and government (federal, state, local, and tribal); rights of these parties and relationships between them. Education, medical care, children's rights, concept of legal parenthood, parental rights (and termination thereof), adoption, juvenile justice process. Concentration on constitutional and policy analysis as opposed to examination of rules and regulations in the different areas. Students graded on class participation, several short written assignments, and take-home final examination. (I)

7111 Communications Law. Cr. 2-3

Government regulation of radio, over-the-air TV, cable, direct satellite broadcasting, and other electronic mass media technologies. Licensing; content control, respective roles of the regulator and the marketplace. (B)

7118 Complex Litigation. Cr. 2

Prereq: LEX 6100 and LEX 6101. This course builds upon the framework and core concepts in Civil Procedure A and B and will delve more deeply into issues in complex litigation, including a thorough examination of class action rationale and practice, other types of multi-party litigation, multi-district litigation, and mass tort cases. Examination of theory and practice of class actions and complex litigation. Class participation, production of filing-quality pleadings, and successful completion of a final exam are expected. (Y)

7121 Conflict of Laws. Cr. 3

Principles, rules and methods thought to underlie the resolution of multi-state problems. Jurisdiction and enforcement of judgments of other states. (Y)

7126 Constitutional Law II. Cr. 4

Prereq: LEX 6700. Not open to students who have taken or are currently taking LEX 7829. Individual rights under the Constitution of the United States. Freedom of speech, religious freedom and equal protection. (Y)

7127 Constitutional Litigation. Cr. 3

Prereq: LEX 6700. Jurisdictional and constitutional basis and history of claims by individuals against government officials for constitutional violations. Limits and constraints on actions of officials and policies of governments. (Y)

7128 Consumer Law. Cr. 2-3

Rights and obligations of consumers. Regulation of the consumer marketplace: Federal Trade Commission Act, Truth in Lending Act, Fair Credit Reporting Act, Equal Credit Opportunity Act, Fair Debt Collection Practices Act, and lemon laws. Interpretation, enforcement, role of administrative agencies. (I)

7136 Copyright Law. Cr. 3

Prereq: LEX 6500 Law of copyright and related doctrines protecting literary, musical and artistic works. Nature of rights and kinds of works protected, doctrine of fair use, pre-emption problems, and problems posed by new technologies. Emphasis on 1976 Copyright Act and its relation to issues such as home videotaping, photocopying and non-profit performance of protected works. (Y)

7141 Corporate Finance. Cr. 3

Prereq: LEX 7156 Economic and legal problems arising in connection with financing decisions of publicly-held corporations, including valuation of the enterprise and its securities, determination of securities structure and dividend policy, capital structure (including problems relating to debt), and acquisition strategies. Federal securities regulations and selected topics. (Y)

7156 Corporations. Cr. 2-4

Relationships between owners and directors of a corporate enterprise; different types of stock ownership and the corresponding rights in profits and control; consolidation and merger; distinctive features of the closed corporation. (Y)

7160 Criminal Pretrial Advocacy. Cr. 3

Prereq: LEX 6300. The court rules, statutes and Constitutional principles implicated in pre-trial criminal advocacy. Topics include arraignment, discovery, pre-preliminary examination, preliminary examination, motion practice, and pleas. Structural rules and principles of the process; the practical application of those rules and principles. Students participate in mock arguments, client meetings, and witness interviews, and draft the documents that would be filed in a criminal case. (Y)

7161 Criminal Procedure: Investigation. Cr. 3

Prereq: LEX 6700 recommended. Constitutional requirements for arrests, searches, seizures, electronic surveillance, and interrogations. (Y)

7166 Criminal Procedure: Adjudication. Cr. 3

Prereq: LEX 6700 recommended. Operation of the criminal justice system from the defendant's first appearance in the court through the trial, and to post-conviction remedies, including a study of bail, the preliminary hearing, the grand jury, voir dire, discovery, double jeopardy, joinder, and habeas corpus. (Y)

7172 Developing the Commercial Real Estate Project. Cr. 3

Prereq: LEX 6500. Real estate development: laws and requirements affecting the development of commercial properties, including the law of contracts; real estate interests, such as mortgages, easements and encumbrances, zoning laws, environmental laws, building codes and requirements and other regulatory laws. Topics include: purchase and sale contracts, title and survey matters, due diligence investigations, closing processes, construction, financing, and leasing. (Y)

7201 Education Law. Cr. 3

Survey of education law with emphasis on public education. Historical development of education law in the U.S. as well as topics of current interest: tenure, academic freedom, school discipline, school financing, home-based schooling, state regulation of private schools, church-state relationships, and desegregation in public education. (I)

7204 Elder Law. Cr. 2-3

Legal needs of growing elder population: housing, health care delivery, end-of-life decisions, elder abuse. Legal, social, political contexts. (Y)

7205 Employee Benefits Law. Cr. 3

Survey course provides students with a strong grounding in the major laws affecting employment-based benefits plans, including the Employee Retirement Income Security Act (ERISA) and the Internal Revenue Code. Retirement plans (including traditional defined benefit plans and common types of defined contribution plans such as 401(k) plans). and welfare benefit plans (including health and life insurances and disability plans). (Y)

7216 Employment Discrimination. Cr. 2-3

Federal constitutional and statutory guarantees of freedom from invidious discrimination in employment. Thirteenth and Fourteenth Amendments, Title VII of the Civil Rights Act of 1964, the Reconstruction Civil Rights Acts, 42 U.S.C. 1881, et seq., the Equal Pay Act of 1963, and the Age Discrimination in Employment Act of 1967. (Y)

7221 Employment Law. Cr. 2-3

Legal rights and responsibilities of employees (excluding rights provided by anti-discrimination laws and the NLRA); statutory and common-law limitations on the employer's right to discharge; protection of employee privacy and reputation; laws governing wages and hours, occupational safety, unemployment compensation, workers' compensation, and employee benefits. (Y)

7226 Entertainment Law. Cr. 2-3

Legal and business issues in the entertainment industries, including those related to sound recordings, music publishing, literary publishing, films, television, the Internet and other new media. Readings and discussions: representing talent, drafting and negotiating contracts, remedies for breaches, and rights of publicity. How the entertainment industries and their economics work. (Y)

7228 Energy Law. Cr. 3

Introduction to energy law and regulation in the United States. Principles of rate regulation of public utilities and the division of jurisdiction between federal and state governments. Emerging trends such as promotion of energy efficiency and renewable energy. (This course does not cover traditional oil and gas law.) (Y)

7231 Environmental Law. Cr. 2-3

Environmental law in common-law, statutes, constitutional issues, administrative and international law. Coherent legal analysis of environmental problems and active legal remedies, rather than specialized instruction in pollution controls and the like. (Y)

7236 Equitable Remedies. Cr. 2-3

Survey of the equitable remedies available for the vindication of substantive rights, which includes injunctive and restitutionary relief as well as the general treatment of equitable relief in contract, tort and criminal actions. (I)

7241 Estate, Gift and Inheritance Taxation. Cr. 2

Prereq: LEX 7816. Not open to students who have completed LEX 7246. Federal and state transfer taxes and income taxation of fiduciaries and beneficiaries. (Y)

7266 Evidence. Cr. 2-4

General principles relating to the proof of questions of fact in civil and criminal trials, including competency, relevancy, and materiality of evidence; judicial notice, presumptions; burden of proof; competency of witnesses, rules relating to examination and cross-examination of witnesses; weight and sufficiency of evidence. (Y)

7301 Family Law. Cr. 2-3

Entry into marriage; legal treatment of couples in marital and non-marital relationships; divorce, including custody, alimony and property distribution, and the role of the attorney; procreation; illegitimacy; rights and responsibilities of children and parents with respect to each other and to the state; child abuse and neglect; and adoption. When offered for two credits, considerably less time is devoted to children's issues. (Y)

7306 Federal Courts and the Federal System. Cr. 2-3

Prereq: LEX 6700. Interrelationship of state and federal law in our legal system from the point of view of the federal courts and the Congress. Emphasis on the politics, history, and philosophy of federalism, rather than on procedures. (B)

7311 Taxation of Partnerships. Cr. 2-3

Prereq: LEX 7816. Tax treatment of partnerships, including multiple-member LLCs. Topics include: transfer of property to partnerships, operation of a partnership, distributions of property, transactions between partners and partnerships, transfers of interests in partnerships, termination of partnerships; some coverage of taxation of Subchapter S corporations, partnership agreement provisions, related topics. (Y)

7326 Foreign Direct Investment. Cr. 3

Prereq: recommended for second- or third-year law students; prior exposure to international law, international business transactions, international commercial arbitration, or international trade also recommended. History of, and policy justifications for, protection of foreign direct investment (FDI); the substantive international law regarding the protection of FDI; the process for resolving disputes between foreign investors and host states through international arbitration; and critiques of the existing legal framework for the protection of FDI. (Y)

7353 Health Care Organizations and Finance. Cr. 3

Legal responses to problems of health care costs, access and financing from both public and private perspectives. Registration of insurance and managed care, developments in federal ERISA preemption, changing business structures, and antitrust enforcement. Medicare and Medicaid financing, rules prohibiting self-referrals, and standards policing fraud and abuse. (Y)

7354 Health Care Quality, Licensing and Liability. Cr. 3

Legal responses to problems of health care quality and medical errors. State licensing of health care professionals and institutions, self-regulation, and tort liability for physicians, hospitals and managed care organizations. Basic introduction to health care institutions, the particulars of malpractice litigation, and proposals for tort reform. (Y)

7360 Health Policy: The Firm, the Market and the Law. Cr. 3

Prereq: LEX 6200, LEX 6600. Exploration of problems of health law and policy from perspective of modern institutional economics, including Coase's theory of the firm and Ken Arrow's work on uncertainty and the welfare economics of health care. Trends towards prepayment, vertical integration and development of managed care networks. Legal questions include constructing a competition policy, defining physician rights and responsibilities within an integrated firm structure, significance of social norms, and patient protection in a world of managed care. For students interested in law and economics and contemporary policy analysis, as well as students interested in the health care industry. (Y)

7371 Immigration and Nationality Law. Cr. 2-3

Immigration, its history and development; entry into the United States, and alien status and adjustment to status; deportation and relief from deportation; exclusion and relief from exclusion; nationality and citizenship. (B)

7381 Insurance Law. Cr. 2

General principles, including indemnity, subrogation, reinsurance, insurable interest and classification of risks such as personal business and legal liability. Michigan insurance law and "no fault" legislation examined; contractual rights and liabilities of the insurer, insured, and third party beneficiaries. (I)

7384 International Commercial Arbitration. Cr. 3

Prereq: recommended for second- or third-year law students; prior exposure to international law, international business transactions, international commercial arbitration, or international trade also recommended.

Course follows the life cycle of an international commercial arbitration, including: drafting and enforcing arbitration agreements; appointment and challenge of arbitrators; conduct of the proceedings; drafting of awards; review and enforcement of awards by courts at the seat of arbitration and beyond. (Y)

7401 International Aspects of U.S. Taxation. Cr. 2-3

Prereq: LEX 7816. United States taxation of non-resident aliens and foreign entities, foreign tax credit, determination of source of income, impact of tax treaties, earned income exclusion, tax effect of mode of operation and country of incorporation, and statutory and non-statutory tax devices available for international operations. (B)

7404 International Business Transactions. Cr. 3

Practical legal problems connected with doing business abroad; counseling on foreign law. (Y)

7406 International Finance: Transactions, Regulation, and Policy. Cr. 3

Prereq: background in economics or finance, or a course in corporations, corporate finance, or securities regulation, recommended. Legal problems associated with flow of capital across national borders. Topics include international financial transactions, regulation of international capital markets, regulation of international banking and financial services, emerging market debt crisis, role of International Monetary Fund, reform of international financial system. (Y)

7407 International Intellectual Property Law. Cr. 3

Prereq: LEX 7136, LEX 7656 or LEX 7831. Addresses the legal issues surrounding the protection of intellectual property rights in a globalized commercial environment. The course centers on the study of the principal multilateral treaties that protect intellectual property rights: the Berne Convention on copyrights, the Paris Convention on trademarks and patents, and the Agreement on Trade-Related Aspects of Intellectual Property Rights (iTRIPS). The course also looks at the intellectual property component of the North American Free Trade Agreement, and a variety of legislative materials from the European Union. (Y)

7408 International Law. Cr. 3

Basic legal concepts applied by international tribunals and courts of the United States to the relations between independent nations. The nature and sources of international law; the use of treaties; international organizations; and practices respecting recognition, territory, nationality and jurisdiction. (Y)

7409 International Litigation. Cr. 3

Issues arising in civil cases in American courts in which international parties, evidence, and issues are present. Subjects include personal jurisdiction, service of process abroad, conducting discovery abroad, suing foreign sovereigns and governmental officials, forum non conveniens and international arbitration. (Y)

7410 International Organizations and Public Health. (MDR 7410) Cr. 3

Prereq: LEX 6200 and LEX 6600. Course has two objectives: first, to give students a working understanding of the structure, function, and mission of the international organizations that increasingly impact modern life: the WTO, EHO, World Bank, IMF, and UN; second, to explore the effects of globalization on public health. Topics include: WHO control of infectious diseases such as SARS, impact of the WTO on pharmaceutical pricing of AIDS drugs and genetically-modified foods, international conventions for tobacco control, and influence of World Bank and IMF privatization requirements on health sector reform in developing countries. (Y)

7411 International Protection of Human Rights. Cr. 2-3

The main international and regional legal instruments and procedures for the protection of human rights. (I)

7413 International Prosecution of State Actors. Cr. 3

Legal and political aspects of new processes by which one-time state officials (such as former Yugoslav President Slobodan Milosevic, former Chilean dictator Augusto Pinochet, and former East German leader Egon Krenz) and their followers have been subjected to prosecution in international and foreign legal systems. Basic elements of transnational criminal law; controversial questions of principle and policy such as United States opposition to the new International Criminal Court; concerns about retroactive punishment; respect for amnesties that have contributed to ending civil conflicts. (Y)

7414 International Legal Research. Cr. 1 (2 req.; max. 4)

Prereq: written consent of instructor. Fundamentals of research in public international law. In connection with Jessup International Law Moot Court Competition, students review structure of international legal institutions, nature of the materials they produce, and the unique way these materials are indexed and cataloged. Focus on how these materials can best be used in legal advocacy; emphasis on effective writing and oral argument. (Y)

7418 International Trade Law. Cr. 3

Regulation of international trade relations. Focus on Law of the World Trade Organization (WTO) and its interaction with domestic regulation of international commerce. (Y)

7419 Interviewing and Counseling. Cr. 2-3

Prereq: completion of all first-year courses. Not open to students who have taken or are taking LEX 8604 or LEX 8641. This course introduces students to interviewing and counseling theory, and helps students develop skills needed to effectively and efficiently interview and counsel clients in both litigation and transactional matters. Topics addressed and skills developed include active listening, phrasing and sequencing questions, eliciting timelines, probing for details, clarifying objectives, identifying options and discussing their consequences, and helping clients make final decisions. The course makes extensive use of role-playing exercises. Each student conducts a full-length simulated interview at mid-semester, and a full-length simulated counseling session towards the end of the semester. When offered for three credits, the course will include a forty-hour fieldwork component in which each student will interview and counsel actual clients who are seeking free legal help from one of the Law School's clinics or from a faculty-approved public interest externship field placement. (Y)

7420 Introduction to Intellectual Property. Cr. 3

Survey of general principles of copyright, patent, and trademark law, as well as related state law doctrines. Questions of subject matter, scope of protection, infringement, defenses and remedies. Practical and theoretical commonalities and distinctions among these systems of intellectual property. General overview for the non-specialist and useful grounding for those interested in pursuing additional intellectual property courses. (Y)

7422 Islamic Law. Cr. 3

This course will survey the universe of Islamic law from the vantage point of a beginner to the field. The readings and class discussions will broadly cover the following: (1) classical Islamic jurisprudential theory, (2) substantive aspects of family and criminal law, (3) the intersection of Islamic law and the American legal system, and (4) the place of American-Muslims in the framework of American constitutionalism. Because law *in* of any variety *is* does not operate in a vacuum, discussions will proceed with reflection on prevailing sociopolitical realities such as global terrorism, jihadist movements, Islamophobia, misogyny, and racism. The student will also be asked to draw from the offerings of philosophy, critical race theory, postcolonial studies, security studies, and feminism. The aim is for course participants to develop a more textured understanding of Islamic law and to be better positioned to understand the debates surrounding its relevance and practice. (B)

7424 Introduction to the Legal System of the United States. Cr. 2-3

Not open to J.D. students. General introduction to the institutions and processes involved in lawmaking and legal interpretation in the United States, with a focus on lawmaking at the federal level. Topics include: federal legislative process, precedent and the common-law method, federal administrative rule-making, separation of powers, and judicial review. Sources of law produced by these processes and the development of research strategies with respect to these sources. Course is also designed to provide foreign LL.M students (all of whom write a Master's Essay to complete the LL.M. program) with an overview of the principal forms of legal scholarship in the American academy. (Y)

7426 Jurisprudence. Cr. 2-3

Analysis of important legal notions such as law, sanction, rule, and sovereignty; relations between law and morals as seen particularly in the development of natural law and legal positivism and in the development of the notion of legal responsibility. (Y)

7435 Juvenile Delinquency. Cr. 2

Introduction to the juvenile justice system. Topics include: juvenile court jurisdiction over delinquents and status offenders; pretrial criminal procedure in the juvenile justice context; screening and diversion; pretrial detention; waiver of juvenile court jurisdiction; procedural rights at trial; dispositional decisions. (Y)

7495 Labor Arbitration. Cr. 2

Prereq: LEX 6100 (or equivalent) and LEX 6200. Arbitration is the primary form of adjudication outside the court system; this course emphasizes labor arbitration: disputes between employers and unions under collective bargaining agreements; but it also treats other forms of arbitration including employment, commercial and securities arbitration. (Y)

7501 Labor Law. Cr. 2-4

Legislative, administrative and judicial regulation of labor relations. The scope of national labor legislation; the protection of the rights of self-organization and the designation of bargaining agents; the negotiation and administration of the collective agreement; the legality of strikes, picketing and boycotts; employer interference with concerted activities; and the relations between unions and their members. (Y)

7506 Labor Law in the Public Sector. Cr. 2

State (and some federal) regulation of labor relations in the public sector. Establishment of representative status, negotiation and administration of the collective agreement, strikes and impasse resolutions. (B)

7511 Land Use. Cr. 2-3

Prereq: LEX 6500. Allocation of land use in the urban environment by both private agreement and governmental order. Problems involved in the development and effectuation of community planning; goals by means of conservation, clearance, and renewal; zoning, variances and exceptions; housing code enforcement, subdivision control, eminent domain; relocation. (Y)

7514 Law, Authority, and Resistance. Cr. 3

This course addresses, in both theoretical and practical terms, the relationship between legal and political obligation: When, if ever, do individuals have a moral obligation to obey the law because it is the law? What count as valid justifications of civil disobedience, conscientious refusal, or insurrection? When can governmental authority justifiably depart from the rule of law? When can individuals be held criminally accountable for egregious acts committed under unjust prior regimes? The course combines classics of the history of political thought with contemporary theoretical writings and contemporary discussions of topical questions. Particular attention will be paid to the special obligations of lawyers who are asked to validate immoral practices (e.g., enhanced interrogation methods in the Global War on Terrorism). (B)

7515 Law and Economics. Cr. 3

Not open to students who have taken LEX 8246. Application of economic analysis to the selection of legal rules. After brief introduction to foundational economic concepts, the course revisits the first-year curriculum (torts, contracts, property, criminal law) and demonstrates the pervasive influence of economic thinking in these foundational areas. Application of economics to a variety of legal topics, such as discrimination, business organizations, federalism, and definitions of justice. Course assumes no background in economics and requires no mathematical training beyond high school algebra. (B)

7516 Law of Elections and Political Organizations. Cr. 2-3

Ways in which law governing the political process in the United States affects and reflects power relationships. How law and other forces shape the structure of American political participation; alternative directions for American democracy. Class discussions, short assignments, final examination. (B)

7518 Law of Armed Conflict. Cr. 3

History and current state of the law governing recourse to force (*jus ad bellum*) and the law governing the application of force (*jus in bello*). Contemporary *jus ad bellum* topics include: prohibition of the use of force in international relations, self-defense, unilateral intervention in internal conflicts and humanitarian crises, as well as collective action relating to security and humanitarian crises. Contemporary *jus in bello* topics include: legal obligations relating to targeting, selection of weapons, status and treatment of prisoners, and protection of civilians during hostilities and occupation. (Y)

7520 Advanced Legal Writing: Legal Drafting. Cr. 3

Prereq: LEX 6400. Development of transactional drafting skills; focus on writing techniques most often assigned to summer interns and first and second year associates. (Y)

7536 Appellate Advocacy. Cr. 3

Prereq: LEX 6400. May not be taken on pass/no credit basis. Research and analysis of complex legal problems. Class discussion on advanced research, development of strategy, and organization and writing as an advocate. Students learn appellate procedure and write an appellate brief. (Y)

7581 Local Government Law. Cr. 2

Prereq: LEX 6500 Law as an instrument for governing urban areas. Distribution of decision-making power between private and public persons, between state and local governments and among various local governments. Local finance, decentralization, annexation and municipal incorporation. Exploration of possible reform by means of metropolitan government or federal assistance. The lawyer's role in formulating governmental policy in major urban complexes. (Y)

7590 Maastricht Exchange Program. Cr. 1-4

Students take courses offered in the Maastricht Exchange Program. (Y)

7603 Mergers and Acquisitions. Cr. 2-3

Prereq: LEX 7156 and 7816. Mechanics of an acquisition, including: (1) state corporate codes relevant to acquisitions, dissenting shareholder remedies, listing requirements, and federal security law affecting the mechanics (proxy, tender offers, public offerings); (2) successor liability, transfers of assets; (3) acquisition documents (confidentiality agreements, letters of intent, basic agreements, closing); (4) legal duties of board of directors and dominant shareholders (decision to sell or acquire, conflicts of interest, attempts to block takeovers, shareholder value); (5) disclosure requirements of federal and state securities law; (6) accounting and tax issues (definition of tax-free reorganization, accounting for mergers and acquisitions). (Y)

7604 Mock Trial Workshop. Cr. 2

Coreq: LEX 8721. LEX 7266 is highly recommended but not required. This course introduces students to basic evidence concepts (e.g. relevance, competency, impeachment, hearsay, authentication)

and helps student develop basic trial advocacy skills (e.g. how to develop persuasive case theories and themes, how to deliver opening statements and closing arguments, how to examine and cross-examine witnesses, how to lay a proper evidentiary foundation for testimony, how to introduce and use demonstrative evidence, how to refresh a witness's recollection, how to impeach a witness by using the witness's prior statements, how to make and respond to objections). The course consists of two skill-building workshops: a 4-day workshop offered during the week before upper-level classes begin in the fall, and a 2-day workshop offered over a weekend during the fall semester. The teaching format will include lecture, discussion of problems, demonstration and discussion of skills, and extensive simulation work in small groups. The course is graded on an Honors-Pass-Low Pass-No Credit basis. Students who have taken Trial Advocacy (LEX 7836) are not eligible to take this course, and vice versa. (B)

7605 Multistate Taxation in the Digital Age. Cr. 3

Not open to students who have taken former LEX 7771. Prereq: LEX 7816. Sale and use taxes and corporate and personal income taxes imposed by state and other sub-national governments, including Indian tribes. Constitutional limits on cross-border taxation under the Due Process Clause and the Commerce Clause. Methods for apportioning income among jurisdictions, from theoretical and practical perspectives. Special income tax and sales tax issues arising from electronic commerce. (Y)

7616 Negotiation. Cr. 2-3

Comprehensive examination of various legal principles that affect negotiation, such as rights assessment, custom and practice, rules of contract construction, concepts of condonation, proper and improper conditions, effective use of evidence in the negotiation process and legal strategies that affect outcome of negotiations. Taken for three credits this course also addresses contract drafting, collaborative lawyering, use of mediation in negotiation, multicultural negotiation, the law of settlement, enhanced processing of simulations, and contract drafting exercises. (T)

7631 No-Fault Insurance Law. Cr. 2

Prereq: LEX 6200, LEX 6600. Comprehensive review of Michigan's No-Fault Automobile Insurance Law, which governs all motor vehicle accidents in the State. Topics include: questions of coverage, medical and work loss benefits, coordination of benefits, exclusions, priorities, subrogation, and claims procedures. Negligence claims under the No-Fault Law also reviewed. (B)

7646 Patent Application Preparation. Cr. 2-3

Prereq or Coreq: LEX 7656. The mechanical steps of preparing a patent application, as related to recent decisions of the Court of Appeals for the Federal Circuit (CAFC) regarding claims interpretation. Lessons learned from case law in preparing an application. Jeffersonian ideals for the patent system and the latest Supreme Court patentability decisions. (Y)

7651 Patent Enforcement. Cr. 3

Prereq: LEX 7656. Unique aspects of patent litigation. Policy issues; practice considerations in enforcing patents. Issues in approaching a patent infringement suit (who can file; when and where to file). (Y)

7656 Patent Law. Cr. 3

Substantive patent and related trade secret law. Emphasis on nature of patent right; scope of coverage of patent system; issues of validity, infringements, inequitable conduct, patent-antitrust. Special issues relating to software, living organisms, and chemistry. Technical background not required. (Y)

7657 Patent Prosecution. Cr. 2-3

Prereq: LEX 7656. Art of writing patent applications; aspects of practicing before the Patent and Trademark Office (PTO). Rules and techniques for investigating what is legally considered the background of the invention (prior art). Introduction to basic claim drafting concepts, techniques for writing a written description (or specifica-

tion) of an invention. Effective response to PTO actions as defined by the Manual of Patent Examining Procedure (MPEP) and by the relevant case law. Inter partes post-grant proceedings and derivation proceedings available under the new America Invents Act. Ethics and licensing will be briefly covered. Course provides a good foundation for students who wish to take and pass the patent bar exam to become registered to practice before the PTO. (Y)

7659 Political Theory of Public Law. (PS 7580) Cr. 3

Legal restraints on exercise of public power as conceived in works of early modern theorists (e.g., Machiavelli, Locke, Montesquieu, and Madison), and as applied in constitutional arrangements that have emerged in a range of historical settings. Topics include: role of law in totalitarian political systems; emergency rule; comparative approaches to judicial review. (Y)

7660 Practicum in Dispute Resolution. (DR 7310) Cr. 3

Prereq: Written consent of Clinics Director required. Training in facilitative mediation with opportunity to practice skills in a variety of settings. Material fee as stated in Schedule of Classes. (Y)

7661 Commercial Systems. Cr. 2

Prereq. or coreq: LEX 7756. Capstone course for contracts/commercial curriculum; creation, transfer and enforcement of obligations, mostly in payment, transport and storage settings. (Y)

7666 Pretrial Advocacy. Cr. 3

Adversary strategy and practice skills in the pretrial stages of litigation. Preparation of pleadings, interrogatories, requests for admission and document production requests. Students negotiate settlement of disputes, draft and argue motions, and take and defend depositions. (Y)

7669 Privacy Law. Cr. 2-3

Covers the law of information privacy. Addresses the law and policy applying to the collection, use and disclosure of personal information. Relevant law includes state laws founded in tort and property, federal laws addressing specific privacy issues and constitutional limitations on government. Topics may include use of personal information by the media, government surveillance aimed at combating terrorism, the privacy of health care information, the collection and use of personal information by businesses, privacy in schools and at the workplace and international privacy issues. (Y)

7671 Products Liability. Cr. 2-3

Prereq: LEX 6600. Problems arising out of defective products. Warranty actions, strict liability in tort, damages, problem of proof, other topics. (B)

7676 Public Finance Law. Cr. 2

Legal principles involved in public finance transactions: municipal borrowing and debt; state law considerations: sources of authority for borrowing and repayment; effect of ultra vires borrowing, of procedural defects, municipal debt limitations, and other factors relating to power to incur municipal debt; traditional financing techniques; federal tax and securities law considerations; default and municipal bankruptcy; municipal bond market. (Y)

7680 Public Health Law. Cr. 3

Prereq: LEX 6600, LEX 6700. Legal foundations of American public health system; struggle between individual liberties and governmental interest in providing for collective health and well-being of citizens. (Y)

7686 Race and the Law. Cr. 3

Impact of law on race relations and vice versa. Topics include: history and legal history, civil rights and equal protection, criminal law, affirmative action, employment, hate speech, education, interracial marriage and adoption, housing discrimination, emergence of Critical Race Theory in contemporary jurisprudence. Contemporary issues and solutions illuminated by historical problems and developments. (Y)

7689 Race, the Law and Social Change in Southeast Michigan. Cr. 2-3

Detroit is the most segregated metropolitan area in the country. Course examines role and limits of law in addressing issues of race, discrimination and equality in southeastern Michigan. From a legal and anthropological perspective, students study the efforts attorneys have made over the past century to create a region more consistent with American values of inclusiveness. Individual and class action lawsuits and other forms of policy advocacy, all addressing legal problems in southeast Michigan, examining litigation tactics and the role of expert testimony. History and social problems of the region examined from the perspective of the courtroom. (Y)

7701 Real Estate Financing. Cr. 2-3

Prereq: LEX 6500. Methods of financing the acquisition and improvement of residential and commercial real estate through the use of private sources of funds. (Y)

7751 Advanced Sales and Leases under the UCC. Cr. 2-3

Advanced study in sales areas beyond first-year contracts course. (Y)

7756 Secured Transactions. Cr. 3

Prereq: LEX 6500. Basic study of Article 9 of the Uniform Commercial Code with particular attention to the law governing the creation and perfection of security interests in personal property and the relative priorities of interested parties; also attention to some of the following: goods-oriented remedies in Article 2, financing leases in Article 2a, bulk sales, effects of the Bankruptcy Code on secured transactions, and documents of title Article 7. (Y)

7761 Securities Regulation. Cr. 2-3

Prereq: LEX 7156. Not open to students who have taken LEX 7061. Analysis of current problems in federal and state regulation of transactions in securities. (Y)

7766 Sports and the Law. Cr. 2-3

Survey of legal issues presented by sports in America. Application of basic principles of antitrust and labor law, constitutional law, administrative law, contract law and tort law to sports. Regulation of professional sports labor markets, regulation of agent representation, sports franchises, leagues and the powers of commissioner's offices, and the regulation of intercollegiate sports. (I)

7800 State Constitutionalism. Cr. 3

Prereq: LEX 6700. Distinguishing features of some state constitutions which are not shared with the parallel federal government. State judiciaries as interpreters of state constitutions. Differences in protection of civil liberties reviewed through readings in constitutional litigation. Common areas of inquiry in a theoretical field remarkably distinct from the study of the federal Constitution. (Y)

7816 Taxation. Cr. 1-4

Interrelation between income tax policy and basic governmental and social institutions. Introduction to law of federal income taxation; the taxation of individuals. Basic application of these taxes; problems involved in transactions and situations which confront the lawyer in general practice; analysis and use of materials which permit their solution. Underlying problems of policy which have led to the tax law of today and which may be expected to require change in the tax law of tomorrow. (Y)

7821 Taxation of Corporations. Cr. 4

Prereq: LEX 7816. Not open to students who have taken LEX 7061 or LEX 7146 or LEX 7151. Federal income taxation of corporations and their shareholders; problems relating to the formation, operation, reorganization, and liquidation of the corporation. Problems between shareholders and their closely-held corporation. Analysis and resolution of corporate tax issues. (B)

7826 Teaching Law in High School. Cr. 3

Prereq: second- or third-year student. Students teach 20 sessions to high school students and attend seminar on teaching methods. Preparation of model lessons, lesson plans. Field supervision. (Y)

7828 Law of Electronic Commerce. Cr. 3

New legal and policy issues that arise when businesses and consumers use the Internet to conduct their commercial transactions. Broad range of subject matters, such as history and technology of the Internet, regulatory paradigms, trademarks, copyright, jurisdiction over online disputes, spam and other online intrusions, clickwrap and browsewrap contracting, liability of online intermediaries, privacy, taxation of Internet commerce, and consumer protection. (Y)

7829 Law of the First Amendment: Freedom of Speech. Cr. 2

Not open to students who are currently taking or who have taken LEX 7126. Prereq: LEX 6700. In-depth coverage of the First Amendment guarantee of freedom of speech, press, association and petition. Emphasis on the "law of the First Amendment" as it has developed through the decisions of the Supreme Court; how the "law of the First Amendment" operates in the context of actual litigation. First Amendment issues likely to arise in the United States today and tomorrow. (Y)

7831 Trademarks and Unfair Competition. Cr. 2-3

Prereq: LEX 6500. Federal trademark statute, 15 U.S.C. section 1051 et. seq., state statutory and common law unfair competition, and the federal law of unfair competition and false advertising under 15 U.S.C. section 1125 (a). (I)

7836 Trial Advocacy. Cr. 3

Prereq: LEX 7266. Basic trial techniques taught through student performances of role-play exercises followed by critique. Mastering major trial skills in isolation: direct and cross examination, introduction of exhibits, impeachment, expert witnesses, opening and closing statements. Application of skills in simulated full criminal or civil jury trial. (Y)

7841 Trusts and Decedents' Estates. Cr. 4

Prereq: LEX 6500. Intestate succession, wills and trusts, requisite elements of wills and express trusts, and procedural requirements for their creation; administration of decedents' estates and trusts; special rules relating to charitable and spendthrift trusts; trust forms as equitable remedial devices under resulting and constructive trust rules. (Y)

7888 United States Foreign Relations Law. (PS 6870) Cr. 4

Prereq: LEX 6700; LEX 7408 recommended. Constitutional and statutory doctrines that regulate the conduct of U.S. foreign relations. Topics include: distribution of foreign affairs powers between the three branches of government, status of international law in U.S. courts, scope of the treaty power, validity of executive agreements, preemption of state foreign affairs activities, and the political question and other doctrines regulating judicial review in foreign affairs cases; political influences on and policy effects of legal doctrines in this field. (Y)

7931 Water Law. Cr. 2-3

Categories of water bodies and public and private rights therein under the riparian and the prior appropriation systems. Consumptive and non-consumptive uses, management, and protection of the resource. Intergovernmental relations with respect to water resource allocation and management. (Y)

7941 White Collar Crime. Cr. 3

Substantive and investigative issues related to federal prosecution of business crimes. Balance between government powers to investigate white collar crime and the rights of corporate and individual investigatory targets in connection with criminal prosecutions of federal economic crimes. Problems related to parallel civil enforcement actions involving the same underlying conduct. (Y)

7951 Workers' Compensation Law I. Cr. 2

Overview of Michigan statute; discussion of "arising out of" and "in the course of employment," including the going to and from work doctrine. Analysis of the occupational disease provisions of the statute as compared to single event personal injury provisions. Study of specific loss. (Y)

7960 Workers' Rights in a Global Economy. Cr. 3

The global trade-labor debate, structure and function of the international labor organization, private initiatives such as anti-sweatshop campaigns and corporate codes of conduct, and select topics, including: human rights/labor rights lawsuits in the U.S.; transnational collective labor action; migrant workers and female workers in the global economy; and child labor. (Y)

7990 Directed Study. Cr. 1-2

Prereq: prior written consent of professor directing the study, and: for LL.M. students, prior written consent of the Director of the Graduate Program; for J.D. students, prior written consent of the Assistant Dean for Academic Affairs. A directed study may involve writing a paper, participating in a regularly-scheduled course for reduced credit, or other work of an academic nature. Subject matter and procedure are to be arranged prior to registration. Directed studies may not be elected on a pass-no credit basis. (T)

7999 Special Topics. Cr. 2-4

Areas of current interest in the law. (T)

8002 Access to Justice Seminar. Cr. 3

History, policies, practices and laws that demonstrate how our legal system addresses access to justice for people with economic needs or other restrictions that prevent them from using the system effectively. Seminar examines issues in both the criminal and civil areas. How lawyers are uniquely suited to improve access to justice. Career options to enhance access to justice, such as: following a public interest career, performing pro bono legal service for the poor, and exercising leadership in government and elsewhere to bring changes that enhance access to justice for all. Lectures, readings, research, site visits, and guest speakers. (Y)

8003 Reimagining Development in Detroit: Institutions, Law and Society. Cr. 3

Prereq: LEX 6500. Seminar course. Examination of contemporary problems of community development from a perspective of institutional economics; how tools and theories of institutional economics are applied to problems relevant to the City of Detroit. Students write research papers applying these tools to issues such as race and regionalism, role of faith-based organizations in community development, abandoned land and community gardens, structure of local governance, charter schools and the fate of public schools, opportunity-based housing, and state of health-care safety net providers. (Y)

8010 Ancient Greek and Roman Law. Cr. 3

Legal systems of ancient Greece and Rome. The law of Athens during its classical period in fifth and fourth centuries B.C.E.; development of Roman law during Republican period and the Empire, as transmitted through the compilations of Justinian in the sixth century C.E. Students write a paper on a subject related to the course material (this paper will satisfy the Law School writing requirement). (Y)

8015 Asian Pacific American History and the Law: Perspectives on APA Civil Rights and Civil Wrongs Cr. 3

This seminar explores the Asian Pacific American civil rights movement with an overview of how federal and state laws have affected the Asian Pacific American (APA) experience and presence in the United States, covering a variety of civil rights cases and civil wrongs against APAs. The seminar will cover the APA historical timeline, exclusion laws, alien land laws, World War II internment of Japanese Americans, affirmative action as it applies to APAs, civil rights and racial hate crime violence, APAs in the marriage equality movement, bilingual issues in education and in the workplace, post-9/11 issues,

immigration law reform, the Hawaiian sovereignty movement, and the effort to change birthright citizenship and immigration laws, among other topics. (B)

8029 Citizenship Seminar. Cr. 3

Legal understanding of citizenship. How has the concept of citizenship evolved over time? How do we (or should we) decide who is and is not a citizen in the U.S. and in other nations? If one is a citizen, what rights flow from that status? Completion of this seminar satisfies the Law School writing requirement. (Y)

8031 Commercial Law Seminar. Cr. 3

Prereq: LEX 7756. Advanced study of an area of commercial law; assigned readings. Final grade based on paper and seminar discussion leadership, on topic selected by student from instructor's list. (Y)

8039 Contract Drafting Seminar. Cr. 3

Prereq: six credits in LEX 6200. Knowledge and skills necessary for sound drafting of agreements. Substantive issues of contract law and important drafting issues. Students draft several contracts for review and critique; final grade based on drafting and editing as well as participation in seminar meetings. (Y)

8048 Current Topics in International Law. Cr. 3

Prereq: LEX 7408. Focus on new and controversial issues; topics change with each offering. Readings, class discussions, and paper. How international institutions function, justification for the norms they seek to enforce, and coherence of those norms with respect to theories of international society. (Y)

8049 Civil Rights Trip Seminar Cr. 3

introduction to the Civil Rights Movement of the 1950s and 1960s, as well as how lawyers at preeminent civil rights organizations continue the work today. Enrolled students travel to Atlanta, Selma, Montgomery, and Birmingham over spring break; meet with prominent civil rights attorneys; visit the legal, spiritual, and political landmarks of the Civil Rights Movement; meet survivors and activists from the movement, who provide them with first-hand accounts of the Selma to Montgomery March, the maneuverings of segregationist and progressive political figures in Montgomery, and daily life during the Jim Crow and civil rights eras. Students prepare for the trip with several hours of direct instruction prior to spring break, a compendium of readings, documentary films, and group discussion on the 14th Amendment, Jim Crow, the Civil Rights Movement, critical race theory, narratives of African-American migration, white privilege, structural racism, implicit bias, and how legislation and enforcement intersect with each of these topics. (Y)

8051 Detroit Equity Action Lab: A Collaborative Study of Structural Racism Seminar Cr. 3

This Seminar introduces students to notions of structural racism as it impacts the city of Detroit. Students will work collaboratively with members of the Detroit Equity Action Lab (DEAL) addressing racial equity in a wide range of sectors, such as civil rights, transportation, community development, health, education and housing. Students will develop awareness of the role and limits of law in addressing structural racism. In addition to examining the work of individual organizations, students will consider broader issues impacting racial equity and will explore interventions that might change public policy and public awareness as it relates to structural racism. (Y)

8067 Effective Oral Communication for Lawyers. Cr. 3

Prereq: written consent of instructor. Exercise-based seminar to help students become more familiar with, and more skillful at, oral communication in the various settings familiar to a lawyer. Topics include: physiology of speech and sources of speech pathology; aspects of non-verbal communication; use of humor; stage fright; making communication interesting. (B)

8068 Energy Law: Current Topics. Cr. 3

In-depth exploration of a particular topic regarding regulation of energy production or consumption. Topics may include: regulation of fuel sources and emissions in the U.S. transportation sector, incentives and regulations in financing clean energy investments, and the impact of regulation on adoption of electric vehicles. Students are responsible for a research paper and presentation to the class. (Y)

8075 Ethics of the Lawyering Experience Seminar. Cr. 3

Psychological and ethical dimensions of law and legal practice, explored through engagement with works of fiction and selected legal scholarship. Student writes weekly reaction paper. (Y)

8081 Evidence Law: Advanced Topics. Cr. 3

Prereq: LEX 7266. Seminar course; students write papers and give presentations on current topics of evidence law. (Y)

8101 Family Violence: Seminar. Cr. 3

Analysis of the utilization of the legal system to address issues of abuse within the family. Topics include: the response of the criminal justice system to various forms of family violence, such as marital rape, spouse abuse, and child abuse; use of tort and injunctive remedies; examination of new and proposed legislation relevant to these issues. (B)

8141 International Environmental Law Seminar. Cr. 3

Prereq: LEX 7231 and LEX 7408. Students explore use of bilateral and multilateral treaties and other international mechanisms for dealing with international environmental problems; emphasis on United States - Canada international environmental law. In-class presentations, paper required. (I)

8161 International and Comparative Business Law: Doing Business in China Seminar. Cr. 3

Preparation of papers and presentations on various aspects of business in China. (Y)

8190 International Womens Human Rights Seminar' Cr. 3

Evolution of women's rights as human rights. Students will examine women's human rights in the context of legal instruments such as the UN Convention to Eliminate Discrimination Against Women (CEDAW) and other international treaties, and in the jurisprudence of women's human rights in international tribunals. This course will also explore the role of global and regional human rights organizations in securing women's legal rights and analyze the current legal discourse on women's human rights and explore key issues in the light of specific world regions, cultures and religious traditions. (T)

8248 Law and Literature Seminar. Cr. 3

Connection between law and literature. Topics include: role of narrative in legal arguments and legal decision-making; role of narrative and law, respectively, in constructing identity; literary criticisms of the law and legal profession. Focus on stories of adoption, including: shifting definitions of parenthood; nature vs. nurture debate; issues of class, race, gender, and national identity. Novels, short stories, films, memoirs, and legal cases; authors include Charles Dickens, George Eliot, P.D. James, and Louise Erdrich. In-class presentations; paper required. (Y)

8256 Law in Cyberspace: Seminar. Cr. 3

Application of current law to the Internet and proposals for new or revised laws to regulate development of global information infrastructures. Topics include: defamation, copyright, wire fraud, criminal threats to Internet activities, and problems asserting national laws in medium without national boundaries. Students will use the Law Library's computer system and not need their own computers. (Y)

8260 Law of the City: Detroit: Seminar. Cr. 3

Exploration of legal, economic, and policy issues regarding the contemporary American city, using Detroit as the case study. Themes covered include race, class, positive rights, community organization and identity, economics, public education, environmental justice and

legal pluralism. Students read in constitutional and statutory provisions, case law, administrative determinations, academic writing, and current popular media. Discussion of a different aspect of urban law each week; students explore a broad array of legal issues and opportunities in the urban environment around them; current law and policy reforms; research paper and presentation. (Y)

8263 Legal Change Seminar Cr. 3

Prereq: All required JD courses (LEX 6100, LEX 6101, LEX 6200, LEX 6201, LEX 6300, LEX 6400, LEX 6500, LEX 6600, LEX 6700) except Professional Responsibility. What is the relationship between law and social change? How effective are changes in legal doctrine in changing social practices? Under what conditions can we effectively use the law to promote social change? This course investigates these questions by studying the relationships among social movements, courts, legislatures, and other international and domestic institutions. Students will examine materials from actual legal reform movements, including equality in education and women's rights, and evaluate strategies for legal reform and their impact on statutory and decisional law as well as social practices. (B)

8271 National Labor Relations Act: Current Problems. Cr. 3

Prereq: LEX 7501. Legal issues pending before the National Labor Relations Board and in the courts. Students act in place of NLRB and render opinions on critical labor law issues; read actual briefs in pending cases, discuss the cases, and vote on disposition and draft majority and dissenting opinions. Each student writes one majority and one concurring or dissenting opinion. Class discussions focus on NLRB decision-making process and judicial review of Board decisions; and on draft opinions of student Board panels. Grade is based on class participation as well as written work; students may elect to write papers based on legal issues discussed in class. (Y)

8280 National Security Law Seminar. Cr. 3

Prereq: LEX 6700; LEX 7126 and LEX 7408 recommended; written consent of instructor required if elected after LEX 7888. National security as area of specialization within government law practice, private law practice, and academia. Aspects of international law, constitutional law, criminal law, administrative law, and other fields as they apply to issues such as: Who formulates and implements the national security policies of the United States? When do the nation's security interests trump competing values (civil liberties, transparency, fulfillment of the nation's international legal obligations)? In what respects is America's approach to these issues similar to or different from that of other countries? Readings include statutes, treaties, regulations, case law, and extensive secondary literature, which serve as a basis for a substantial research paper or law journal note. (Y)

8300 Race and the Law: Advanced Topics. Cr. 3

Prereq: LEX 7686. In-depth examination of particular issues; topics may include: emerging issues in education, voting rights and criminal justice; intersection of race and sports law; or race and the media. Focus may be related to Michigan or the metropolitan Detroit area. In-class presentations, research paper. Completion of this course will satisfy Law School writing requirement. (Y)

8335 Regulation of Vice. Cr. 3

Seminar exploring legal, economic, and policy issues regarding federal, state, and local regulation of vice, including: alcohol nicotine, drugs, gambling, and commercial sex. The current legal landscape; potential policy reforms. Students prepare a research paper on a mutually agreed upon topic, which may include a specific regulation or vice law, proposed policy reform, comparative analysis from another jurisdiction, and state/local issues. (Y)

8338 Religious Liberty in the United States. Cr. 3

Not open to students who have previously taken LEX 7725. Prereq: LEX 6700. Relationship between Church and State in the United States. It addresses the First Amendment's Free Exercise and Establishment Clauses, as well as some related state and federal statutes, giving due regard to matters of history, legal doctrine, and public pol-

icy. In addition to in-class presentations, students will be required to complete a paper on a topic of their choosing within the parameters of the course. Completion of the paper will satisfy the law school writing requirement. (Y)

8345 Sex, Sexuality and the Law in the Contemporary United States. Cr. 3

The ways the law constructs people as sexual beings and regulates that being and her/his sexuality. Seminar course has four main objectives: 1) to deepen understanding of contemporary U.S. laws that address sex and sexuality; 2) to understand the ways in which individuals and groups are impacted by those laws; 3) to learn and apply aspects of critical legal theories in legal analysis; and 4) to strengthen written and oral legal analysis and communication. Workshop format; class contribution makes up a significant portion of the grade. (Y)

8363 Tax Policy Seminar: Role and Impact of Congressional Oversight on Abusive Tax Strategies. Cr. 3

Prereq: LEX 7816. This seminar will examine the international tax rules, the abusive strategies, and the responses by Congress and foreign governments. We will use excerpts from Congressional hearings to explore the role of Congressional oversight in identifying the noncompliance with existing laws, the role of foreign governments in facilitating abuses and illegal behavior, and the need for legislative or administrative action to address some of the abuses. We will consider policy options to reduce the incentives for businesses to pursue these strategies. We will examine professional ethics and the role of lawyers and other professionals in structuring these abusive transactions. (Y)

8401 Urban Housing and Community Development: Seminar. Cr. 3

Legal, social, and economic aspects of urban housing and community development, including local, state and national programs and policies. (Y)

8505 Criminal Justice Externship Practicum. Cr. 1-3

Prereq: written consent of Director of Clinical Education. Coreq: LEX 8506; prereq or coreq: LEX 8600. Students perform 150 hours of unpaid work in a criminal prosecutor or defender's office. Students are assigned tasks similar to those performed by entry-level prosecutors and defenders. Students develop advocacy skills, legal drafting skills, law practice management skills, the ability to recognize and resolve strategic and ethical dilemmas, and the ability to learn from experience. (T)

8506 Criminal Justice Externship: Colloquium. Cr. 2-3

Coreq: LEX 8505 or concurrently working at least 150 hours for an approved prosecutor or defender's office. Prereq or coreq: LEX 6800. Prereq.: written consent of Director of Clinical Education required. Roles and responsibilities of criminal prosecutors and defenders, the judicial process in criminal cases, and strategic and ethical issues in criminal prosecution and defense. Substantial class time is devoted to professional skills instruction and to facilitated discussion and analysis of students' fieldwork observations and experiences. (T)

8507 Judicial Externship: Practicum Cr. 2

Coreq.: LEX 8508; Prereq or coreq: LEX 6800. Prereq.: written consent of Director of Clinical Education required. Students perform 150 hours of unpaid work in judicial chambers. Students are assigned tasks similar to those performed by judicial clerks. Students develop research, writing, and analysis skills, legal drafting skills, oral communication skills, law practice management skills, and the ability to learn from experience. (T)

8508 Judicial Externship: Colloquium. Cr. 2

Coreq.: LEX 8507 or concurrently working at least 150 hours for an approved field supervisor. Prereq or coreq: LEX 6800. Prereq.: written consent of Director of Clinical Education required. Students learn about the roles and responsibilities of judges and judicial clerks, judi-

cial decision-making, and effective advocacy. Substantial class time is devoted to professional skills instruction and to facilitated discussion and analysis of students' fieldwork observations and experiences. (T)

8515 Corporate Counsel Externship: Practicum. Cr. 2

Prereq or coreq: LEX 6800 and LEX 7156; Coreq: LEX 8516. Satisfactory completion of at least thirty law school credits, with passing grades in all first-year courses for which grades have been assigned; good academic standing; g.p.a. of 2.0 or higher (2.33 for J.D. students who have not yet received thirty credits, 3.0 for LL.M. students). Grading will be on an Honors, Pass, Low Pass, No Credit basis. Students perform 150 hours of unpaid work in corporate counsel offices of non-profit and for-profit entities for two credits. Students are assigned tasks similar to those performed by attorneys in corporate counsel or general counsel offices. The Practicum is an opportunity for students to develop professional skills, including legal analysis and reasoning, contract drafting, problem solving, communication, teamwork, negotiation, and fact-finding. Students will also learn about important workplace issues such as time management, corporate culture, professionalism, and giving and receiving feedback. (T)

8516 Corporate Counsel Externship: Colloquium. Cr. 2

Prereq or Coreq: LEX 6800 and LEX 7156; Coreq: LEX 8515 or concurrently working at least ten hours per week for an approved field supervisor. Completion of at least thirty law school credits, with passing grades in all first-year courses for which grades have been assigned; good academic standing; g.p.a. of 2.0 or higher (2.33 for J.D. students who have not yet received thirty credits of grades, 3.0 for LL.M. students).† Students will learn about substantive issues encountered in an in-house legal department and the ethical responsibilities of in-house counsel. Substantial class time is devoted to professional skills instruction on topics such as working with outside counsel, conflicts management, contract drafting, and conducting internal investigations. Students will also participate in facilitated discussion and analysis of their fieldwork observations and experiences. Chief legal officers, general counsel, and senior managing attorneys will guest lecture in some classes. (T)

8598 Public Interest Externship: Practicum. Cr. 2

Coreq.: LEX 8599. Prereq or coreq: LEX 6800. Prereq.: written consent of Director of Clinical Education required. Students perform 150 hours of unpaid work in public interest settings. Students are assigned tasks similar to those performed by entry-level public interest lawyers. Students develop interviewing and counseling skills, legal drafting skills, oral communication skills, law practice management skills, and the ability to learn from experience. (T)

8599 Public Interest Externship: Colloquium. Cr. 2

Coreq.: LEX 8598 or concurrently working at least 150 hours in an approved public interest setting. Prereq or coreq: LEX 6800. Prereq.: written consent of Director of Clinical Education required. Students learn about the roles and responsibilities of public interest lawyers, strategic, practical, and ethical dimensions of public interest practice, and effective advocacy. (T)

8601 Criminal Appellate Practice Clinic. Cr. 4

Prereq: LEX 7161, 7166, or 7266 recommended. Clinical legal writing experience. Students prepare briefs and other pleadings for indigent clients with pending felony appeals in cooperation with the Michigan State Appellate Defender Office. Students meet with instructor in individual and class sessions to discuss writing, research, and the appellate and correctional processes. Students have client contact and participate in simulated court environment. (Y)

8604 Asylum and Immigration Law Clinic. Cr. 6

Prereq: LEX 6800, LEX 7371. Lawyering skills and values needed to effectively represent clients, and the legal skills and knowledge needed to represent clients seeking asylum or other immigration

benefits, including an Immigration Court hearing. Asylum case simulation. Professional responsibility issues. In clinical component, students represent clients on a variety of immigration matters. (Y)

8606 Asylum and Immigration Law Clinic (Advanced). Cr. 2

Prereq: LEX 6804. Students continue to gain increased experience in different settings and issues, and may also organize and participate in community outreach projects. (Y)

8607 Civil Rights and Civil Liberties Clinic. Cr. 6

Prereq: passing grades in all required first-year courses, including LEX 6101, with a grade point average of 2.5 or above; coreq: LEX 6800; prereq or coreq recommended but not required: LEX 7126 and LEX 7266. Collaborative venture with American Civil Liberties Union (ACLU) of Michigan; opportunity to litigate civil rights and civil liberties impact cases before state and federal courts. Classroom component includes a semester-long simulation of a civil rights case that gives students opportunity to develop professional skills such as interviewing, counseling, drafting pleadings and discovery requests, taking depositions, preparing and arguing motions, and negotiating with opposing counsel. (W)

8610 Transnational Environmental Law Clinic (Advanced). Cr. 2

Prereq: good academic standing; LEX 8611. Students continue their work with the Environmental Law Clinic, gaining increased experience in different settings on issues; students work with Great Lakes Environmental Law Center and may be involved in formally representing other community organizations and public interest groups. (Y)

8611 Transnational Environmental Law Clinic. Cr. 6

Open only to students who have completed all required first-year law courses. Prereq. or coreq: LEX 7006 and LEX 7231; or advance written consent of instructor. Skills and strategies needed to affect environmental policy in the three branches of state and federal government. Classroom sessions include current environmental policy challenges and opportunities; guest speakers. Clinical component includes preparation of policy papers and formal legislative testimony, commenting on rulemaking and permit decisions, and engaging in judicial review and enforcement litigation; students work with Great Lakes Environmental Law Center. (Y)

8615 Patent Procurement Clinic. Cr. 4

Prereq: completion of all first-year courses and LEX 7656; and completion of or coreq in LEX 6800; good academic standing with at least a cumulative 2.5 grade point average; students must meet PTO qualifications for participation, including at least a bachelor's degree in a recognized technical subject such as biology, chemistry, computer science, engineering, and physics. Enrollment preference is given to graduating students and students who have not previously taken a live-client clinic. Credits earned are subject to the 14-credit maximum on clinics and internships. Students represent clients in patent procurement matters before the U.S. Patent and Trademark Office, Detroit satellite office. Student work includes interviewing and counseling clients, fact investigation, performing legal research, conducting prior art searches, and drafting and prosecuting patent applications. Skills and values necessary to effectively represent clients in patent procurement matters; exploration of substantive areas of patent law that arise in these matters. Professional responsibility issues commonly faced by patent attorneys, such as conflicts, competence, and confidentiality. (Y)

8616 Patent Procurement Clinic (Advanced). Cr. 2

Prereq: LEX 8615; written consent of clinic director. Students in this clinic represent clients in patent procurement matters before the United States Patent and Trademark Office's Detroit, Michigan, Satellite Office. There is no classroom component in the Advanced Patent Procurement Clinic. Students will be expected to spend between five to ten hours per week continuing work on ongoing cases that have significant deadlines during the semester, gaining increased

experience in different settings and addressing more complex issues. Advanced Clinic students will also work with PPC faculty to provide direction and guidance to those enrolled in the PPC Clinic for the first time, in areas in which Advanced Clinic students have already acquired some expertise. Time spent in the Advanced Clinic will include a one-hour weekly meeting with the Clinic's faculty to discuss the status of client matters. (F,W)

8621 Free Legal Aid. Cr. 4

Prereq or coreq: LEX 6800 and invitation to work at the Free Legal Aid Clinic, Inc. from that organization's board of directors. Students must be in good academic standing and have successfully completed all first-year required courses; GPA of 2.0 or higher. The Free Legal Aid Clinic, Inc. (FLAC) is a student-run, non-profit organization with a board of directors composed entirely of current Wayne Law students. FLAC partners with legal services organizations to provide free legal services to low-income people in Wayne County. FLAC students practice under the supervision of legal aid attorneys and law school faculty pursuant to the Michigan Student Practice Rule. Students, who work an average of 12-14 hours per week, are responsible for all aspects of the cases assigned to them, including interviewing clients, drafting pleadings and other court filings, arguing motions, conducting trials and evidentiary hearings, negotiating with opposing counsel, researching legal issues, and drafting legal documents. Students participate in a twice-weekly seminar class for this letter-graded course. Credits earned meet the experiential learning and clinical education requirements. (T)

8631 Business and Community Law Clinic. Cr. 6

Prereq: completion of all first-year courses; good academic standing or C (2.0) average; LEX 6800 and LEX 7156. Course component: basic provisions of nonprofit corporate law, tax law, and legal ethics that affect community economic development groups. Clinical component: students assist a community group at or near the stage of incorporating itself and/or applying for tax-exempt status, in services such as drafting and filing articles of incorporation, bylaws, and IRS forms. Students complete term paper on topic of interest to community economic development organizations. (I)

8633 Business and Community Law Clinic (Advanced). Cr. 2

Prereq: LEX 8631; written consent of instructor; good academic standing; cumulative C (2.0) average. Participation requires demonstrated commitment to business law, community economic development, or nonprofit law. No classroom component; enrollment limited to two students per semester; students spend between five and ten hours a week continuing their work on ongoing cases and meeting significant deadlines during the semester. Advanced Clinic students also work with BCL faculty to provide direction and guidance to those in the BCL Clinic for the first time, in areas in which Advanced Clinic students have already acquired some expertise; as well as coordinate community outreach and informational programs. Includes one hour per week meeting with BCL faculty to discuss the status of client matters. (Y)

8641 Disability Law Clinic. Cr. 6

Prereq: written consent of assistant director of clinical education; good academic standing; completion of all first year required courses; prereq. or coreq: LEX 6800. No credit after LEX 8621. Cooperative venture with Wayne County Legal Services. Hands-on experience while helping individuals with disabilities and their families obtain services and support to avoid out-of-home placement at public expense. Students perform 15-20 hours fieldwork per week. Student responsible for 3 to 5 cases: investigating facts, researching law, counseling client, representing client in administrative or judicial proceedings, drafting and arguing appeals, engaging in settlement negotiations. Intake, case acceptance, individual client representation, community education and law reform efforts. Includes two-hour weekly seminar; graded on honors pass-low pass-no credit basis. Credits count toward 14-credit maximum in applied and skills courses. (Y)

8642 Disability Law Clinic (Advanced) Cr. 2

Prereq or Coreq: LEX 8641; g.p.a. 2.00 or higher. Students continue their work on cases or projects begun in the Disability Law Clinic that could not be completed in a single term, work on new cases or projects that involve more complex issues or give students opportunities to develop additional skills, or serve as teaching assistants for the Clinic. (T)

8661 Legal Advocacy for People With Cancer (Clinic). Cr. 4-6

Prereq: completion of at least thirty law school credits with passing grades in all first-year courses for which grades have been assigned; good academic standing with g.p.a of 2.0 or above; LEX 6800. Students may be required to have flu shot and tuberculosis test to work with clinic clients. Offered for Law School grading: Honors pass, pass, low pass, no credit. Students work with healthcare professionals at the Karmanos Cancer Center to identify and resolve legal issues that present barriers to patient care and wellbeing. Students advise and assist people with cancer in matters pertaining to health insurance, housing, employee rights and benefits, estate and health-care planning, and public benefits. They develop skills used in a broad range of practice settings: interviewing and counseling, case-management, problem-solving, persuasive fact analysis, legal drafting, negotiation, effective oral communication, and interdisciplinary collaboration. Ethical issues case analysis; maintaining confidentiality; identifying and managing conflicts of interest; the lawyer-client relationship; decision making authority between lawyer and client. Legal issues that affect people with cancer; interaction between law and health; medical-legal partnership model of legal services delivery; client-centered and holistic approaches. (Y)

8662 Legal Advocacy for People with Cancer Clinic (Advanced). Cr. 2

Prereq: completion of LEX 6800; good academic standing with g.p.a of 2.0 or above; invitation to participate by written consent of course instructors. Continuation of work begun in LEX 8661 which could not be completed in a single term; work on new cases or projects that involve more complex issues or give students opportunities to develop additional skills or serve as teaching assistants for the LAPC Clinic. Students are expected to perform at least 100 hours of clinical work, including regular, frequent meetings with the course instructors. Course does not have a classroom component, but students who serve as teaching assistants are expected to participate in some LAPC classes. Students are required to document their clinical work through detailed, contemporaneous time logs. (S,F)

8701 Law Review. Cr. 1-2 (Max. 4)

Open only to Law Review members. (Y)

8711 Moot Court. Cr. 1-2 (Max. 4)

Open only to members of the Moot Court Board. Members conduct, under general faculty supervision, the program in the preparation of briefs and the hearings on oral arguments. (Y)

8721 Mock Trial. Cr. 1-2 (Max. 4)

Open only to members. Members participate in skills training; intra-school, regional, and national trial advocacy competitions. (Y)

8731 The Journal of Law in Society. Cr. 1 (Max. 4)

Members contribute to publication of this law journal and the annual symposium. (Y)

8741 Transactional Law Competition Cr. 1

Prereq: LEX 7156 (Fall Term); LEX 7156 and LEX 7603 (Winter Term). Practical skills course focused on improving transactional lawyering skills, including drafting agreements, revising agreements, advising clients, and negotiating with transactional attorneys, while exploring important legal/business issues relevant to mergers and acquisitions. During the fall semester, students will participate in an in-house transactional law competition, and during the winter semester, students will participate in the National Transactional LawMeet Competition. (Y)

8815 Fundamentals of U.S. Legal Research. Cr. 1

Open only to foreign-trained lawyers admitted to the General Legal Studies LL.M. program (in U.S. Law). Introduction to U.S. legal research skills for students from foreign jurisdictions, with a focus on the use of electronic resources for legal research. (Y)

8830 Introduction to the Legal System of the United States. Cr. 2

Open only to foreign-trained lawyers admitted to the General Legal Studies LL.M. program (in U.S. Law). Introduction to U.S. legal research skills for students from foreign jurisdictions, with a focus on the use of electronic resources for legal research. (Y)

8875 Survey of United States Law. Cr. 3 or 4

Open only to foreign-trained lawyers admitted to the General Legal Studies LL.M. program (in U.S. Law). Concise survey of several substantive fields of United States Law (principally in the area of private law) with focus on several core legal topics integral to understanding the U.S. legal system as a whole, and to working with U.S.-trained lawyers. Material drawn from a variety of areas, such as: law of contracts, property, torts, criminal law, and constitutional law. (Y)

8890 U.S. Legal Skills for Foreign Law Students. Cr. 2

Open only to foreign-trained lawyers admitted to the General Legal Studies LL.M. program (in U.S. Law). This course will provide foreign-trained lawyers with a working knowledge of the memo-drafting, transactional, and other skills utilized by U.S. Lawyers. Students will draft a legal memorandum, a client letter, and a contract. (Y)

8999 Master's Essay Direction. Cr. 1-2

Prereq: written consent of advisor. (T)

College of Liberal Arts
and Sciences

Dean: Wayne Raskind

Foreword to the College of Liberal Arts and Sciences

The College of Liberal Arts and Sciences comprises the traditional academic disciplines and may be considered the academic core of the University. Composed of nineteen departments, a variety of programs, and over 400 faculty members, the college is able to offer a rich and broad-based education in the liberal arts and sciences. Curricula leading to master's and doctoral degrees are offered in the physical and natural sciences, mathematics, the social sciences and the humanities. Some programs provide practical training and lead to professional certification. Most doctoral programs acquaint students with methods used in scholarly inquiry and require students to complete an independent research study. Students thus contribute to the University's mission to increase fundamental knowledge and apply that knowledge to the betterment of the human condition. Faculty in the College of Liberal Arts and Sciences have been recognized nationally and internationally for their important contributions to research and for their scholarly publications. Working with these faculty mentors, graduate students acquire an education that leads to the joy of intellectual discovery and its application in the real world.

Certificate Programs

GRADUATE CERTIFICATE in Economic Development

GRADUATE CERTIFICATE in Peace and Security Studies

GRADUATE CERTIFICATE in World History (Bridge Program)

Master's Degrees and Majors

MASTER OF ARTS with majors in

Anthropology

Biological Sciences

Chemistry

Classics

Economics

English

German

History

Industrial and Organizational Psychology

Mathematical Statistics

Mathematics

Mathematics Applied

Near Eastern Languages

Nutrition and Food Science

Philosophy

Physics

Political Science

Public History

Psychology

Romance Languages

Sociology

Speech-Language Pathology

MASTER OF ARTS in Employment and Labor Relations

MASTER OF ARTS in Language Learning

MASTER OF ARTS in Linguistics

MASTER OF PUBLIC ADMINISTRATION

MASTER OF URBAN PLANNING

MASTER OF SCIENCE with a major in

Biological Sciences

Chemistry

Criminal Justice

Mathematics

Molecular Biotechnology

Nutrition and Food Science

Physics

Doctoral Degrees and Majors

DOCTOR OF PHILOSOPHY with majors in

Anthropology

Biological Sciences

Chemistry

Communication

Sciences and Disorders

Economics

English

History

Mathematics

Modern Languages

Nutrition and Food Science

Philosophy

Physics

Political Science

Psychology

Psychology with a dual-title in Infant Mental Health

Social Work and Anthropology

Sociology

DOCTOR OF AUDIOLOGY

Academic Regulations for the College of Liberal Arts and Sciences

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the College of Liberal Arts and Sciences.

Admission Requirements, Graduate Programs

Admission to any graduate degree program is contingent upon meeting the admission requirements of the Graduate School. For further information on these requirements, see Admission, Graduate School, p. 17.

Preference is given to those students who have achieved superior undergraduate scholastic records and who evidence superior abilities.

All credits prerequisite to a degree or certificate program must be earned prior to or concurrent with the initial graduate credits applicable to the program. If undergraduate preparation for the major field is considered deficient, additional coursework may be required at the undergraduate level. Many programs have additional individual admission requirements. Students should consult the subsequent departmental sections in this bulletin for specific requirements in each field of study.

Graduate Record Examinations

The Graduate Record Examination (GRE) is used to assist advisors in evaluating educational preparation and to serve as a basis for planning future study. There is no uniform policy concerning GREs. Some departments require GRE scores from all applicants for admission, while others require scores only from students in specified classifications. Students should consult the department in which they wish to major to determine which examinations must be taken.

Students required to take these examinations must apply at the Testing and Evaluation Office, 698 Student Center, either prior to or at the time of admission. Students who previously have taken the examination may have transcripts of these scores submitted. After the initial registration, no subsequent enrollment will be permitted nor will candidacy be authorized until examination requirements have been fulfilled.

AGRADE' — Accelerated Graduate Enrollment

The College of Liberal Arts and Sciences has established an accelerated combined undergraduate and graduate program ('AGRADE') whereby qualified seniors in the College of Liberal Arts and Sciences may enroll simultaneously in some undergraduate and graduate programs of the College. A maximum of sixteen credits may be applied towards both undergraduate and graduate degrees in a student's major field if the major department is an 'AGRADE' participant. (Students should contact the chairperson of their major department to ascertain its 'AGRADE' status.) Those who elect the 'AGRADE' program may expect to complete the Bachelor's and Master's degrees in five years of full-time study.

Eligibility: 'AGRADE' applicants must have an overall g.p.a. of 3.5. Applicants are also expected to have performed at a superior level in

their major, as determined by the major department and reflected in a g.p.a. in the major of at least 3.6 at the time of application.

Application: A student seeking 'AGRADE' status should present to the Graduate Admissions Committee of his/her major department all of the materials which that department requires for normal admission, EXCEPT for the Graduate Record Examination (GRE) required by some departments. For departments in which the GRE is required, it is expected that this examination will be taken at the normal time and scores forwarded to the major department. Specific departmental admission requirements can be found in this bulletin or obtained from the Graduate Office of the College of Liberal Arts and Sciences (313-577-5188).

The earliest date by which a student may apply for the 'AGRADE' program is during the semester in which he/she completes ninety credits toward the undergraduate degree.

AGRADE Credits: Students may elect a minimum of three and a maximum of sixteen 'AGRADE' credits. These credits will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, 'AGRADE' credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program. Formal admission to the graduate program occurs as AGRADE students complete their baccalaureate degree.

For more details about the 'AGRADE' program, contact the chairperson of the department in which 'AGRADE' enrollment is sought or the Graduate Office of the College of Liberal Arts and Sciences (313-577-5188).

Degree Requirements

Graduate degrees are conferred not merely upon the completion of a prescribed number of courses nor necessarily after a given period of residence, but rather in recognition of each candidate's outstanding ability and high achievement as evidenced in all course work, research, scholarly writing, examinations and personal fitness for a chosen profession. All course work must be completed in accordance with the academic procedures of the Graduate School (see Theses, Master's, p. 37) and College of Liberal Arts and Sciences regulations. In addition to the general Graduate School requirements for degrees and to the information provided below, other requirements are specified by the individual graduate departments. Students should consult the programs and requirements of the departments in which they plan to major.

Candidacy

Candidacy is an advanced status recommended by student advisors and authorized by the Graduate School or Liberal Arts and Sciences Graduate Office upon evidence of superior scholarship, appropriate personal qualities and promise of professional competence. Students should note that admission as an applicant does not assure acceptance as a candidate for a degree, and that candidacy is a necessary but not sufficient requirement for graduation.

To be eligible for candidacy, students must file officially approved Plans of Work. The Plan should provide for effective concentration in a major field, with proper supporting courses in related fields. Ph.D. applicants should file their Plan with the Graduate School; master's applicants should file with the graduate officer of the College of Liberal Arts and Sciences. In preparing a Plan, students should evaluate with care their personal and professional objectives as well as all degree and departmental requirements. Normally, a student enrolled in a master's degree program is expected to file a Plan of Work by the time twelve graduate credits or their equivalent have been earned.

It is recommended that an approved Plan be filed by applicants for the Ph.D. degree before approximately forty credits beyond the baccalaureate degree have been earned. In addition to filing the Plan, students must satisfy any foreign language requirements.

Candidacy is reached after the Plan of Work has been approved, the final Qualifying Examination has been passed, approximately fifty credits have been completed, and the dissertation committee has been named.

Commencement

Information concerning commencement announcements, caps and gowns, invitations, tickets, time and place, assembling and other relevant items will be mailed to graduates by the Alumni Office prior to the event. Candidates for advanced degrees are requested and expected to attend the commencement at which the University confers upon them the honor of the degree earned.

Master's Degree Requirements

In most master's degree programs, the minimum requirement for the degree is thirty-two credits under either Plans A, B, or C as cited below. At least twenty-four credits must be taken in residence. At least six credits of coursework in the major field, in addition to the essay or thesis, must be in courses open only to graduate students (courses numbered 7000 and above).

Plan A requires twenty-four credits of course work plus an eight credit thesis.

Plan B requires twenty-nine credits of course work plus a three credit essay.

Plan C requires thirty-two credits of course work; an essay or thesis is not required. Most departments require a final comprehensive examination. Students should consult a departmental advisor for details.

These requirements vary slightly by department; see listings under the individual departments for exact information. In accordance with the time limitation of the Graduate School, all requirements for the master's degree must be completed within a six-year period.

Doctoral Degree Requirements

Examination, Preliminary Qualifying Ph.D.

Responsibility for preliminary qualifying examinations is vested in the graduate faculty of each department, specifically in its committee on doctoral study. Accordingly, committees may require this examination of all candidates or of any candidate prior to the final qualifying examination.

Examination for Candidacy, Final Qualifying Ph.D.

The final qualifying examination is required of all applicants and will be a written examination. It may also contain an oral portion if the department requires one. Consult the specific department for requirements.

The written qualifying examination will cover the applicant's major and minor areas and may include such other related matters as the doctoral examining committee may prescribe. If an oral qualifying examination is required, it will be conducted by the departmental qualifying examination committee within sixty days after the written qualifying examination has been passed. This examination will relate to the subject matter of the written examination, the applicant's major and minor areas and other pertinent matters.

If an examining committee does NOT certify that the applicant has passed either the written or oral examinations, it must make specific

recommendations with reference to admitting the applicant to a second examination and specify any additional work that should be completed prior to such an examination. If a second examination is held, it must be scheduled within one calendar year and shall be considered final.

Selection of the student's doctoral committee, including one member from outside the student's department, is a requirement for candidacy. Substitutions in the membership of this committee may be made prior to submission of the Outline and Record Form to the Graduate School. After this form is approved, any change in committee membership requires written approval from the Graduate School. This committee conducts the final dissertation defense.

Essays, Theses, and Dissertations

There is no prescribed format for the master's essay. Essay guidelines, indicating standard style manuals for each department and title-page samples, are available in the Liberal Arts and Sciences Graduate Office, 2155 Old Main.

Master's degree candidates under the essay plan register for the course numbered 7999, Master's Essay Direction, in the department of their major; a total of three credits must be elected.

The original copy of the essay should be submitted to the Liberal Arts and Sciences Graduate Office after it is approved and signed by the advisor. This copy will be returned to the department.

The thesis or dissertation *must be an original work, either in or definitely related to the student's major area of specialization*. If proper standards of quality, objectivity, originality, and independence are maintained, candidates may use data that they have derived from their University research. Neither the results of the research nor the publication of findings can be restricted by any non-University agency nor can they be published prior to acceptance of the dissertation by the Graduate School unless prior approval of such publication has been obtained from the advisor. Advisors have primary responsibility for approval of the essay or thesis, but every member of a doctoral committee must read, approve and sign the dissertation.

Students may not begin work on a manuscript until they have submitted an approved Plan of Work and outline form. They may then register for the thesis or dissertation credits and pay regular fees in the same manner as for all other course work.

Master's candidates under the thesis plan register for the course numbered 8999 in the department of their major. This course is entitled *Master's Thesis Research and Direction* and must be elected for a total of eight credits. Ph.D. candidates must enroll in thirty credits of doctoral dissertation direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively) offered under various subject area codes, in consecutive academic year semesters.

Theses/Dissertation Outline and Record Form

Before students begin working on theses or dissertations, they must file outlines and record forms. Master's candidates must prepare three copies which, after receiving departmental approval, will be forwarded to the Liberal Arts and Sciences Graduate Office. Doctoral candidates must prepare four copies which, after receiving departmental approval, will be forwarded to the Graduate School.

Financial Aid

For general sources of graduate financial aid, see the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26. Specific information may be found in various departmental sections of the College of Liberal Arts and Sciences, below.

Directory for the College of Liberal Arts and Sciences

DEAN: Wayne Raskind: 2155 Old Main; 313-577-2515

ASSOCIATE DEANS

Robert Aguirre: 2155 Old Main; 313-577-2094
Heather Dillaway: 2155 Old Main; 313-577-2520
Donald Haase: 2155 Old Main; 313-577-2818
Peter Hoffmann: 2155 Old Main; 313-577-2530

STUDENT SERVICES OFFICE

Office: 2155 Old Main; 313-577-5188
Lisa Dobbs: 2155 Old Main; 313-577-5188
Elizabeth Stone-Hall: 2155 Old Main; 313-577-2516

DEPARTMENTAL/PROGRAM OFFICES

Africana Studies: Rm. 11002, 5057 Woodward Avenue;
313-577-2321
Anthropology: 3054 Faculty/Admin. Bldg.; 313-577-2935
Biological Sciences: 1360 Biological Sciences; 313-577-2873
Chemistry: 169 Chemistry Bldg.; 313-577-7784
Classical and Modern Languages, Literatures, and Cultures:
485 Manoogian; 313-577-3002
Communication Sciences and Disorders: 207 Rackham Bldg.;
313-577-3339
Criminal Justice: 3291 Faculty/Admin. Bldg.; 313-577-2705
Economics: 2074 Faculty/Admin. Bldg.; 313-577-3345
Employment and Labor Relations, Master of Arts in:
5401 Cass, Walter P. Reuther Library; 313-577-0175
English: Rm. 9408, 5057 Woodward Avenue; 313-577-2450
Environmental Science Program: 0224 Old Main; 313-577-6412
Foreign Language Technology Center: 385 Manoogian;
313-577-3022
Gender, Sexuality & Women's Studies: 3063 Faculty/Admin. Bldg.;
313-577-6331
Geology: 0224 Old Main; 313-577-2506
History: 3094 Faculty/Admin. Bldg.; 313-577-2525
International Studies: 355 Manoogian; 313-577-8072
Jewish Studies: 3094 Faculty/Admin. Bldg.; 313-577-2525
Junior Year in Germany Program: 401 Manoogian; 313-577-4605
Labor Studies: 255 Reuther Library; 313-577-5382
Latino and Latin American Studies, Center for:
3324 Faculty/Admin. Bldg.; 313-577-4378
Linguistics: Rm. 10303.1, 5057 Woodward Avenue; 313-577-8642
Mathematics: 1150 Faculty/Admin. Bldg.; 313-577-2479
Nutrition and Food Science: 3009 Science Hall; 313-577-2500
Peace and Conflict Studies: 2320 Faculty/Admin. Bldg.;
313-577-3453
Philosophy: Rm. 1201, 5057 Woodward Avenue; 313-577-2474
Physics and Astronomy: 135 Physics; 313-577-2721
Political Science: 2040 Faculty/Admin. Bldg.; 313-577-2630
Psychology: 7th Floor, 5057 Woodward Avenue; 313-577-2800
Religious Studies: Rm 9203.1, 5057 Woodward Avenue;
313-577-8627
Sociology: 2228 Faculty/Admin. Bldg.; 313-577-2930
Urban Studies and Planning: 3198 Faculty/Admin. Bldg.;
313-577-2701

Website: <http://www.clas.wayne.edu>

Mailing address for all offices: (Department Name), College of Liberal Arts and Sciences, Wayne State University, 4841 Cass Avenue, Detroit, Michigan 48201

Interdisciplinary College Master's Degree Programs

Employment and Labor Relations

(M.A. Program)

Director: Marick Master's
Email: marickm@wayne.edu
Academic Services Officers: Linda J. Johnson
Email: ab1232@wayne.edu
Frank Koscielski
Email: ac2668@wayne.edu

Office: 5401 Cass (255 Walter P. Reuther Library); 313-577-0175;
or 313-577-7846; Fax: 313-577-5359

Website: <http://www.clas.wayne.edu/maelr/>

Advisory Committee

Economics: Allen Goodman
Management: James Martin
Psychology: Cary Lichtman

Faculty

Political Science: Michael Goldfield
Psychology: Cary Lichtman
Management: James Martin, Marick Master's

Part-Time Faculty

Michael Nowakowski, Arthur Schwartz, David Radtke, Reginald Jenkins,
Mark Gaffney, Edward Hartfield

The Master of Arts in Employment and Labor Relations (MAELR) is an inter-college as well as an interdisciplinary graduate degree program jointly sponsored by the Departments of Economics and Psychology in the College of Liberal Arts and Sciences, and Management and Information Systems in the School of Business Administration. Policy direction is provided by the Academic Policy Committee composed of one representative of each sponsoring department

MAELR is designed to provide professional preparation for a career in human resource management and labor-management relations. Students will be prepared in this discipline for positions in government, business and union organizations, and the program staff will assist in the appropriate job placement of its graduates. This program will also provide knowledge and skills for persons who contemplate entering or who are already engaged in self-employment involving labor relations, such as labor arbitration.

Admission

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Admission is limited to holders of baccalaureate degrees from accredited institutions and is granted only to those applicants who evidence promise of success in industrial relations study.

Admission to the program requires three letters of recommendation and completion of the program application form, in addition to the transcripts and the application form required by Graduate Enrollment Services. The letters of recommendation must be written by college or university professors under which the applicant has studied, and/or current or former employers. The Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT) is required of all applicants. Applications will be evaluated on the basis of the following: (1) the overall or upper-division grade point average; (2) GRE and GMAT scores; (3) applicant's performance in previous graduate courses, if any; (4) quality of the applicant's employment experience at increasing levels of responsibility; and (5) other appropriate indicators of successful performance as a graduate student, including the content of reference appraisals. Students applying to the program who have completed a graduate degree, may be exempt from submitting GRE and GMAT scores.

Prerequisites

Students who have been admitted but who do not possess all of the following prerequisites must remedy any deficiency, without graduate credit, before graduate courses are taken in the degree program: statistics (equivalent to ECO 5100, B A 2300, or EER 7630); introductory microeconomics (such as ECO 2010) and an equivalent of PSY 2100, Psychology in the Work Place. A grade of 'C' or better is required of all prerequisite courses.

Degree Requirements

MAELR is offered only as a Plan C master's program requiring the satisfactory completion of at least thirty-six credits in graduate course work, including a core curriculum of twenty-four credits and twelve electives:

The Core Curriculum is as follows:

- ECO 6480 – Advanced Economics of Work: Cr. 3
- ELR 7000 – Introduction to Labor and Employment Relations: Cr. 3
- ELR 7450 – Employment Relations Law in North America: Cr. 3
- ELR 8500 – Strategic Analysis of North American Labor and Human Resources Issues (Capstone course: prerequisites include all other Core Courses.): Cr. 3
- MGT 7640 – Management of Human Resources: Cr. 3
- MGT 7750 – Labor Relations and Collective Bargaining: Cr. 3
- MGT 7780 – Concepts and Processes of Dispute Resolution I: Negotiating Theory and Practice (D R 7210): Cr. 3
- PSY 6570 – Research Methods in Industrial/Organizational Psychology: Cr. 3

Selection of electives will be guided by the student's prior preparation and career objectives and will require the approval of the Program Director. Electives are not limited to courses offered by the sponsoring departments.

ELR 8500 should be taken in the last nine credits of the program and only after the completion of the six other Core Courses.

The topic and methodology of a Directed Study must have the prior approval of the Director, who must also approve the appointment of the faculty member who will supervise the project. For courses specifically associated with this program see Employment and Labor Relations Courses (ELR), p. 303

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

Retention

Graduate students in the MAELR program will be required to earn a 'B' (3.0) average to satisfy degree requirements. *If a grade below 'B' is received in a core course, that course must be repeated promptly and a grade of 'B' or better obtained. A grade of 'C' in two graduate courses will constitute a sufficient basis for dismissal from the program.*

Candidacy

Students are expected to file a Plan of Work when nine graduate credits in the MAELR curriculum have been earned. Upon approval of the Plan of Work the student's rank will be changed from 'applicant' to 'candidate' provided the applicant's grade point average is at least 3.0.

Waivers

A Core Course may be waived only if the student demonstrates, to the satisfaction of the Academic Policy Committee, that he/she has

completed an equivalent graduate-level course with a grade of 'B' or better and elects an additional approved elective course in its place.

Advising

All academic advising will be done by the Academic Services Officer. Students should call the MAELR Office (313-577-0175) for information on advising hours.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Aid, beginning under Financial Assistance, Graduate, p. 26 of this bulletin. The MAELR program awards a limited number of \$500.00 scholarships on a competitive basis.

Employment and Labor Relations Courses (ELR)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7000 Introduction to Labor and Employment Relations. Cr. 3

Introduction to the broad and changing field of labor and employment relations. Topics from the nature of work and role of labor in society to current labor and employment laws. (F)

7010 Health Care, Retirement, and Employee Benefit Plans. Cr. 3

Comprehensive understanding of employee benefits issues and practices. (F)

7400 Labor Relations Law in North America. Cr. 3

Federal and provincial regulation of union organizing, collective bargaining and union contract administration in the private sector. Content, administration and judicial interpretation of labor relations legislation in the United States, Mexico, and the Canadian province of Ontario. (Y)

7420 (PS 6070) Labor and American Politics. Cr. 3

Role of organized labor in American politics. Historical background, including rise of the UAW and its role in Detroit and Michigan politics. Recent declines; future of organized labor as a force in American politics. (B)

7430 Public Sector Labor Relations. (PS 6340) Cr. 3

Prereq: graduate standing. History, present functions, problems and current controversies surrounding public sector unions. (B)

7450 Employment Relations Law in North America. Cr. 3

Federal and state legislation affecting employee-employer relations: discrimination, pension, occupational safety and health, fair labor standards. Implementation of these policies, effect on worker-manager relations: Canada, Mexico, United States. Required core course. (S)

7550 Selected Topics in Industrial Relations. Cr. 3

Various topics to be offered on a limited basis to meet needs of students with special interests not covered by regular course offerings. (I)

7600 Internship in Employment and Labor Relations. Cr. 1-3 (Max. 3)

Prereq: enrollment in employment and labor relations program and written consent of director. Active involvement in employment and labor relations duties for an employer, union, government agency, or employment and labor relations professional; apprenticeship to a labor arbitrator; or other appropriate opportunity for industrial relations experience. At least eight hours per week; may be paid or unpaid. (T)

7700 Current and Future Trends in Collective Bargaining. Cr. 3

Prereq: four employment and labor relations program core courses. Collective bargaining, current and future directions; emphasis on joint union-management approach to developing programs improving the quality of work life through workers' involvement in the decision-making process; examination of practical procedures to initiate and implement such programs. (F)

7990 Directed Study. Cr. 1-3

Prereq: employment and labor relations program course in relevant field; prior approval of employment and labor relations program direc-

tor for topic and instructor. Intensive study of significant industrial relations topic against background of more general course work. Preparation of term paper required. (T)

7999 Master's Essay Direction. Cr. 3

Prereq: enrollment in employment and labor relations program; completion of 24 credits in employment and labor relations program; written consent of advisor. Plan B alternative to a three-credit elective course. Opportunity for intensive research and writing experience on relevant subject matter. (T)

8000 International Industrial Relations and Human Resources. (MGT 7810) Cr. 3

Prereq: MGT 7640, MGT 7750. Labor relations and human resource management from an international perspective. Topics include: international investment, industrial relations strategies of U.S. multinationals, international relations systems in North America, Western Europe, and Asia-Pacific regions. (I)

8500 Strategic Analysis of North American Labor and Human Resources Issues. Cr. 3

Prereq: completion of all core courses; must be taken as part of last nine credits in employment and labor relations program. Analysis on micro (game theory) and macro (planning) levels; integration of skills; student teams work as consultants for client organization on strategic labor or human resource problem. (Y)

Anthropology

Office: 3054 Faculty Administration Building; 313-577-2935
Chairperson: Andrea Sankar
Academic Services Officer: Susan Villerot
Graduate Director: Stephen Chrisomalis
Web: <http://clas.wayne.edu/anthropology>

Professors

Barbara C. Aswad (Emerita), Tamara Bray, Bernice A. Kaplan (Emerita),
Guerin Montilus, Mark Luborsky, Andrea Sankar

Associate Professors

Allen W. Batteau, Stephen Chrisomalis, Gordon L. Grosscup (Emeritus),
Thomas W. Killion, Barry Lyons

Assistant Professors

Yuson Jung, Julie Lesnik, Andrew Newman, Jessica Robbins-Ruszkowski,
Krysta Ryzewski

Graduate Degrees

MASTER OF ARTS with a major in Anthropology

DOCTOR OF PHILOSOPHY with a major in Anthropology

*DOCTOR OF PHILOSOPHY with a major in Social Work
and Anthropology*

Anthropology is a comparative social science that seeks to uncover principles that govern human behavior. Anthropology is divided into the fields of cultural, physical, archaeological, and linguistic anthropology. Wayne State's department offers a broad-based Master of Arts degree in anthropology. Additionally, the Ph.D. with a major in anthropology is offered in the major subfields of the discipline as well as specialties in urban, medical, business/organizational, and applied anthropology.

Today, anthropologists are employed in a wide range of areas. Some work in traditional institutions such as colleges, universities, and museums, but the general and specialized skills of anthropology also prepare them for employment in numerous other public and private settings. These include most notably health, governmental, international, and social agencies, business and organizational settings, and institutions supporting historic preservation and public archaeology. Accordingly, graduate programs in this department are designed to accommodate a variety of specific student interests and objectives.

Individuals who hold degrees in fields other than anthropology and desire admission to graduate degree programs will be individually reviewed. Admission will be granted at the discretion of the Graduate Committee after review of the applicant's background, training, and academic standing; supplementary work may also be individually prescribed.

Academic Scholarship: All course work completed to satisfy the following degree requirements must be done in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Admission Requirements, Graduate Programs, p. 299, respectively. All students are required to maintain a 'B' average. A grade of 'B-minus' or below in two courses will be sufficient reason to dismiss a student from a graduate program. For the purposes of evaluating this condition, a grade of 'WF' is considered to be a failing grade.

To repeat a course, a student will need to submit a "Petition to Repeat a Graduate Course" form to the Graduate Committee for consideration. Students may not repeat a class without prior approval.

The Department only allows two course repeats for a class where a student receives an insufficient grade.

Anthropology (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, applicants must satisfy the following:

- 1) The student must have completed Anthropology 2100 (Introduction to Anthropology) or its equivalent. Admission may be granted while this deficiency is remedied.
- 2) The student must submit three letters of recommendation.
- 3) The student must submit a letter of intent outlining his/her research interests and intentions in the field of anthropology, so that the Department may determine if the student's goals are compatible with its available expertise. The student may also mention any life history experience which may be helpful in the decision to admit.
- 4) A writing sample such as a research paper for a previous course.
- 5) The student may arrange for his/her Graduate Record Examination (GRE) scores to be sent to the Department if he or she wishes.
- 6) The student must have an undergraduate grade point average (g.p.a.) of at least 3.2. Admission may be granted in exceptional cases where the grade point average is less than 3.2. Admission is contingent upon g.p.a., GRE scores (if applicable), recommendations, the compatibility of research and educational goals with Departmental resources, and the availability of openings in programs with high demand.
- 7) All applications and admissions material must be submitted to the Office of Graduate Admissions by the following deadlines: October 1 for admittance to the Winter Semester, and January 15 for admittance in the following Fall Semester.

Each student must file a Plan of Work prior to completion of twelve credits

DEGREE REQUIREMENTS

Students pursuing the M.A. in anthropology have three options, referred to as Plans A, B, and C, below.

ANT 7005 is required for all first-year graduate students. Students who have not completed ANT 2100 or the equivalent as an undergraduate must complete this course with a grade of at least 'A-minus' within their first year of graduate studies (credits for this course do not apply toward the M.A.)

Students must petition to the Graduate Committee for any exceptions to the M.A. requirements.

Coursework: The following courses, or their equivalents, must be completed either as an undergraduate (see note below) or graduate student.

CORE: eighteen credits

- ANT 5140 – Biology and Culture: Cr. 3
- ANT 5270 – Concepts and Techniques in Archaeology: Cr. 3
- ANT 5320 – Language and Societies: Cr. 3
- ANT 5700 – Applied Anthropology: Cr. 3
- ANT 7005 – Thinking and Writing Anthropology: Cr. 3
- ANT 7010 – Anthropological Theory I: Cr. 3

METHODS OPTIONS: four credits (choose one in consultation with advisor)

- ANT 5210 – Anthropological Methods: Cr. 4
- ANT 5230 – Mixed Methods Research Methodology: Cr. 4
- ANT 5280 – Field Work in Archaeology of Americas: Cr. 4

ELECTIVES: nine credits

- ANT 7xxx – Seminar: Cr. 3
- ANT 7xxx – Seminar: Cr. 3
- Elective: Cr. 3

GRADUATION REQUIREMENTS (one of the following)

ANT 7900 – Synthesis (Plan C): Cr. 3

ANT 7999 – Essay (Plan B): Cr. 3

ANT 8999 – Thesis (Plan A): Cr. 8

Total Credits: 33-34

Students opting for Plan A (thesis) take ANT 8999 in lieu of the nine credits of electives. The M.A. thesis is an independent research project taking multiple terms and culminating in an oral defense. The M.A. essay, ANT 7999 is a shorter piece of independent work, often 30-60 pages double-spaced, and intended to be written within a single term. ANT 7900 is an integrative, holistic and comparative course that synthesizes diverse analytical perspectives and methodologies.

Students entering the M.A. program with a B.A. from WSU who have completed any of the core courses for undergraduate credit (with a grade of 'B' or better) do not need to repeat them, however, they must replace the credits with any other ANT 5000 or higher level course chosen in consultation with their advisor.

Students intending to apply for the Ph.D. program are strongly encouraged to take the second semester of theory, ANT 7020 (Anthropological Theory II), as an elective or seminar. For the student who does not intend to pursue a Ph.D., this course is also recommended for a comprehensive understanding of contemporary anthropological thought today.

Students wishing to specialize their degree in specific applied sub-fields may substitute the nine elective credits with one of the following course sets:

Medical Anthropology Concentration

ANT 5400 – Culture, Health, and Illness: Cr. 3

ANT 7420 – Anthropology Practicum: Cr. 3

One additional medical anthropology course: Cr. 3

Museum Studies Concentration

ANT 5600 – Museum Studies: Cr. 3

ANT 7420 – Anthropology Practicum: Cr. 3

ANT 7625 – Material Culture and Social Meaning of Things: Cr. 3

Business Anthropology Concentration

ANT 5800 – Anthropological Perspectives on Business: Cr. 3

ANT 7420 – Anthropology Practicum: Cr. 3

ANT 7700 – Seminar in Business and Industrial Anthropology: Cr. 3

Applied Archaeology Concentration

ANT 6555 – Cultural Resource Management and Public Archaeology: Cr. 3

ANT 6570 – Archaeological Laboratory Analysis: Cr. 3

ANT 7420 – Anthropology Practicum: Cr. 3

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Additional information regarding this program is available from the Department upon request.

Anthropology (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Only a limited number of applicants who have demonstrated superior ability can be accepted in this program.

In addition to the transcripts and other materials required by the Graduate School, the Department requires all materials cited above for admission to the Master of Arts program; curriculum vitae; writing sample, three letters of recommendation, and letter of intent. The GRE is also required. An applicant's admissibility into the doctoral

program will not be reviewed until all these materials have been received.

All application and admissions materials must be submitted to the Office of Graduate Admissions by January 15 to begin in the Fall semester.

The *Plan of Work* must be submitted before forty credits have been completed and before the qualifying examination is scheduled.

DEGREE REQUIREMENTS

The Doctor of Philosophy requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses ANT 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Once the student has attained candidate status, he/she is required to register for doctoral dissertation credits. Students must register for 9000-level credits (ANT 9991, 9992, 9993, and 9994) through the Graduate Office and must fulfill 7.5 9000-level credits each semester for four consecutive semesters (excluding spring-summer). All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Coursework: The following courses, or their equivalents, must be completed:

ANT 5140 – Biology and Culture: Cr. 3

ANT 5210 – Anthropological Methods: Cr. 4

ANT 5270 – Concepts and Techniques in Archaeology: Cr. 3

ANT 5320 – Language and Societies: Cr. 3

ANT 7005 – Thinking and Writing Anthropology: Cr. 3

ANT 7010 – Anthropological Theory I: Cr. 3

ANT 7020 – Anthropological Theory II: Cr. 3

ANT 7030 – Debates in Anthropology: Cr. 3

ANT 7780 – Conceptualizing the Dissertation: Cr. 3

ANT 7777 – Teaching Anthropology

METHODS OPTIONS:

ANT 7200 – Qualitative Research I: Cr. 3

ANT 7210 – Qualitative Research II: Cr. 3

OR

Six credits from:

ANT 5230 – Mixed Methods Research Methodology: Cr. 3

ANT 5280 – Fieldwork in Archaeology of the Americas: Cr. 3

ANT 6570 – Archaeological Laboratory Analysis: Cr. 3

Nine credits of 7000-level coursework within Anthropology

Three credits of graduate work in a discipline other than Anthropology

13 credits of graduate level electives

A minimum of thirty credits of graduate work must be at the 7000 level or above (excluding dissertation credits). Students must petition the Graduate Committee for course equivalents, substitutes, or any other exceptions to the Ph.D. requirements. The student is expected to command in detail theories, concepts, methodology, and research techniques in common usage in the student's subfield of concentration (cultural anthropology, linguistics, archaeology, or physical anthropology).

In the Qualifying Examinations, the student must demonstrate, by written examination, competence in depth in at least three areas of specialization relating to the dissertation topic, including mastery of a broad range of theoretical materials and an ability to think and write analytically. After passing the Qualifying Examinations and prior to

beginning fieldwork, the student must submit the following documents:

- a) an oral defense of the dissertation prospectus and an approved doctoral dissertation outline and record of approval form;
- b) a prospectus; and
- c) a Human Investigations Committee Behavioral Protocol Summary Form, when applicable.

Additionally, the student is expected to:

1. complete substantial field research, which will ordinarily be of sufficient duration and scope to provide materials for the student's dissertation (in the case of physical anthropology and some other specializations, the dissertation may be based on laboratory research); and
- 2). submit an acceptable dissertation and present a final lecture.

Foreign Language Requirement: Doctoral students must demonstrate a proficiency in an approved scholarly language. Approved foreign languages include (but are not limited to) Arabic, Chinese, French, German, Italian, Japanese, Portuguese, Russian and Spanish. Proficiency may be demonstrated in any of the following ways:

1. a grade of 'C' or better in one and one-half years of work in the language offered to meet the requirement (three semesters or five quarters of coursework at any accredited college or university);
2. satisfactory performance on a standardized (Educational Testing Services) examination; or
3. certification of competence to carry out research in the relevant language by a member of the graduate faculty of Wayne State or an equivalent university. The nature of the tools of research and requirements for satisfactory proficiency will be determined by each student's doctoral committee. Additionally mandated tools of research may include additional statistics, mathematics, computer science and/or a field language.

Additional Information: A more detailed discussion of the doctoral program is available from the department or on our website: <http://clas.wayne.edu/anthropology> See also Doctor of Philosophy Degrees (Ph.D.), p. 38, for information on the required minor, residency, and other University requirements.

Social Work/Anthropology SWAN (Ph.D. Program)

Students can apply to earn a doctorate in Social Work and Anthropology (SWAN). The joint Social Work/ Anthropology Ph.D. program draws on the strengths of both fields in theory, social history, research, policy and practice. The SWAN program combines the approaches of each field to make use of its urban location to foster scholarship focusing on global issues of 21st century post-industrial cities and how these cities are being re-invented. Students will receive a thorough grounding in the theoretical and applied aspects of both Social Work and Anthropology and will apply this knowledge to pursue scholarship in areas of interest focusing on urbanism, internationalism, and social/cultural organization. SWAN students follow a curriculum that draws from existing courses in each field with the addition of one new core course that fully integrates the two disciplines. Specific new content combining the perspectives of both disciplines is included in the MA/MSW level practica, the qualifying exam requirements, and dissertation research to meet the educational requirements of this degree.

This program prepares scholars for work in several different occupations. Graduates are qualified for faculty positions in social work or anthropology. In addition, they are highly qualified for positions in governmental or non-profit agencies that work in urban or international development.

Academic Scholarship: All course work completed to satisfy the following degree requirements must be done in accordance with the regulations of the Graduate School; see Academic Regulations, Graduate, p. 32. All students are required to maintain a 'B' average. A grade of 'B-minus' or below in two courses will be sufficient reason to dismiss a student from a graduate program. For the purposes of evaluating this condition, a grade of 'WF' is considered to be a failing grade.

To repeat a course, a student will need to submit a "Petition to Repeat a Graduate Course" form to the Graduate Committee for consideration. Students may not repeat a class without prior approval. The program only allows two course repeats for a class where a student receives an insufficient grade.

Admission to this program is contingent upon admission to the Graduate School; for requirements, Admission, Graduate School, p. 17. Only a limited number of applicants who have demonstrated superior ability can be accepted in this program.

In addition to the transcripts and other materials required by the Graduate School, Admission. Applicants must apply for admission to either the Social Work or Anthropology Ph.D. program and then request admission to the SWAN program. They must meet the admissions standards of the Graduate School and the SWAN program. Students who do not possess an MSW must also apply to the MSW program after alerting the SW doctoral chair of their application to the SWAN program. All application and admissions materials must be submitted to the Office of Graduate Admissions by January 15 to begin in the Fall semester.

The Plan of Work must be submitted before forty credits have been completed and before the qualifying examination is scheduled.

DEGREE REQUIREMENTS

The Doctor of Philosophy requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses SW 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Once the student has attained candidate status, he/she is required to register for doctoral dissertation credits. Students must register for 9000-level credits (SW 9991, 9992, 9993, and 9994) through the Graduate Office and must fulfill 7.5, 9000-level credits each semester for four consecutive semesters (excluding spring-summer). All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Coursework: The following courses, or their equivalents, must be completed by students without an MSW:

Social Work - Practice/Policy Courses (Foundation)

- SW 7040 - Methods of SW Practice: Cr. 3
- SW 7998 - Concentration Field Work I: Cr. 4-6 (Max. 12)
- SW 7055 - Foundations Group Theory & Practice: Cr. 3
- SW 7065 - Foundations Macro Theory & Practice: Cr. 3
- SW 7720 - Introduction to Social Welfare Policy in the United States: Cr. 3
- Social Work - Practice Courses (Community Concentration)
- SW 8048 Social Action Research and Evaluation: Cr. 3
- SW 8035 Techniques of Quantitative Data Analysis: Cr. 1
- SW 8045 Techniques of Data Interpretation and Presentation: Cr. 1
- SW 8075 Community Building/Development: Cr. 4

Coursework: The following courses, or their equivalents, must be completed by ALL students:

Social Work - Research/Theory

- SW 9100 - Social Statistics & Data Analysis: Cr. 3
- SW 9210 - Theories for Practice & Research with Individuals: Cr. 3
- SW 9220 - Theories for SW Research & Practice with Families/Groups: Cr. 3
- SW 9230 - Theories for Practice & Research w/ Communities/Organizations: Cr. 3
- SW 9300 - Applied Regression and Linear Models: Cr. 3
- SW 9410 - Quantitative Research in Social Work: Cr. 3

Anthropology - Research/Theory

- ANT 5060 - Urban Anthropology: Cr. 3
- ANT 5140 - Biology and Culture: Cr. 3
- ANT 5320 - Language and Society: Cr. 3
- ANT 5700 - Applied Anthropology: Cr. 3
- ANT 7010 - Anthropological Theory I: Cr. 3
- ANT 7020 - Anthropological Theory II: Cr. 3
- ANT 7200 - Qualitative Research I: Cr. 4
- ANT 7210 - Qualitative Research II: Cr. 3
- ANT 7780 - Conceptualizing the Dissertation: Cr. 3
- Two (2) ANT electives in the student's research area

SWAN - Theory

- SW 9697 - Integrative Seminar in Social Work and Anthropology: Cr. 3

A minimum of thirty credits of graduate work must be at the 7000 level or above (excluding dissertation credits). Students must petition the Graduate Committee for course equivalents, substitutes, or any other exceptions to the Ph.D. requirements. Students who do not enter with program with an MSW will need to complete all the courses above.

Qualifying Exams: The SWAN steering committee will design and administer the SWAN qualifying examinations so that students can demonstrate the breadth, depth and mastery of their theoretical and empirical knowledge related to social work and anthropology theory, research methods and data analysis approaches as well as their substantive domain of knowledge. Students will demonstrate this knowledge through a written examination consisting of four sections: (1) statistics, (2) culture area, (3) research methods, and (4) a substantive paper demonstrating students' application of social science theory and SWAN knowledge to their intended research domain.

The statistics exam will be an in-school, open book exam developed by faculty teaching the required statistics courses. For the take home theory, topic area and substantive paper components, students will, in consultation with their academic advisers, select a three-person examination committee consisting of social work and anthropology faculty. These examination committee members will meet with students to develop reading lists and questions that students will then address in written take-home exams.

Students who fail one or more sections of the qualifying examination will be expected to retake only those sections that they failed. Students who fail one or more sections of the examination for a second time will be dismissed from the program.

Foreign Language Requirement: Students doing SWAN research fieldwork in non-English speaking settings will be expected to have 3 semesters of a foreign language or demonstrate fluency in their field language. These students need to take classes to complete the Anthropology Foreign Language requirement (3 semesters of the same foreign language at the undergraduate level; language credits do not count towards the 90 credits needed for a Ph.D.).

1. a grade of 'C' or better in one and one-half years of work in the language offered to meet the requirement (three semesters or five quarters of coursework at any accredited college or university);
2. satisfactory performance on a standardized (Educational Testing Services) examination; or
3. certification of competence to carry out research in the relevant language by a member of the graduate faculty of Wayne State or an equivalent university. The nature of the tools of research and requirements for satisfactory proficiency will be determined by each stu-

dent's doctoral committee. Additionally mandated tools of research may include additional statistics, mathematics, computer science and/or a field language.

Additional Information: A more detailed discussion of the doctoral program is available from the School or on our website: <http://clas.wayne.edu/swan> See also Doctoral Degree Requirements, p. 300, for information on the required minor, residency, and other University requirements.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin. The following information pertains to the Anthropology Department:

Assistantships and Fellowships

A limited number of assistantships and fellowships are available. Consult the Department Chairperson or Academic Services Officer for further details.

Leonard Moss Memorial Scholarship: One or more awards are made annually to graduate students in support of tuition or an outstanding research proposal.

Barbara C. Aswad Award: Awards are made annually to graduate students to support research in cultural anthropology.

Anthropology Courses (ANT)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5060 Urban Anthropology. (SOC 5540) Cr. 3

Prereq: ANT 2100 or graduate status. Social-cultural effects of urbanization from a cross-cultural perspective with emphasis on the developing area of the world. The process of urbanization; the anthropological approach in the area of urban studies. (Y)

5140 Biology and Culture. Cr. 3

Prereq: ANT 2100 or 2110, or graduate status. Interrelationships between the cultural and biological aspects of humans; human genetic variability, human physiological plasticity and culture as associated mechanisms by which humans adapt to environmental stress. (F)

5165 Shop 'Til You Drop: Consumer Society and Culture. Cr. 3

Why do we want things that we don't need? Are we bound to consumerism in the global age? This course offers an overview of consumer society and examines consumption practices cross-culturally from an anthropological perspective. (B)

5170 Political Anthropology. Cr. 3

Prereq: ANT 2100 or graduate status. Ethnographic and comparative study of power, politics, and political organizations in non-state and state societies and in the colonial encounter; evolutionary, functionalist, practice-oriented, Marxist, feminist, and Foucauldian approaches to the study of power. (I)

5180 Forensic Anthropology. Cr. 3

Prereq: CRJ 1010 or ANT 2110 or graduate status. Introductory survey of the natural, medical, and behavioral sciences with regard to forensic applications. Topics may include: toxicology, forensic pathology, fingerprints, ballistics, analysis of the human skeleton, body fluid identification. (Y)

5210 Anthropological Methods. Cr. 4

Prereq: ANT 2100 or graduate status. Required for majors. Intensive introduction to research methods, techniques and issues in anthropology. Students engage in a research experience supervised by the instructor, write a field journal, and complete a final exam. Exercises focus on data collection, data management, and data analysis. Techniques include participant observation, fieldnotes, and interviewing. Students learn how to use software packages employed by anthropological researchers in the computer lab. (F,W)

5230 Mixed Methods Research Methodology. Cr. 4

Prereq: ANT 2100 and ANT 5996. Introduction to statistics for students already trained in anthropological or qualitative methods; statistical concepts and techniques. (F)

5240 Cross Cultural Study of Gender. Cr. 3

Prereq: ANT 2100 or graduate status. Evolutionary and cultural bases of gender roles using a world sample; division of labor, marriage and sexual behavior, power and ideology. (I)

5260 The African Religious Experience: A Triple Heritage. (AFS 5260) Cr. 3

A triple heritage has contributed to the shaping of lives of African descent: the indigenous, Islamic and Christian religions. Analysis of these legacies, their specificity, interplay and significance in Africa, the Caribbean, South and North America. (I)

5270 Concepts and Techniques in Archaeology. Cr. 3

Prereq: ANT 2100 or 3200 or graduate status. For advanced upper-level undergraduates with a background in anthropology, and graduate students. Current theoretical and methodological approaches to investigation of past societies; frameworks include culture history, processual, structuralist, neo-Marxist; methods and techniques used to investigate ancient environments, subsistence strategies, ideologies, and social, political and economic organizations. (W)

5280 Field Work in Archaeology of the Americas. Cr. 4

Prereq: written consent of instructor; ANT 5270 recommended. Introduction to reconnaissance and excavation of sites; preparation and cataloging of specimens; analysis of data. Material Fee As Indicated In The Schedule of Classes (S)

5320 Language and Societies. (LIN 5320) Cr. 3

Prereq: ANT/LIN 3310 or graduate status. For graduate students and advanced undergraduates with a background in linguistic anthropology. Students read classic and contemporary works of linguistic anthropology to expand knowledge of human language and sociality; conduct a major original research project. (W)

5370 Magic, Religion and Science. Cr. 3

Prereq: ANT 2100 or graduate status. The nature and variety of religious belief and practice; theoretical interpretations. (B)

5400 Anthropology of Health and Illness. Cr. 3

Prereq: ANT 2100 or graduate status. Concepts and theory in medical anthropology from cultural and biological perspectives. Topics include: cross-cultural aspects of sex and gender in health and illness, life course, sexuality, birth and death, biocultural approaches to healing and treatment, international health and epidemiology. (B)

5410 Anthropology of Age. Cr. 3

Prereq: ANT 2100 or graduate status. Cultural construction of the life course; age categories such as childhood and old age examined from cross-cultural, historical, political and economic perspectives. Special attention to women's aging; role of biology and ethnicity in aging and death and dying. (B)

5420 Anthropology Practicum. (ANT 7420) Cr. 3

Prereq: written consent of instructor. Field placement in a service agency or other organization. Students provide volunteer assistance to an agency while conducting participant observation research exercises. Utilization of field experience to learn about a variety of research issues and methodologies. (Y)

5430 (NUR 7515) End-of-Life Issues. (ANT 7430) (SOC 5020) (SOC 7020) Cr. 3-4

Physical, spiritual, legal, economic, political, cultural, and ethical issues at the end of life, examined as stories about individuals, families, and communities. (Y)

5500 Historical Archaeology. Cr. 3

Prereq: ANT 3200 or graduate status. Methods and theoretical approaches of historical archaeology, the archaeology of the modern world (post-1500 AD). Case studies drawn from around the world which converge on major topics and debates within the sub-field. (I)

5510 Pre-Columbian and Mesoamerican Civilization. (LAS 3510) Cr. 3

Prereq: ANT 2100 or graduate status. Survey of the history and characteristics of cultures in Mesoamerica prior to and after colonization, from the Olmec and Maya to the Aztec and their descendants. (B)

5515 Archaeology of the Atlantic World. Cr. 3

Focus is on Caribbean, American, and African colonies over the past 500 years. Topics include: slavery, colonization, migration, diaspora, social inequality, material culture, and maritime. (B)

5565 Urban Archaeology. Cr. 3

Introduction to urban archaeology. Case studies from modern and historic-period North and South America, Europe, and Australia. Special emphasis on Detroit's archaeology and how it is used to understand the city's changing urban fabric over time. (B)

5600 Museum Studies. Cr. 3

Introduction to basics of museums, museum work, and museum theory. Topics include: collections management, data bases, interpretive exhibit methods, current issues in museum studies, legal concerns, role of museums as educational institutions. (I)

5700 Applied Anthropology. Cr. 3

Prereq: ANT 2100 or ANT 7005. The application of anthropological concepts and methods to contemporary issues of public concern in the United States and abroad. (F)

5800 Anthropological Perspectives on Business. Cr. 3

Implications of applying the term "business" to a field or activity. Anthropological approaches to the question of how business differs from other forms of authority and commerce, particularly outside the modern, Euro-American sphere. (T)

5900 Culture, Language and Cognition. (LIN 5900) (PSY 5900) Cr. 3

Undergrad. prereq: ANT/LIN 3310 or PSY/LIN 3080 or ANT/LIN 5320; grad. prereq: graduate status. Systematic investigation of the relationships among, language, cognition and culture, including issues relating to human universals, cross-cultural concept formation, metaphor, classification and the evolution of cognition and language. (B:W)

6290 Culture Area Studies. Cr. 3 (Max. 9)

Prereq: ANT 2100 or graduate status. Culture and social changes. Origins and functional relationships, regional variation in population, settlement, culture contact, religion, migration, social institutions. Topics to be announced in Schedule of Classes. (I)

6420 Economic Anthropology. Cr. 3

Prereq: ANT 2100 or graduate status. Use of economic analysis in anthropology. Difference between Western and non-Western economies and economic models; methods of analysis of non-Western economies and non-rationalized sectors of Western economies. (B)

6510 The Inca and their Ancestors. Cr. 3

Prereq: ANT 2100 or ANT 3200 or graduate status. Study of pre-Columbian cultures of South America. Archaeological and ethnohistorical data beginning with the Inca; foundations of Inca civilization; major cultures from different regions and periods in South American prehistory. (B)

6550 Practicum in Archaeology. Cr. 2-4 (Max. 8)

Prereq: ANT 5270 or ANT 5280. Emphasis on application of theory, practice, and research. Topics include: cultural resource management, ceramic analysis, settlement pattern studies, materialities, historical archaeology, archaeological data management. (Y)

6555 Cultural Resource Management and Public Archaeology. Cr. 3

Prereq: ANT 5270 or ANT 5280. Practicum focuses on historical development of cultural resource management (CRM) in the U.S.; contemporary regulatory framework of CRM; practical experience in project planning, proposal writing, archival research, project management and the reporting process. (B)

6570 Archaeological Laboratory Analysis. Cr. 3

Prereq: ANT 5270 or ANT 5280. Introduction to basic laboratory methods for the analysis of archaeological artifacts from both prehis-

toric and historic period using materials housed in the collections of the Museum of Anthropology. (B)

6650 Studies in Physical Anthropology. Cr. 2-4 (Max. 12)

Prereq: ANT 2110 or graduate status. Selected topics in physical anthropology. Topics to be announced in Schedule of Classes. (I)

6680 Studies in Cultural Anthropology. Cr. 2-4 (Max. 12)

Prereq: ANT 2100 or graduate status. Selected topics in cultural anthropology. Topics to be announced in Schedule of Classes. (I)

6990 Grant Proposal Writing for the Social Sciences. Cr. 3

Prereq: graduate status. Grant and proposal writing organized around elements of writing and research design; includes defining the research question, problem orientation, research objectives, funding sources, target audience, and project evaluation. (B)

6992 Field Practicum in Business/Organizational Anthropology. Cr. 2-8

Students gain firsthand experience in conceptualizing, conducting, and/or implementing applied research in business and other organizations. (I)

7005 Thinking and Writing Anthropology. Cr. 3

Required for first-year graduate students. Critical reading of classical and contemporary ethnographies (anthropological descriptions and interpretations of societies and cultures, based on fieldwork). Analysis of theoretical approaches to the study of culture, social relations, and social organizations; ethnographies in historical and comparative perspectives; nature of ethnographic representation and knowledge. (F)

7010 Anthropological Theory I. Cr. 3

Examination of some major debates in anthropology in historical and contemporary perspective; continuities and breakthroughs. (W)

7020 Anthropological Theory II. Cr. 3

Prereq: ANT 7010. Required for Ph.D. students. Continuation of ANT 7010. (Y)

7030 Debates in Anthropology. Cr. 3

Prereq: ANT 7020 and registration in the Ph.D. program in Anthropology. Offered for S/U grades only. Advanced seminar on enduring questions and key debates in anthropological thought over its history, including different subfields and allied social sciences. (W)

7200 Qualitative Research I. Cr. 4

Prereq: ANT 7010 or 7020. Qualitative methods techniques and research design. Students conduct independent field research and learn data collection methods. (B)

7210 Qualitative Research II. Cr. 3

Prereq: ANT 7200. Students continue their field research and learn to analyze and draw theoretical conclusions from their data. Training in computer and other tools for data analysis and theory building. (B)

7260 (UP 7260) Urban Poverty and Racial Segregation. (AFS 6600) (PS 7260) (SOC 7350) Cr. 3

Review of theories of poverty from various economic/political perspectives; historical intervention policies; current literature on interplay of racial, economic, and spatial factors on growing economic inequality among urban whites and African-Americans. Political rationale and meaning of "underclass" debate. (B)

7420 (ANT 5420) Anthropology Practicum. Cr. 3

Field placement in a service agency or other organization. Students provide volunteer assistance to an agency while conducting participant observation research exercises. Utilization of field experience to learn about a variety of research issues and methodologies. (Y)

7430 (NUR 7515) End-of-Life Issues. (ANT 5430) (SOC 5020) (SOC 7020) Cr. 3-4

Physical, spiritual, legal, economic, political, cultural, and ethical issues at the end of life, examined as stories about individuals, families, and communities. (Y)

7605 Seminar in Problems and Concepts in Medical Anthropology. Cr. 1-9 (Max. 9)

Topics to be announced in Schedule of Classes. (I)

7620 Seminar in Problems and Concepts in Archaeology. Cr. 3 (Max. 15)

Central concepts and theories. Current developments, problems and contemporary research orientations. Topics to be announced in Schedule of Classes. (B)

7625 Material Culture and the Social Meaning of Things. Cr. 3

Our relationship with objects, and various ways of looking at material culture as part of our social world. Understanding and appreciation of the materiality of our lives and the lives of peoples of different cultures. (B)

7630 Seminar in Problems and Concepts in Cultural Anthropology. Cr. 2-3 (Max. 9)

Central concepts and theories. Current developments, problems and contemporary research orientations. Topics to be announced in Schedule of Classes. (Y)

7635 Globalization and Culture. Cr. 3

Focuses on the discourse, debates, and practices of globalization from an anthropological perspective. Fast-paced seminar course for graduate students. Topics include: globalization, localization, and anti-globalization; citizenship and belonging; modernity; transnationalism; migration and diaspora; global food systems; consumption and production; popular culture; religion; development; methodological issues in studying global phenomena. (F)

7650 Seminar in Physical Anthropology. Cr. 3

Current developments, problems, research orientations. Topics to be announced in Schedule of Classes. (B)

7665 Seminar in Linguistic Anthropology. (LIN 7665) Cr. 3

Prereq: ANT/LIN 5320. Central concepts and theories. Current developments, problems and contemporary research orientations. Topics to be announced in Schedule of Classes. (I)

7680 Medical Anthropology I. Cr. 3 (Max. 6)

Required of students in medical anthropology concentration. Core concepts and theoretical approaches, including: aging, life course, childhood, old age, disability, chronic illness, infectious disease, international health, organization of health care institutions, health policy, political economy of health, women's health, reproduction, technology, the body, bioethics, culture and cognition, death and dying, race and ethnicity, violence, sex and sexuality. (B)

7690 Medical Anthropology II. Cr. 3

Required of students in medical anthropology concentration. Continuation of ANT 7680. (B)

7700 Seminar in Business and Industrial Anthropology. Cr. 3-9

Applications of anthropology to domestic and international business and industrial practices. Topics include: technology, material culture, and consumption; industrial anthropology; organizational culture and reform; anthropology of capitalism; globalization. (B)

7745 (NUR 7745) Immigration and Health. Cr. 3

Interdisciplinary distance-learning course that focuses on worldwide migration across international borders, and its health-related effects on individuals, families and nations. (Y)

7777 Teaching Anthropology. Cr. 1

Teaching anthropology at the college level, including pedagogical philosophies and practical strategies. (F)

7780 Conceptualizing the Dissertation. Cr. 3

Basic concepts, practices, and skills needed to develop and present a grant proposal for funding. (W)

7900 Synthesis. Cr. 3

Prereq: ANT 7005 and ANT 7010; minimum 21 anthropology graduate credits completed. Integrative, holistic, and comparative examination of anthropology as the synthesis of diverse analytic perspectives and methodologies. (W)

7987 Directed Study in Business/Organizational Anthropology. Cr. 1-9 (Max. 9)

Prereq: written consent of instructor and graduate officer. Research problem which involves fieldwork or intensive and systematic reading of original technical literature. (T)

7990 Directed Study in Physical Anthropology. Cr. 1-8 (Max. 8)

Prereq: written consent of instructor and graduate officer. (T)

7991 Directed Study in Linguistics. (LIN 7991) Cr. 1-9 (Max. 9)

Prereq: written consent of instructor and graduate officer. Open only to graduate students. A research problem which requires field work or intensive and systematic reading of original technical literature. (T)

7992 Directed Study in Archaeology. Cr. 1-9 (Max. 9)

Prereq: written consent of instructor and graduate officer. Open only to graduate students. A research problem which requires field work or intensive and systematic reading of original technical literature. (T)

7993 Directed Study in Cultural Anthropology. Cr. 1-9 (Max. 9)

Prereq: written consent of instructor and graduate officer. Open only to graduate students. A research problem which requires field work or intensive and systematic reading of original technical literature. (T)

7994 Directed Study in Medical Anthropology. Cr. 1-9 (Max. 9)

Prereq: written consent of instructor and graduate officer. Open only to advanced graduate students. Research problem requiring intensive study of original documents, specialized literature, and/or field research with write-up. (T)

7995 Directed Study. Cr. 1-9 (Max. 9)

Prereq: written consent of advisor and graduate officer. (T)

7998 Field Problem. Cr. 1-9 (Max. 9)

Prereq: written consent of advisor and graduate officer. Open only to graduate students. A research problem which requires field work or intensive and systematic reading of original technical literature. (T)

7999 Master's Essay Direction. Cr. 3

Prereq: written consent of advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ANT 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ANT 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ANT 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ANT 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ANT 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ANT 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ANT 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Biological Sciences

Office: 1360 Biological Sciences

Phone: 313-577-2873

Fax: 313-577-6891

Chairperson: David L. Njus

Associate Chairperson: Edward M. Golenberg

Academic Staff: Antoinette Cunningham, Anne Holtvluwer, Krystyn Purvis, Rebecca Russell, Michelle Serreyn, Kimberly Walkowiak Hunter

Web: <http://clas.wayne.edu/biology>

Professors

Robert Arking, David R. Cook (Emeritus), Thomas E. Dowling, D. Carl Freeman, Markus Friedrich, Stanley K. Gangwere (Emeritus), Edward M. Golenberg, Miriam Greenberg, Garrett Heberlein (Emeritus), R. Anton Hough (Emeritus), Victoria Meller, Hiroshi Mizukami (Emeritus), William S. Moore (Emeritus), David L. Njus, Claude M. Rogers (Emeritus), John D. Taylor (Emeritus), William L. Thompson (Emeritus), James D. Tucker (Emeritus), Mark VanBerkum

Associate Professors

Athar Ansari, Karen A. Beningo, Philip R. Cunningham, V. Hari (Emeritus), Daniel M. Kashian, Donna Kashian, Lori Pile, Aleksandar Popadic, Ann Sodja, Christopher Steiner

Assistant Professors

Joy Alcedo, Arun Anantharam, Chuanzhu Fan, Haidong Gu, Weilong Hao, Penelope I. Higgs, Jared Schrader, Xiang-Dong Zhang

Assistant Professor, Research

Karen Myhr

Lecturers

Jyoti Nautiyal, Robert A. Thomas, Nataliya Turchyn

Graduate Degree

MASTER OF ARTS with a major in Biological Sciences

MASTER OF SCIENCE with a major in Biological Sciences

*MASTER OF SCIENCE with a major in Molecular
Biotechnology*

*DOCTOR OF PHILOSOPHY with a major in Biological Sciences
and specializations in molecular biology and biotechnology;
cell development and neurobiology; evolution and organismal
biology*

Biological Sciences (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants are expected to have attained a level of scholarship in the baccalaureate program equal to a grade point average of 3.0 or better, including adequate preparation in biological sciences and supporting courses in chemistry, physics and mathematics. Normally, the entering student will be expected to have fulfilled the equivalent of the requirements for the Bachelor of Arts (or Bachelor of Science) degree at Wayne State University and to satisfy any deficiencies by course work before becoming a candidate for the advanced degree.

DEGREE REQUIREMENTS

The Department offers the Master of Arts degree under the *Plan C* option requiring thirty-two credits of coursework, all of which must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Admission Requirements, Graduate Programs, p. 299. Course requirements include the following:

Plan C: *Thirty-two credits in course work are required, with a minimum of seven graduate level courses completed in the Department of Biological Sciences. Cognate credits may be taken in other College of Liberal Arts and Sciences departments, the College of Education, or the School of Medicine with approval from the Departmental Graduate Officer. All students must meet with the Departmental Graduate Officer, Dr. Edward Golenberg, once each semester for approval of course selections.*

Students must elect courses according to Departmental requirements. Course requirements are available online at: <http://clas.wayne.edu/Biology/UndergraduatePrograms>

Candidacy: Applicants become degree candidates after completing twelve credit hours of course work and filing a Plan of Work which must be approved and signed by the Departmental Graduate Officer.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Biological Sciences (M.S. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants are expected to have attained a level of scholarship in the baccalaureate program equal to a grade point average of 3.0 or better, including adequate preparation in biological sciences and supporting courses in chemistry, physics and mathematics. Normally, the entering student will be expected to have fulfilled the equivalent of the requirements for the Bachelor of Science degree at Wayne State University and to satisfy any deficiencies by course work before becoming a candidate for the advanced degree. The general portion of the Graduate Record Examination (GRE) is required for admission to the Master of Science program. Admission is granted for the Fall Semester only.

DEGREE REQUIREMENTS

The Department offers the Master of Science degree under the *Plan A* option.

Requirements include the following:

Plan A: *Twenty-three credits in course work, plus a thesis (eight credits) based on completion of a research program.*

Under *Plan A*, the eight credits of thesis work must be in original laboratory or field research under the direction of the student's major advisor. At least twenty-four of the total credits must be from the Department of Biological Sciences. A final oral examination is required, based on the candidate's course work and research.

Students must complete one semester of two laboratory rotations before choosing an advisor. Students must elect courses according to Departmental requirements, including a core curriculum and electives determined by the student's graduate advisor with review and approval by the Graduate Committee Chairperson and the Department Graduate Officer, Dr. Edward Golenberg. Course requirements are available online at: <http://clas.wayne.edu/biology/MSCurriculum>

Candidacy: Applicants become degree candidates after completing twelve credit hours of course work and filing a Plan of Work which must be approved and signed by the Departmental Graduate Officer.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Molecular Biotechnology (M.S. Program)

The Molecular Biotechnology Program is a career-oriented program specifically designed to educate and train technically-oriented people in both the theory and practice of modern biotechnology. The program's main emphasis is on the application of these skills through integration of classroom, laboratory, and research experiences.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants are expected to have attained a level of scholarship in the baccalaureate program equal to a grade point average of 3.0 or better, including adequate preparation in biological sciences and supporting courses in chemistry, physics and mathematics. The general portion of the Graduate Record Examination (GRE) is required. An introductory genetics course and a microbiology course passed with grades of 'B' or better are required, and completion of an introductory biochemistry course is strongly recommended. Deficiencies in course work must be completed before beginning the program. Students may enter in the Fall semester only.

DEGREE REQUIREMENTS

This program is offered as a specially approved Plan C master's program only, requiring sixty-nine credits. All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Course requirements are available online at: <http://clas.wayne.edu/biology/BioTechCurriculum>

Candidacy: Applicants become degree candidates after completing twelve credit hours of coursework and filing a Plan of Work which must be approved and signed by the Departmental Program Director.

Course work will be completed in accordance with the schedule set by the Program's Director, Dr. Athar Ansari. Students must consult with Dr. Ansari, each semester prior to registration.

Biological Sciences (Ph.D. Program)

Admission: In addition to the requirements of the Graduate School (see Admission, Graduate School, p. 17), the applicant should have completed a bachelor's or master's degree with a major in a biological or other science. Applicants who have completed degrees in other disciplines will be considered on an individual basis.

Applicants must submit scores for the general portion of the Graduate Record Exam (GRE). The approval of the Department of Biological Sciences Graduate Admissions Committee is required for admission of applicants. Three letters of reference must be submitted, along with a statement of the Candidate's goals and career objectives. Admission is granted for the Fall Semester only.

DEGREE REQUIREMENTS

The Doctor of Philosophy degree requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses BIO 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respec-

tively), in consecutive academic year semesters. The remaining sixty credits must include the following:

- a) at least twelve credits in Biological Sciences course work from a core curriculum;
- b) no more than thirty-two credits in BIO 7996, Research Problems;
- c) one semester (minimally) of BIO 9996, Lab Rotation;
- d) two semesters of BIO 8995, Graduate Seminar in Biology;
- e) thirty credits in course work at the 7000-level or higher, exclusive of doctoral dissertation research. Six of those credits must be in courses exclusive of BIO 7996, BIO 8995, and BIO 8999.

Course requirements are available online at: <http://clas.wayne.edu/Biology/PhDProgram>

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Qualifying examinations are administered in two parts. The first part is a written test which is taken during one of three testing periods, July at the end of the first two semesters, November in the second year, or April in the second year. A list of examination topics will be generated by the student's dissertation advisory committee at least two months before the scheduled exam.

Students who pass the written qualifying examination take the oral examination within one year of the written test. Students are required to complete a written prospectus of their dissertation research, in the form of a grant proposal. The oral examination will include, but not be limited to, a defense of the prospectus. The examiners will be members of the student's dissertation advisory committee. The oral examination is graded on a pass/fail basis.

Candidacy status is reached after the Plan of Work has been approved, the written and oral portions of the qualifying examination have been passed, approximately fifty credits have been completed, and the student's dissertation advisory committee has been named.

Teaching/Research Requirement: Every doctoral student is required to teach at least two semesters or have equivalent teaching experience.

Continuance in the doctoral program depends upon satisfactory progress as determined by the student's Dissertation Committee with the Departmental Chairperson as an *ex officio* member.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Teaching and research assistantships, as well as fellowships, are available to qualified graduate students. Inquiries and applications should be directed to the Chairperson of the Graduate Committee, Department of Biological Sciences.

Summer research stipends are also awarded to selected students.

Biological Sciences Courses (BIO)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

Most laboratory courses have a non-refundable materials fee and are so indicated in the Schedule of Classes.

5040 Biometry. Cr. 4

Prereq: BIO 3070 or 4130; and MAT 1800, with grades of C-minus or above. Quantitative methods in biology. Statistical approach to data analysis and the design of experiments. Laboratory section permits actual analysis of selected statistical problems. Material Fee As Indicated In The Schedule of Classes (I)

5080 (PSY 5080) Cellular Basis of Animal Behavior. Cr. 3

Prereq: BIO 2600 with a grade of C-minus or above. Relationship between behavior and neuroscience using a variety of animal models, each examined from the level of natural behavior progressively to the cellular level. Topics include: sensory systems, motor behavior, and learning. (W)

5180 Field Investigations in Biological Sciences. Cr. 12 (Max. 20)

Prereq: BIO 1500, BIO 1510; and either BIO 2200 or BIO 2600; each with grade of C-minus or above. Field studies of one to fifteen weeks, emphasizing biological principles and techniques demonstrated in the field. Material Fee As Indicated In The Schedule of Classes (I)

5330 Principles and Applications of Biotechnology I. Cr. 3

Prereq: BIO 2200, 3100, and 3070; or equiv.; with grades of C-minus or above. Review of origins of molecular biotechnology and its characteristic technologies; survey of applications of biotechnology to problems in industries. (F)

5610 Structural Embryology. Cr. 1

Prereq. or coreq: BIO 5620 with grade of C-minus or above. Slides, models, and 4-D computer programs used to enable the student to know and recognize the cascade of structural changes that take place during the embryological developmental pathways. Material Fee As Indicated In The Schedule of Classes (W)

5620 Developmental Biology. Cr. 3

Prereq: BIO 3070 with grade of C-minus or above. An analytical and comparative study of genetic and cellular mechanisms and their interaction with environmental factors to effect the developmental mechanisms which produce the adult organism. Origin and unfolding of structural patterns characteristic of different species; their evolutionary origins. (W)

5640 Cancer Biology. Cr. 3

Prereq: BIO 2600, BIO 3070, and BIO 3100, with grades of C-minus or above. Introduction to integrated analysis of cancer and cell biology, pathology, etiology and therapy. (I)

5680 (PSL 5680) Basic Endocrinology. Cr. 3

Prereq: BIO 3200 or BIO 4120 with grade of C-minus or above. Basic description of the human endocrine system, the endocrine control of several physiologic processes (growth, development, metabolism and reproduction), and a description of common endocrine disorders. (F)

6000 Molecular Cell Biology I. Cr. 3

Prereq: BIO 2600 and BIO 3100 with grades of C-minus or above. Analysis of cell structure at the molecular and cellular levels and the physiological consequences of these structures: isolation, physicochemical properties, and biological attributes of cells, organelles, and biopolymers including nucleic acids, proteins, and lipids. (F)

6010 Molecular Cell Biology II. Cr. 3

Prereq: BIO 6000 with grade of C-minus or above. Analysis of cell regulation at the molecular level. Cell development and differentiation. Genetic mechanisms including: DNA synthesis and repair, mechanism of gene expression and control. (W)

6020 Methods of Analyses. Cr. 4

Prereq: BIO 5330 or BIO 6330 with grade of C-minus or above. Design and execution of experiments in molecular biology. Topics include: laboratory safety, scientific documentation, database searching, development of experimental protocols, error analysis, solutions and buffers, electrophoretic separation of proteins and nucleic acids, basic immunohistochemistry, bioimaging, and scientific ethics. Material Fee As Indicated In The Schedule of Classes (F)

6055 (ANA 6050) Biology of the Eye. (PYC 6050) Cr. 3

Prereq: BIO 2600 and BIO 3100 with grades of C-minus or above. Offered for undergraduate credit only. Introduction to biology of eye structure/function, and to causes and clinical treatments of eye-related disorders and diseases. Material Fee As Indicated In The Schedule of Classes (F)

6060 Molecular Evolution. Cr. 3

Prereq: BIO 3070; prereq. or coreq: BIO 4200, all with grades of C-minus or above. Patterns and processes of evolutionary change on the DNA sequence level. Emphasis on models of nucleotide substitutions, and genic evolution. Methods of phylogenetic inference. (I)

6070 Human Genetics. Cr. 3

Prereq: BIO 3070 with grade of C-minus or above. Principles of genetics as applied to humans. Topics include pedigree analysis, simple and complex inheritance patterns, cytogenetics, development and sex determination, role of mutations in disease, genes and cancer, genetic testing and forensics, genomics, linkage, genetics of behavior, and human evolution. (I)

6090 Population Genetics. Cr. 3

Prereq: BIO 3070 with grade of C-minus or above; BIO 4110 and knowledge of Calculus recommended. Theoretical bases for micro-evolutionary change in natural populations of organisms; basic to study of evolutionary genetics and evolutionary ecology. (I)

6120 Molecular Biology Laboratory I. Cr. 3

Prereq: BIO 6010 with grade of C-minus or above. Laboratory exercises illustrate methods and concepts of molecular biology and recombinant DNA analysis. Material Fee As Indicated In The Schedule of Classes (W)

6160 Proteins and Proteomics. Cr. 3

Undergrad. prereq: BIO 3100 or CHM 5600 or CHM 6620 with grade of C-minus or above. Structure and dynamics of proteins at the molecular level. Strategies used to biochemically purify, analyze, and characterize proteins. (F)

6180 Membrane Biology. Cr. 3

Prereq: BIO 6000 with grade of 'C-' or above. Comprehensive analysis of cellular and model membranes integrating molecular structure and physiological properties. Structural, dynamic, and physiological

properties examined, including molecular and macromolecular assemblies, physical and chemical analysis of molecular motion, functional aspects including trans-membrane signaling. (I)

6190 Advanced Special Topics. Cr. 1-6 (Max. 6)

Prereq: written consent of instructor or department. Formalized treatment of current state of knowledge in a significant area of biology. Topics to be announced in Schedule of Classes. (I)

6250 Biology Instruction for Teachers. Cr. 2 (Max. 10)

Prereq: written consent of instructor. Offered only for graduate credit; for teachers only. Offered for graduate credit only. Discussion of basic biological principles in light of recent advances. (I)

6330 Principles and Applications of Biotechnology II. Cr. 3

Prereq: BIO 5330 with grade of C-minus or above. Application of molecular biology and recombinant DNA technology of contemporary eukaryotic systems. Topics include: specialized application of PCR for cloning, generation of antibodies, the expression of recombinant proteins in cultured cells and transgenic animal models. (W)

6620 Advanced Evolution. Cr. 0

Prereq: BIO 4200 with grade of C-minus or above. Continuation of BIO 4130; emphasis on evolutionary biology. Topics include: history of evolutionary thought, origins of life, evolution of the cell, evolution of genes, evolution and behavior, evolution of life history traits, phylogenetics, historical biogeography, tempo and mode of evolution, species concepts and speciation, nature of adaptation and adaptive radiations. (T)

6690 Neurobiology I. Cr. 3

Prereq: BIO 3100; prereq. or coreq: BIO 4120, with grades of C-minus or above. Electrical and chemical signal transmission and signal processing in the nervous system. Integration of these functions into complex sensory and control mechanisms. Molecular mechanisms of electrical excitability and ion channels, neurotransmitters and receptors, second messengers, and feedback circuits. Neurobiology of motor control, sensory and regulatory systems. (W)

6994 Technical Communication in Molecular Biotechnology. Cr. 3

Prereq: admission to molecular biotechnology program. Methods of written and oral communication in the biotechnology field. (W)

7000 Recent Advances in Cellular and Developmental Biology. Cr. 3 (Max. 6)

Prereq: written consent of instructor. Formalized and in-depth treatment of the current state of knowledge in a significant area of cell and molecular biology. Topics to be announced in Schedule of Classes. (I)

7011 Principles of Toxicology. (PHC 7410) Cr. 3

Prereq: CHM 2260 and BIO 1510 or equiv. recommended. Basic concepts and principles of toxicology, including toxicity of major classes of chemicals (pesticides, solvents, metals) and organ systems (renal, immune, digestive, neuro and respiratory) affected. (F)

7020 (BIO 5020) Comprehensive Virology. Cr. 3

Course provides students with a comprehensive knowledge of molecular virology, from viral classification, vital structures and life cycles, to host response and global health. (F)

7055 (ANA 7055) Biology of the Eye. (PYC 7050) Cr. 3

Prereq: BIO 2600 and BIO 3100 with grade of C-minus or above. Integrated introduction to basic biological structure/function of the eye; causes and clinical treatments of eye-related disorders and diseases. (F)

7060 Evolutionary and Developmental Biology. Cr. 3

Prereq: BIO 5620 with grade of C-minus or above. Introduction to animal diversity. Genetic pathways and networks in development; focus on limb and organ formation. Evolving developmental path-

ways: case studies. Genetic source materials for developmental evolution. Speciation and developmental evolution. (B)

7090 Molecular Genetics of Development. Cr. 3

Prereq: BIO 5620. An examination of the current and classical research literature dealing with the role of gene action in development. (I)

7100 Recent Advances in Microbiology and Molecular Genetics. Cr. 3

Prereq: written consent of instructor. Formalized and in-depth treatment of current state of knowledge in a significant area of microbiology and molecular genetics. (I)

7110 (BIO 5100) Aquatic Ecology. Cr. 4

Prereq: graduate standing. Physical, chemical and biological processes occurring in lakes, streams, and wetlands. Material Fee announced in Schedule of Classes. (B:F)

7120 Molecular Genetics of Plant Development. Cr. 3

Prereq: BIO 3070. Molecular basis of organogenesis in vascular plants. Current advances in plant development. Potential bases of morphological diversity and evolutionary change. (I)

7150 (BIO 5150) Genomics. Cr. 3

Introduction to the theory and practice of genomics. Topics include sequencing and mapping, overview of genomes, comparative genomics, transcriptomes, population genetics and genomics, basic bioinformatics and statistics, population-level variation (SNPs, MNPs, indels), ethics, evolutionary genomics, and functional genomics. (F)

7180 Membrane Biology. Cr. 3

Comprehensive analysis of cellular and model membranes integrating molecular structure and physiological properties. Structural, dynamic, and physiological properties examined, including molecular and macromolecular assemblies, physical and chemical analysis of molecular motion, functional aspects including trans-membrane signaling. (W)

7280 Bioinformatics. Cr. 3

Basic Linux commands and PERL programming skills, sequence comparison, phylogenetic analysis, gene/genome patterns. (W)

7440 (BIO 5440) Terrestrial Ecology. Cr. 4

Open only to graduate students. Prereq: BIO 1500 and BIO 4130, each with grade of C-minus or above. Ecology of forests and grasslands. Field study and interpretation of ecological processes. Importance of species-site relationships and disturbance history. Material fee as listed in Schedule of Classes. (B)

7490 (BIO 5490) Population and Community Ecology. Cr. 3

Prereq: BIO 1500 and BIO 4130. Population dynamics of animals and plants. Life history theory. Species interactions. Structure and dynamics of communities. (F)

7500 Prokaryotic Gene Structure and Function. Cr. 4

Prereq: BIO 3070, 3100 or equiv. Detailed analysis of structure, expression and replication of genes of prokaryotic cells and associated extrachromosomal elements. Critical discussion of studies establishing central concepts in prokaryotic gene regulation, DNA structure and dynamics transcription, translation and signal transduction systems. (B)

7510 Eukaryotic Gene Structure and Function. Cr. 4

Prereq: BIO 6330 or BIO 7780. Knowledge of current molecular technology is absolute prerequisite for this course; prerequisite course must have been satisfied. Analysis of structure, replication, expression and regulation of eukaryotic genome. Experimental approaches to study eukaryotic gene expression, critical comprehension of current research, design of experiments in gene expression. (B)

7540 (BIO 5540) Ecosystem and Landscape Ecology. Cr. 3

Prereq: BIO 1500 and BIO 4130. Ecosystem productivity. Carbon dynamics and nutrient cycling in ecosystems. Causes of ecological pattern on landscapes. Interrelationships of ecological pattern and process. (B)

7660 Neurobiology II. Cr. 3

Prereq: BIO 6690. Advanced topics; emphasis on neurodevelopment using model systems, and possible molecular mechanism; models of higher order functions: learning, memory behavior, cognition; human disease and recent genetic characterization. (B:F)

7750 (BIO 5750) Biology of Aging. Cr. 3

Prereq: BIO 3070. Aging and senescence viewed as fundamental biological processes common to most organisms. Discussion of investigative methods and accepted facts regarding aging; critical analysis of theoretical interpretation of the data. (W)

7780 Genetic Engineering Laboratory. Cr. 2

Prereq: BIO 6120, 6330. Continuation of BIO 6120 laboratory experience; screening procedures and DNA sequencing methods. Material Fee As Indicated In The Schedule of Classes (I)

7996 Research Problems. Cr. 1-8 (Max. 4 for M.A. and M.S. students; max. 32 for Ph.D. students who may take up to 8 credits per semester)

Prereq: written consent of advisor or instructor. Original investigation. (T)

8000 Special Topics. Cr. 1-6 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Various frontier aspects of biology. Work may include lectures, laboratories or discussion. Topics to be announced in Schedule of Classes. (Y)

8995 Graduate Seminar in Biology. Cr. 2 (Max. 2 for M.A., Max 4 for M.S.)

Prereq: graduate standing in biology. One semester required for research master's students; two semesters required for doctoral students. Presentations by graduate staff, advanced students, visiting lecturers. (Y)

8996 Research in Molecular Biotechnology. Cr. 1-4 (Max. 8)

Prereq: admission to biotechnology program. Students spend two semesters doing research under the guidance of faculty associated with the Molecular Biotechnology Program and in other laboratories. (W,S)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of instructor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: BIO 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following BIO 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: BIO 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following BIO 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: BIO 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following BIO 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in BIO 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

9996 Lab Rotation. Cr. 2 (Max. 4)

Offered for S and U grades only. Prereq: written consent of doctoral advisor. Open only to doctoral students and Plan A master's students. Research training in faculty laboratories on a rotating basis, up to two labs per semester. (T)

Chemistry

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Associate Chairperson: Charles H. Winter
Academic Services Officers: Erin Bachert, Melissa Barton
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Professors

Ashok S. Bhagwat, Stephanie L. Brock, Jin K. Cha, Vladimir Chernyak, Christine S. Chow, David Crich, Darrell D. Ebbing (Emeritus), John F. Endicott (Emeritus), Andrew L. Feig, Zhongwu Guo, Carl R. Johnson (Emeritus), Tokuji Kimura (Emeritus), Richard L. Lintvedt (Emeritus), W. Martin McClain (Emeritus), John P. Oliver (Emeritus), Colin F. Poole, Morton Raban (Emeritus), Gene P. Reck (Emeritus), James H. Rigby, Mary T. Rodgers, Louis J. Romano, David B. Rorabacher (Emeritus), John SantaLucia, A. Paul Schaap (Emeritus), George H. Schenk (Emeritus), H. Bernhard Schlegel, Arthur Suits, Claudio N. Verani, Charles H. Winter

Associate Professors

Matthew Allen, Andrés G. Cisneros, Tamara Hendrickson, Jeremy Kodanko, Wen Li, Mary Kay Pflum, Sarah Trimpin

Assistant Professors

Young-Hoon Ahn, Stanislav Groysman, Federico A. Rabuffetti, Jennifer Stockdill

Associate Professor, Research

Regina Zibuck

Senior Lecturers

Maryfrances Barber, Andrea Matti, Barbara Munk

Graduate Degrees

MASTER OF ARTS with a major in Chemistry

MASTER OF SCIENCE with a major in Chemistry

DOCTOR OF PHILOSOPHY with a major in Chemistry and specializations in analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry

Graduate Study in Chemistry, General Requirements for

Every student entering the graduate program in chemistry will be required to take a series of entrance (proficiency) examinations covering the major disciplines of chemistry. These examinations, which cover standard undergraduate-level material, will be administered on announced dates in August, January, and May (prior to the start of each term). The examination in each area must be taken every time it is offered until a satisfactory level of proficiency is demonstrated in three of the five major fields.

Demonstration of proficiency in each area may be achieved:

- a) by receiving a grade of 'pass' on the proficiency examination; or
- b) by completing a 7000-level course in the area with a grade of 'B' or higher.

Full-time graduate students must establish proficiency in three areas within twelve months of commencing graduate study. Part-time graduate students must meet this requirement by the time they have completed twelve hours of graduate credit.

A final oral examination is required of all graduate degree candidates.

Academic Scholarship: All course work to be accredited to graduate degrees must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

Chemistry (M.S. Program)

This is a professional degree for those planning to enter the chemical profession.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

Admission may be granted to applicants who have completed one year of college physics, mathematics through calculus, and the equivalent of undergraduate semester credits in chemistry as follows: general chemistry (eight credits), organic chemistry (eight credits), physical chemistry (six credits), quantitative analysis (four credits), and advanced chemistry (three credits). Applicants specializing in biochemistry may substitute advanced biology for advanced chemistry.

A minimum undergraduate grade point average of 2.75 in chemistry and cognate science is required. Students who do not meet the requirements may petition the departmental committee on graduate study for qualified admission. Admissions under this program may include special requirements specified on the basis of the student's previous experience and training.

Candidacy must be established by the time twelve credits have been earned. The applicant must file a copy of the Plan of Work with the Graduate Officer.

DEGREE REQUIREMENTS

This degree is offered only as a Plan A (thesis) master's program. (*Chemistry courses below the 6000 level may not be applied toward this degree.*)

- Total of twenty-two credits in course work which must include:
 - one credit in CHM 8850;
 - two or three credits in seminar (CHM 8800, 8810, 8820, 8830, or 8840);
 - one credit in CHM 6740;
 - at least twelve credits in chemistry courses open to graduate chemistry students (excluding research, seminar, CHM 6740, and CHM 8850) of which at least nine credits must be at the 7000 level;
 - six credits in chemistry and/or cognate courses;
- Eight credits in CHM 8999 involving independent thesis research under the direction of a faculty member in the Department.
- Submission of a satisfactory research thesis.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Chemistry (M.A. Program)

This degree is designed for those who wish advanced training in chemistry but intend to pursue careers in cognate fields, such as education or business.

Admission Requirements: see above, under the Master of Science degree.

DEGREE REQUIREMENTS

This degree is offered only as a Plan C master's program. (*Chemistry courses below the 6000 level may not be applied toward this degree.*) A total of thirty-two credits in course work which must include:

- one credit in CHM 8850;
- two or three credits in graduate seminar (CHM 8800, 8810, 8820, 8830, or 8840);
- one credit in CHM 6740;
- at least eighteen credits in chemistry courses open to graduate chemistry students (excluding research, seminar, CHM 6740 and CHM 8850) of which at least nine credits must be at the 7000 level. Courses must be elected in at least four of the following fields: analytical, biological, inorganic, organic, and physical chemistry.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Chemistry (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. All applications for admission to the doctoral program in chemistry and all adjustments in the program subsequent to admission must have the approval of the Graduate Officer of the Department of Chemistry.

A minimum undergraduate grade point average of 3.0 in chemistry and cognate science is required except by special permission of the Departmental Committee on Graduate Study. An applicant having a master's degree from another institution must show a grade point average of at least 3.0 ('B').

Transfer from the Master's Program to the Ph.D. Program: In order to transfer to the Ph.D. program, a student must accumulate a minimum of nine credits in chemistry course work numbered 6040-8690 with a grade point average of at least 3.25. An applicant having a lower average must earn the master's degree with a superior academic record before acceptance as a doctoral applicant.

Candidacy: In order to become a candidate for the Ph.D. degree, an applicant must successfully complete both a written and oral qualifying examination. The written examination consists of a series of short cumulative examinations administered seven times per year, of which a student must obtain five passes within thirteen attempts (three of which must be in the major division). The oral examination includes the major field and covers minor and cognate fields as well. Any additional requirements set by the Graduate School or the department must be completed. Copies of such requirements may be obtained from the Chairperson of the Departmental Committee on Graduate Study.

DEGREE REQUIREMENTS

Questions regarding requirements should be addressed to the Academic Services Officer. The Doctor of Philosophy degree requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit, and the remainder of which must include the following:

- A minimum of six courses (eighteen credits) in graduate course work of which at least nine credits must be in chemistry courses at the 7000 level or above; not less than six credits shall be from outside the major division of specialization. A student who does not pass any proficiency examinations upon entrance to the program will be required to pass an additional graduate course, for a total of seven

courses (twenty-one credits). Additional courses beyond the required six or seven, may be specified by the student's Ph.D. advisor or committee to address deficiencies or to develop expertise in one or more specific research areas.

Effective, Fall 2011, minors are not required for graduation from the Ph.D. program. Many departments offer minors and graduate students may complete minors at their own discretion. A minor may be satisfied by two courses (at least six credits) taken outside the major division of specialization. The minor requirement may be satisfied in any one of the following ways:

a) *Outside Minor* may be satisfied by a minimum of six credits in related fields outside chemistry (biology, chemical engineering, computer science, mathematics, physics, etc.) with appropriate courses at the 5000 level and above.

b) *Distributed Minor* may be satisfied by a minimum of six credits taken in chemistry, or three credits taken in chemistry and three credits taken in a related field. The chemistry credits must be at the 7000 level; the outside credits must be at the 5000 level or above.

c) *Concentrated Chemistry Minor* may be satisfied by a minimum of six credits at the 7000 level in a single division outside the major division (including 7000-level courses taken to satisfy proficiency requirements).

2. *Credit by Examination:* Well-prepared students may receive up to nine credits by passing the final examinations in 6000- or 7000-level courses. These may be in either the major or minor fields.

3. At least four credits of graduate seminar (CHM 8800, 8810, 8820, 8830, or 8840).

4. At least one credit in CHM 8850.

5. One credit in CHM 6740.

6. Thirty credits in Ph.D. research involving independent research under the direction of a faculty member in the Department. The thirty credit dissertation registration requirement is fulfilled by registering for the courses CHM 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

7. Satisfactory completion of a 'Pre-Oral' examination based on the student's doctoral research is required prior to the final writing of the dissertation.

8. Submission of a satisfactory research dissertation.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Assistantships and Fellowships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Graduate assistantships and fellowships are available for well-qualified students working toward the M.S. or Ph.D. degree. Requests for information should be addressed to the Graduate Admissions Officer, Department of Chemistry, 169 Chemistry Building; or e-mail: gradadmit@chem.wayne.edu.

Chemistry Courses (CHM)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696

6070 Advanced Bioinorganic Chemistry. (CHM 7070) Cr. 3

Prereq: a grade of C or above in CHM 3000. Applications of inorganic chemistry principles to understanding biological systems including metalloenzymes. (I)

6170 Advances in Bioanalytical Chemistry. (CHM 7170) Cr. 3

Prereq: a grade of C or above in CHM 5160. How analytical methods are used to obtain information regarding biological systems. (W)

6240 Organic Spectroscopy. (CHM 7240) Cr. 3

Prereq: a grade of C or above in CHM 1420 or CHM 2220 or equiv. Application of IR, NMR, UV, and mass spectrometry to the identification of organic compounds. Emphasis on interpretation of spectra, especially NMR. Recommended for students intending to do graduate or industrial work in organic chemistry. (W)

6270 Advanced Bioorganic Chemistry and Drug Design. (CHM 7270) Cr. 3

Prereq: a grade of C or above in CHM 6620. Studies of biological problems using organic synthetic methods and applications to drug design. (F)

6440 Computational Chemistry. (CHM 7440) Cr. 3

Prereq: a grade of C or above in CHM 5440 or equiv. Aspects of computational chemistry pertinent to effective use of molecular modeling techniques. Molecular mechanics, semi-empirical and ab initio calculations, molecular dynamics. Material Fee As Indicated In The Schedule of Classes (I)

6570 Computational Biochemistry and Bioinformatics. (CHM 7570) Cr. 3

Prereq: a grade of C or above in CHM 5400. Application of computational and molecular modeling software tools to biochemical problems. (I)

6620 Metabolism: Pathways and Regulation. (CHM 7620) Cr. 3

Only two credits apply if elected after CHM 5600. Prereq: a grade of C or above in CHM 2220 or CHM 1420 or CHM 2260 or equiv. Major metabolic pathways of carbohydrate, fatty acid, amino acid, and nucleotide synthesis and degradation. Pathways and mechanisms of energy generation. Hormonal and allosteric regulation of enzyme activity. (F)

6635 Tools of Molecular Biology. (CHM 7635) Cr. 3

Prereq: a grade of C or above in CHM 6620. Principles underlying genetic and biochemical methods; complements work in lab CHM 6610. (W)

6640 Molecular Biology. (CHM 7640) Cr. 3

Prereq: a grade of C or above in CHM 6620 or equiv. Nucleic acid structure and function. Mechanism and control of replication, transcription, and translation. Mutation, genetic recombination, and recombinant DNA. Membranes and organelles. (W)

6660 Biomolecular Interactions. (CHM 7660) Cr. 3

Prereq: a grade of C or above in CHM 1420 or CHM 2220 or equiv. The role of molecular interactions in determining the structure and reactivity of complex biological molecules. Experimental approaches for evaluating the nature of these interactions. (I)

6740 Laboratory Safety. Cr. 1-2

Not for chemistry major credit. Offered for S and U grades only. Required for all graduate degrees in chemistry. Discussion and demonstration of safe laboratory practice. Use, storage and disposal of ordinary and hazardous substances; personal protection devices; regulations and codes. (F,W)

6990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of department. (T)

6991 Internship in Chemistry. Cr. 1 (Max. 2)

Prereq: written consent of department and supervisor in semester prior to internship assignment. Offered for S and U grades only. Practical research experience through visiting a university, industry, or national laboratory. (T)

7010 Descriptive Inorganic Chemistry. Cr. 3

Prereq: CHM 5020 or equiv. Reactions and reactivity of inorganic compounds. Emphasizes mechanistic and synthetic approaches to transition metal, organometallic, main group chemistry. (F)

7020 Physical-Inorganic Chemistry. Cr. 3

Prereq: CHM 6040 or 7040 or equiv. Structure and properties of inorganic compounds. Ligand field theory; electronic, vibrational, and magnetic resonance spectroscopy. (I)

7060 Materials Chemistry and Engineering. Cr. 3

Prereq: Open only to graduate students. Solid state structure and bonding. Crystallography, defects, and non-stoichiometry. Phase diagrams. Synthesis and properties of extended solids and nanomaterials. Molecular interactions and statistical physics of soft matter. Synthesis and characterization techniques of polymeric and colloidal material. Physical properties, phase behavior, self-assembly and ordering in synthetic and biological soft matter. (W)

7070 (CHM 6070) Advanced Bioinorganic Chemistry. Cr. 3

Open only to graduate students. Prereq: CHM 3000. Applications of inorganic chemistry principles to understanding biological systems including metalloenzymes. (I)

7080 Electron Microscopy. Cr. 3

Basics of electron microscopy and its applications. The theory and practice of transmission and scanning electron microscopies, along with associated spectroscopies, will be presented. (I)

7100 Theory of Analytical Chemistry. Cr. 3

Prereq: CHM 2280 and 2290 or equiv. Physicochemical principles applied to reaction equilibria and kinetics of analytical importance. Approaches to problem solving in complex systems, principally in the solution phase. (F)

7120 Electroanalytical Chemistry. Cr. 3

Prereq: written consent of instructor. The theory and practice of modern voltammetric methods as applied to analytical, kinetic, and mechanistic studies. (B)

7142 Data Analysis. Cr. 3

Prereq: CHM 2280 and 2290, or equiv. Application of statistics, chemometrics, and experimental design to the interpretation of chemical measurements; validation of analytical methods; practice and theory of sampling for chemical measurements. (B:F)

7160 Separation Science. Cr. 3

Theory and practice of gas-liquid, supercritical fluid, and thin-layer chromatography and capillary electromigration methods. (B)

7170 (CHM 6170) Advances in Bioanalytical Chemistry. Cr. 3

Open only to graduate students. Prereq: CHM 5160. How analytical methods are used to obtain information regarding biological systems. (I)

7180 Mass Spectrometry. Cr. 3

Prereq: CHM 5160 or equiv. Topics will include ICP, ICP-MS, AA, LIBX, MIPS, etc. Instrumentation concepts. Review of contemporary literature. (W)

7200 Organic Structures and Mechanisms. Cr. 3

Prereq: one year of organic chemistry with laboratory. Structure and stereochemistry of organic molecules. Correlations between structure and chemical and physical properties. Reaction mechanisms. (F)

7220 Organic Reactions and Synthesis. Cr. 3

Prereq: CHM 7200. Alkylation, condensation, and Grignard reactions; synthesis of acid derivatives; cycloadditions and unimolecular rearrangements. Scope and limitations of important synthetic methods of organic chemistry. (W)

7240 (CHM 6240) Organic Spectroscopy. Cr. 3

Open only to graduate students. Prereq: one year of organic chemistry with laboratory. Application of IR, NMR, UV, and mass spectrometry to the identification of organic compounds. Emphasis on interpretation of spectra, especially NMR. Recommended for students intending to do graduate or industrial work in organic chemistry. (W)

7270 (CHM 6270) Advanced Bioorganic Chemistry and Drug Design. Cr. 3

Open only to graduate students. Prereq: CHM 6620. Studies of biological problems using organic synthetic methods and applications to drug design. (I)

7410 Statistical Thermodynamics. Cr. 3

Prereq: CHM 5440 or equiv. Statistical methods of determining thermodynamic properties of bulk materials from molecular properties. Real gases at high density, crystals, liquids; phase transitions, transport properties. (B)

7430 Chemical Kinetics. Cr. 3

Prereq: CHM 5440 or equiv. Empirical analysis of reaction rates, theories of chemical kinetics, gas phase reactions, molecular collisions and non-thermal reactions, and kinetics in liquids. (B)

7440 (CHM 6440) Computational Chemistry. Cr. 3

Open only to graduate students. Prereq: CHM 5440 or equiv. Aspects of computational chemistry pertinent to effective use of molecular modeling techniques. Molecular mechanics, semi-empirical and ab initio calculations, molecular dynamics. Material Fee As Indicated In The Schedule of Classes (W)

7470 Quantum Chemistry. Cr. 3

Prereq: CHM 5440 or equiv. Theorems of quantum mechanics, approximation methods, solutions to simple atomic and molecular systems, electronic structure of many-electron atoms and molecules, chemical bonding. (B)

7480 Molecular Spectroscopy. Cr. 3

Prereq: CHM 7470 or equiv. Basic theory of interaction of molecules with the electromagnetic field. Rotational, vibrational, and electronic spectra of molecules; elements of lasers, multiphoton spectroscopy. (B)

7500 Modern Methods in Experimental Chemistry. Cr. 3

Prereq: CHM 5440 or equiv. Survey of modern methods for performing experiments in chemistry, including: laser techniques, high vacuum methods, time-resolved techniques, surface characterization, electronics and optics, and computer interfacing. (B)

7570 (CHM 6570) Computational Biochemistry and Bioinformatics. Cr. 3

Open only to graduate students. Prereq: CHM 5400. Application of computational and molecular modeling software tools to biochemical problems. (I)

7600 Structure and Function of Biomolecules. Cr. 3

Open only to graduate students. Prereq: CHM 1420 or 2220 or equiv. Introduction to the structure and function of macromolecules of biological importance. Emphasis on bioenergetics, nucleic acid and protein structure and chemical reactivities, enzyme catalysis, enzyme kinetics, carbohydrate and lipid structure and function, and membrane structure. (F)

7620 (CHM 6620) Metabolism: Pathways and Regulation. Cr. 3

Open only to graduate students. Prereq: CHM 7600 or equiv. Major metabolic pathways of carbohydrate, fatty acid, amino acid, and nucleotide synthesis and degradation. Pathways and mechanisms of energy generation. Hormonal and allosteric regulation of enzyme activity. (F)

7635 (CHM 6635) Tools of Molecular Biology. Cr. 3

Open only to graduate students. Prereq: CHM 7620. Principles underlying genetic and biochemical methods; complements work in lab CHM 6610. (Y)

7640 (CHM 6640) Molecular Biology. Cr. 3

Open only to graduate students. Prereq: CHM 7600 or equiv. Nucleic acid structure and function. Mechanism and control of replication, transcription, and translation. Mutation, genetic recombination, recombinant DNA. Membranes and organelles. (W)

7660 (CHM 6660) Biomolecular Interactions. Cr. 3

Open only to graduate students. Prereq: CHM 1420 or CHM 2220 or equiv. The role of molecular interactions in determining the structure and reactivity of complex biological molecules. Experimental approaches for evaluating the nature of these interactions. (I)

7740 Responsible Conduct of Research. Cr. 1

Offered for S and U grades only. Prereq: graduate or post-doctoral student in chemistry department. Recognition of and approach to ethical issues that chemistry students may confront during their careers; the tools for dealing with these quandaries; procedures for reporting and resolving such conflicts. (F)

7990 Directed Study. Cr. 1-4 (Max. 12)

Prereq: written consent of department. (I)

8090 Advanced Topics in Inorganic Chemistry. Cr. 1-3 (Max. 12)

Prereq: graduate standing. Topics offered in different semesters: inorganic synthesis and reactions; organometallic chemistry; bioinorganic chemistry; spectroscopy and stereochemistry of inorganic compounds; inorganic reaction mechanisms; photochemistry. (I)

8190 Advanced Topics in Analytical Chemistry. Cr. 1-3 (Max. 12)

Prereq: CHM 7100 or equiv. The following topics offered in different semesters: sample preparation, surface analysis, analytical mechanisms, advanced instrumentation, computer interfacing. (I)

8290 Advanced Topics in Organic Chemistry. Cr. 1-3 (Max. 12)

Prereq: CHM 7200 or equiv. The following topics offered in different semesters: physical-organic chemistry; kinetics of organic reactions; structure-reactivity correlations; reaction mechanisms; molecular orbital theory in organic chemistry; photochemistry; free radical chemistry; polymer chemistry; recent developments in organic chemistry; synthetic strategy; chemistry of natural products including steroids, terpenes, alkaloids, carbohydrates, and proteins. (I)

8420 X-Ray Crystallography. Cr. 3

Prereq: CHM 7010 or 7240 or equiv.; 6040 recommended. Theoretical and practical aspects of modern x-ray crystallography. Training and practice in determination of crystal structure. (I)

8490 Advanced Topics in Physical Chemistry. Cr. 1-3 (Max. 12)

Prereq: CHM 7410 or equiv. The following topics offered in different semesters: chemistry of the solid state; electron spin resonance; lasers and nonlinear spectroscopy; molecular dynamics; molecular quantum mechanics; particle and photon scattering; photophysics and photochemistry; radiation and nuclear chemistry; theory of gas phase kinetics. (I)

8690 Advanced Topics in Biochemistry. Cr. 1-3 (Max. 12)

Prereq: CHM 7620 or equiv. Topics offered in different semesters: applications of spectroscopy to biochemical systems; chemical carcinogenesis; DNA repair; enzyme chemistry; experimental methods in molecular biology; hormone biochemistry; mechanisms of oxygen metabolism; membrane chemistry. (I)

8700 Research in Chemistry. Cr. 1-16 (Max. 40)

Prereq: written consent of advisor. Offered for S and U grades only. (T)

8800 Seminar in Analytical Chemistry. Cr. 1 (Max. 4, M.S.; max. 6, Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Required of all graduate students in analytical chemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. (F,W)

8810 Seminar in Organic Chemistry. Cr. 1 (Max. 4, M.S.; max. 6, Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Required of all graduate students in organic chemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. (F,W)

8820 Seminar in Inorganic Chemistry. Cr. 1 (Max. 4, M.S.; max. 6, Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Required of all graduate students in inorganic chemistry. Weekly meeting of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. (F,W)

8830 Seminar in Physical Chemistry. Cr. 1 (Max. 4, M.S.; max. 6, Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Required of all graduate students in physical chemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. (F,W)

8840 Seminar in Biochemistry. Cr. 1 (Max. 4, M.S.; max. 6, Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Open only to chemistry graduate students. Required of all graduate students in biochemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and participates in discussions. (F,W)

8850 Frontiers in Chemistry. Cr. 1 (Max. 3, M.S.; max. 6, Ph.D.)

Prereq: graduate standing. Offered for S and U grades only. Fields of fundamental chemistry now under investigation, presented by invited specialists actively engaged in research. (F,W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: CHM 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following CHM 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: CHM 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following CHM 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: CHM 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following CHM 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in CHM 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Classical and Modern Languages, Literatures, and Cultures

Office: 485 Manoogian Hall; 313-577-3002

Chairperson: Anne Duggan

Academic Services Officer: Terrie Pickering

Website: <http://www.clas.wayne.edu/languages>

Professors

Jorgelina Corbatta, Anne E. Duggan, Michael J. Giordano, Donald Haase, Francisco J. Higuero., Donald E. Schurknight, Michele Valerie Ronnick, Charles J. Stivale, Margaret E. Winters

Associate Professors

Catherine Barrette, Kenneth Brostrom, Eugenia Casielles, Raffaele DeBenedictis, Vanessa DeGifis, Victor Figueroa, Lisabeth Hock, Leisa Kauffmann, Thomas D. Kohn, Haiyong Liu, Jennifer Sheridan Moss, Kate Paesani, Elena Past, Jose Rico-Ferrer, Anne Rothe, Roslyn Abt Schindler, May Seikaly, Kenneth R. Walters

Assistant Professors

Alina Cherry, Nicole Coleman, Mohamed El-Sharkawi, Hernan Garcia, James Michels, Abderrahman Zouhir

Senior Lecturers

Edith Covensky, Mark Ferguson, Alina Klin, Laura Kline, Maha Saker

Lecturers

Silvia Giorgini-Althoen, Saeed Khan, Julie Koehler, Rie Masuda, Leonidas Pittos, Luisa Quintero, Marilyn Rashid, Roxana Zuniga

Director of Foreign Language Technology Center

Sangeetha Gopalakrishnan

Adjunct Faculty

Hans-Peter Soeder, Dickran Toumajan

Emeritus Professors

Ernest J. Ament, Achim Bonawitz, Alfred L. Cobbs, Frank J. Corliss, Jr., Andrea di Tommaso, Penrith Goff, Jesus Gutierrez, Joel B. Itzkowitz, Louise M. Jefferson, Louis Kibler, Kathleen McNamee, Richard W. Minadeo, Sol Rossman, Aleya A. Rouchdy, Donald Spinelli, Guy Stern, Richard Vernier

Graduate Degrees

MASTER OF ARTS with a major in Classics and concentrations in Ancient Greek and Latin, Latin, or Ancient Studies

MASTER OF ARTS with a major in German

MASTER OF ARTS IN LANGUAGE LEARNING with Concentrations in Arabic, Classics, French, German, Italian, and Spanish

MASTER OF ARTS with a major in Near Eastern Languages and concentrations in Arabic or Hebrew

*MASTER OF ARTS with a Major in Romance Languages
and concentrations in French, Italian, or Spanish*

DOCTOR OF PHILOSOPHY with a major in Modern Languages

Classics (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, the applicant must present an undergraduate major in Latin, Greek, or Classics, or receive the consent of the graduate advisor for graduate work. Evidence of having passed the Graduate Record Exam is required.

Candidacy must be established by the time twelve credits have been earned.

DEGREE REQUIREMENTS: The master's degree in Classics is offered under the following options:

Plan A: Twenty-four credits in course work, plus an eight-credit thesis.

Plan B: Twenty-eight credits in course work, plus a four-credit essay.

Plan C: Thirty-two credits in course work.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Concentrations available under *Plan A* or *Plan B* are: Latin, or ancient Greek and Latin. Concentrations available under *Plan C* are: Latin, Ancient Greek and Latin, or Ancient Studies. Requirements are:

Latin (M.A. Concentration)

Under *Plan A*, course work must include at least twenty-four credits in Latin exclusive of Latin 8999 (CML 8999); at least eight of these twenty-four credits must be in courses numbered 7000 or higher. Latin 5000 does not satisfy these requirements; a final written and/or oral examination is required.

Under *Plan B*, course work must include at least twenty-eight credits in Latin exclusive of Latin 7999 (CML 7999); at least eight of these twenty-eight credits must be in courses numbered 7000 or higher. A maximum of four credits in cognate or related *fields* may be applied under this Plan; Latin 5000 does not satisfy these requirements; a final written and/or oral examination is required.

Under *Plan C*, course work must include at least thirty-two credits in Latin; at least eight of these thirty-two credits must be in courses numbered 7000 or higher. A maximum of four credits in cognate or related fields may be applied under this Plan; Latin 5000 does not satisfy these requirements; a final written and/or oral examination is required.

Greek (Ancient) and Latin (M.A. Concentration)

Under *Plan A*, a minimum of twelve credits in course work is required in each language (Ancient Greek and Latin) exclusive of Greek or Latin 8999. A minimum of two courses (exclusive of thesis courses) in one language must be in courses numbered 7000 or higher. Greek or Latin 5000 does not satisfy these requirements; a final written and/or oral examination is required.

Under *Plan B*, a minimum of twelve credits in course work is required in each language (Ancient Greek and Latin) exclusive of Greek or Latin 7999. A minimum of two courses (exclusive of the essay course) in one language must be in courses numbered 7000 or

higher. The remaining four credits may be in Latin or Ancient Greek; alternatively, a maximum of four credits in cognate or related fields may be applied. Greek or Latin 5000 does not satisfy these requirements; a final written and/or oral examination is required.

Under *Plan C*, a minimum of sixteen credits in course work must be taken in one language, and a minimum of twelve credits in the other. To complete the thirty-two credit requirement, four credits in either language may be added; alternatively, a maximum of four credits in cognate or related fields may be applied. Greek or Latin 5000 does not satisfy these requirements; a final written and/or oral examination is required.

Ancient Studies (M.A. Concentration)

This concentration is available only under *Plan C*. A minimum of twenty credits is required in either Ancient Greek or Latin, exclusive of Greek or Latin 5000, plus three credits of CLA 5300, three additional credits in Classics (CLA) courses at the 5000 level or above and at least six additional credits in courses selected from the following list. At least two courses elected in this plan must be in courses numbered 7000 or above.

ANT 5270 – Concepts and Techniques in Archaeology: Cr. 3

A H 5210 – Hellenistic Art: Cr. 3

A H 5260 – Classical Greek Art: Cr. 3

A H 5270 – Roman Painting and Sculpture: Cr. 3

A H 5310 – The Ancient City of Athens: Cr. 3

CLA 5050 – Cleopatra: Cr. 3

CLA 5150 – Athens and the Ancient Greek World: Cr. 3-4

CLA 5190 – Topics: Women in Antiquity: Cr. 3

CLA 5200 – Special Studies: Cr. 1-4

CLA 5250 – Greek and Roman Drama: Cr. 3-4

CLA 5350 – (CLA 3350) Plutarch: Lives of the Noble Greeks and Romans: Cr. 3

CLA 5600 – (CLA 3600) Religious Experience: Anc. Greeks and Romans: Cr. 3

CLA 5700 – (CLA 3700) The Golden Age of Rome: Cr. 3-4

CLA 5800 – (CLA 3800) Survey of Greek Literature: Cr. 3-4

CLA 5825 – (CLA 3825) Survey of Latin Literature: Cr. 3-4

CLA 6250 – (CLA 3250) The Ancient City: Cr. 3-4

CLA 6260 – (CLA 3999) Further Studies in Mythology: Cr. 3

HIS 5330 or 7330 – History of Ancient Greece: Cr. 3

HIS 5340 or 7340 – History of Ancient Rome: Cr. 3

HIS 5360 or 7360 – The Early Middle Ages: 300-1000: Cr. 3

PHI 5400 – Presocratic Philosophy: Cr. 3

PHI 5410 – Plato: Cr. 4

PHI 5420 – Aristotle: Cr. 4

German (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

DEGREE REQUIREMENTS: The master's degree in German is offered by this department under the following options:

Plan A: Twenty-four credits in course work, plus an eight credit thesis and oral examination

Plan B: Twenty-nine credits in course work, plus a three credit essay and oral examination

Plan C: A minimum of thirty-two credits in course work depending on the Plan of Work. Course work is followed by three written examinations and an oral examination covering graduate studies.

Students planning a teaching career on the college level or intending to continue to the doctoral degree should elect either Plan A or Plan B. Plan C, Language and Culture, is intended primarily for those interested in teaching on the elementary and secondary school levels, or for those with a more general interest in German language and culture.

All students studying for the M.A. in German who have graduate teaching assistantships are required to complete LGL 7850.

Under all Plans, the Graduate School requires a minimum of six credits at the 7000 level or above.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Master's Option in Germany: Students accepted into the German graduate program have the opportunity to earn graduate credit towards a Master of Arts in German while spending two semesters studying at the University of Munich. The opportunity is made possible by the cooperation of the Junior Year in Munich Program, which facilitates the student's matriculation, registration, and housing in Munich.

All students must first be admitted to the German graduate program before they will be considered eligible to participate in this option. Students already enrolled are eligible to participate upon successful completion of sixteen graduate credits within the department with a grade of 'B' or better, approval of the M.A. Plan of Work, and/or the approval of the graduate advisor. Students who wish to spend their first year of graduate study in Munich must complete their studies on the WSU campus in order to receive the M.A. degree. While in Germany the student will complete a minimum of eight credits per semester. WSU credit will be granted only for those classes approved in advance by the graduate advisor and for which the student has earned *benotete Scheine* (graded certificate).

For further details and requirements, see the German M.A. advisor.

Language Learning (M.A Program with Concentrations in: Arabic, Classics, French, German, Italian, and Spanish)

This program is targeted at in-service elementary, secondary, and college-level foreign language teachers interested in ongoing professional development. Students should be advised that it does not provide provisional state licensure (teacher certification), and does not include a practice teaching component.

Admission to this program is contingent upon: 1) admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17, and 2) approval of the Master of Arts in Language Learning (MALL) Advisory Committee (based on the applicant's academic record, target language proficiency, statement of purpose, and three letters of recommendation). Candidacy must be established by the time twelve credits have been earned.

DEGREE REQUIREMENTS: The Master of Arts in Language Learning degree is offered under the Plan B (essay) option only. It requires a minimum of thirty-three credits in course work, plus a three-credit essay.

Course work is divided into three core areas. The first core consists of a minimum of twelve credits in language, linguistics, literature or culture at the 5000, 6000, 7000, and 8000 levels. These courses must be taught in the target language. The second core is focused on methodology; all students complete LGL 5750, 5850/7850, 5860/7860 plus two courses from: LGL 5810/7810, 5820/7820, and 5830/7830. The Graduate School requires that a minimum of six credits be completed at the 7000-level or above; these credits must be earned in the language learning core. The third core consists of six credits in a cognate area, chosen in consultation with the graduate advisor. The three-credit essay will be written in conjunction with materials learned in the three cores under the direction of a MALL faculty member.

Academic Scholarship: Grades of 'B-minus' or lower in any course in the language and culture core or in the methodology core will represent unacceptable work. Students receiving such grades must repeat the course in order to have it count toward the degree. Students must maintain a 3.0 g.p.a. overall. All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Near Eastern Languages (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, applicants must supply the program with a letter of intent, a 5-7 page sample of academic writing in English, and three confidential letters of recommendation. GRE scores are encouraged, but not required. International applicants must satisfy English proficiency requirements as established by the Graduate School, which may require submission of TOEFL scores.

Admission Requirements consist of: Minimum undergraduate g.p.a. of 2.75 ('C+'); and a minimum of two years of prior study in Arabic language, with a minimum g.p.a. in Arabic language courses of 3.5 ('B+'). Prior coursework in Islamic and/or Near Eastern Studies is preferred. Candidates for the master's degree with concentration in either Hebrew or Arabic must have an adequate knowledge of at least one Semitic language and some knowledge of the culture of the Near East.

DEGREE REQUIREMENTS: The master's degree is offered by this department under the following options:

Plan A: Thirty-two credits including an eight credit thesis.

Plan B: Thirty-two credits including a three credit essay.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Candidacy must be established by the time twelve credits have been earned.

Hebrew (M.A. Concentration)

A student specializing in Hebrew is expected to demonstrate ability in the use of modern Hebraic sources. In addition to Hebrew language, literature, and culture courses, the student may be advised to elect six credits in cognate courses from the disciplines of history, philosophy, anthropology, linguistics, sociology, and political science. He/she is expected to write a thesis or essay in which he/she shows ability in using sources and in doing original research as well as demonstrates proficiency in a modern language and literature. A final oral and written examination will be required to test the ability of the student in the language and culture of his/her area of concentration. The student's program of study must have approval of the major advisor.

Arabic (M.A. Concentration)

A student specializing in Arabic is expected to demonstrate ability in the use of Arabic sources. The student must successfully complete at least one advanced Arabic course in which work is performed with original Arabic sources (ARB 5010, 5020, or ARB 5140; in extraordinary circumstances a student may request acceptance of ARB 5990 as compliance with this requirement) with a grade of 'B' or higher while enrolled in the M.A. program. In addition to Arabic language (ARB) courses, the student may elect courses in Near Eastern stud-

ies (NE) and Hebrew (HEB), and may elect up to six credits in cognate courses in other related topics in the history, philosophy, anthropology, linguistics, sociology and politics of the Middle East. At least two courses must be completed at the 7000+ level. He/she is expected to write an essay or a thesis wherein he/she must show ability in using sources and doing original research as well as demonstrate proficiency in a modern language. A final oral and written examination will be required to test the ability of the student in the language and culture of his/her area of concentration. The applicant's program of study must have the approval of the major advisor.

Romance Languages (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, the Graduate Record Examination is strongly recommended, and three letters of recommendation are required of all applicants to the M.A. and Ph.D. programs.

DEGREE REQUIREMENTS

The master's degree is offered by this department under the following options:

Plan A: Twenty-four credits in course work, plus an eight-credit thesis.

Plan B: Twenty-nine credits in course work, plus a three-credit essay.

Plan C: Thirty-two to thirty-three credits in course work depending on the Plan of Work.

Under all Plans, the Graduate School requires a minimum of six credits at the 7000 level or above.

Students envisaging a teaching career on the college level or intending to continue to the doctoral degree may elect either Plans A, B, or C — Literature. At present, Plan C — Literature is available only in French, and Plan C — Language and Culture, is available only in French and Spanish.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

French (M.A. Concentration)

Under Plans A and B: Candidates are required to take French 6400 and 7300. No more than four credits in course work on the 5000 level may be counted toward the degree. With the consent of the candidate's advisor, up to six credits may be elected in related fields. At least five weeks prior to the time the degree is to be granted, candidates must pass a comprehensive oral examination based on the French area reading list for the Master of Arts degree.

Under Plan C — Literature: Candidates are required to take French 6400 and 7300. No more than four credits in course work on the 5000 level may be counted toward the degree and course work must include two graduate seminars. With the consent of the candidate's advisor, up to six credits may be elected in related fields. No essay is required for Plan C Literature. Candidates for the degree must, upon completion of their course work, take a comprehensive written and oral examination based on the French area reading list for the Master of Arts Degree.

Under Plan C — Language and Culture: Candidates are required to take French 5100, 5200, 6400, and 6450; however, any part of this requirement may be waived by the graduate advisor if he/she judges it has been properly satisfied in previous study. A minimum of twelve credits of French literature in courses on the 6000 level or higher is also required, one of which must be a seminar. With the consent of

the candidate's advisor, up to six credits may be elected in related fields. On completion of their course work, candidates will be required to demonstrate a superior command of written and oral French. A final written and oral examination will be given to test their knowledge of French language and culture and those aspects of French literature in which they have had course work.

Italian (M.A. Concentration)

Under Plans A and B: Candidates are required to take Italian 7300. At least five weeks prior to the time the degree is to be granted, candidates must pass a comprehensive oral examination based on course work and the Italian area reading list.

Spanish (M.A. Concentration)

Under Plans A and B: Candidates are required to take course work in the areas of linguistics, Peninsular Spanish literature, and Spanish American literature. Candidates are required to write a comprehensive examination as specified in the *Graduate Handbook for Students and Faculty of the Department of Classical and Modern Languages, Literatures, and Cultures*, based on the Spanish area reading list for the Master of Arts degree. No oral examination is required.

Under Plan C — Language and Culture: Candidates are required to take a minimum of thirty-three credits in course work. They must elect Spanish 5550 and 5560 and a minimum of nine credits from Spanish 5200, 5300, 6400 and 7510. In addition, a minimum of twelve credits in Hispanic literature at the 6000 level or above is required. At least one of these courses must be in Spanish American literature and one in Spanish peninsular literature. With consent of the graduate advisor, students may elect up to six graduate credits in related areas. Upon completion of their course work, candidates are required to write an examination covering Spanish language and linguistics, Hispanic culture and Hispanic literature, as specified in the *Graduate Handbook for Students and Faculty of the Department of Classical and Modern Languages, Literatures, and Cultures*. No oral examination is required.

Modern Languages (Ph.D. Program)

The Doctor of Philosophy with a major in Modern Languages allows students to combine a major and a minor that best meet their interests and career goals. Students must consult with the Ph.D. advisor to consolidate a coherent plan of work that emphasizes disciplinary knowledge, critical thinking, research skills, and interdisciplinary work. Several options are available:

Major Concentration: Doctoral students may concentrate their studies in French, German, or Spanish. Between forty-five to forty-eight graduate credits must be completed in one of these major areas.

Minor Concentration: Doctoral students broaden their course of study through the choice of a minor concentration, which requires nine to twelve credits. Minors are available in literary and cultural criticism, in a second language (French, German, Italian, or Spanish), or in another area which will complement work undertaken in the major. The choice of the minor will be determined in consultation with both the graduate adviser and the potential dissertation advisor, if determined, or a subject-matter specialist in the area of the minor.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The application for admission and transcripts of all previous college work should be filed in the Graduate School at least three months in advance of the time the applicant plans to register. A letter giving information on the applicant's educational background, experience, objectives, oral fluency in the language, or proposed major concentration and other data of interest to an evaluating committee should be sent by the applicant as soon as possible to the Chairperson of the Department of Classical and Modern Languages, Literatures, and Cultures.

DEGREE REQUIREMENTS

The Doctor of Philosophy requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credits. The thirty credit dissertation registration requirement is fulfilled by registering for the courses CML 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Language Requirements: The doctoral candidate must pass a Ph.D. reading examination in one language other than those of his/her major and minor fields. The choice of the language will be determined in consultation with the graduate advisor and subject to the approval of the Graduate Committee.

Course Requirements: A minimum of between forty-five to forty-eight credits on the graduate level in the field of major concentration, and nine to twelve credits in one minor field. The total program must include thirty credits (excluding dissertation direction) at the 7000 level or above. All students are required to take a 7010 course (Introduction to Literary Theory) and all students with a graduate teaching assistantship must take LGL 7850 (Foreign Language Instruction). FRE 7300 (Comparative Romance Linguistics) is required of all graduate students in Romance languages. Course requirements for Master of Arts (Plans A, B and C - Literature) apply in the field of major concentration.

Qualifying Examinations: Within a reasonable time after the completion of all course work, students are required to pass extensive examinations, both written and oral, in the major and minor fields. Candidacy is achieved after passing the qualifying examinations and the dissertation committee is named. Later, after the dissertation has been completed, a final oral presentation and defense of it is required.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Fellowships, Assistantships, and Scholarships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

University graduate fellowships for students working toward a Ph.D. degree provide a waiver of tuition fees, stipends, health insurance, and housing allowance. Support for summer study is also available. Graduate assistantships with teaching assignments are available to students working toward a Master of Arts degree as well as to doctoral candidates. They also provide a waiver of tuition fees and stipends.

Teaching assistantships and scholarships are available to qualified graduate students. Applications for teaching assistantships and scholarships should be submitted to the Department, in care of the graduate advisor. Applications for teaching assistantships are due by February 1.

All students are also encouraged to apply for Graduate-Professional Scholarships, which provide tuition awards to students not otherwise holding a graduate assistantship or fellowship. Apply to the Graduate School.

The Martha S. Aust Graduate Scholarship in German is awarded annually to a student or students planning a teaching career in German. Deadline announced annually; amount of award and number of awards vary. Apply to the Department.

Concordia Singing Society Foundation Scholarships for Study in Germany: Awards are made annually to American undergraduate

or graduate students for the study of language, music, arts, or culture in Germany. Deadline announced annually; number and amount of awards vary.

The Uwe K. Faulhaber Endowment in Applied German Studies annually makes funds available to employ a graduate student to assist a faculty member with a special project. All graduate and AGRADE students are eligible for consideration. Apply to the Department.

Graduate students may also apply for the Munich Exchange Fellowship, offered by the Graduate School, for a year of study in Munich. Apply to the Graduate School.

Asian Studies in English Courses (ASN)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. These courses may NOT count toward a concentration in the foreign language from which the translations were derived.

5825 (HIS 3825) Readings in the History of Modern China. (ASN 3825) (HIS 5825) Cr. 4

From the rise of the last dynasty in the early seventeenth century to the present. (I)

5855 (HIS 5855) Pre-Modern Japan. Cr. 4

Japanese history from its mythical origins to early nineteenth century; political, economic, social, cultural developments. (B)

5865 Modern Japan. (HIS 5865) Cr. 4

Japanese history from the early nineteenth century to the present; emphasis on political, economic, and social developments. (Y)

5875 (HIS 5875) Gender in Modern East Asia. (GSW 5875) Cr. 4

History of gender in China, Japan, and Korea, with topics to include Confucianism, the state's role in gender construction, nationalism, imperialism, marriage, family, labor, sexuality, and feminism. (B)

6840 (HIS 3840) Readings in China and the World. (HIS 6840)

(ASN 3840) (CHI 3840) (CHI 6840) Cr. 4

Offered for graduate credit only. History of China as it has interacted with the world over the last two thousand years. Focus on global flow of trade goods, ideas and ideologies, religions and people. (Y)

Classics in English Translation Courses (CLA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. These courses may NOT count toward a concentration in the foreign language from which the translations were derived.

5050 (CLA 3050) Cleopatra. Cr. 3

Cleopatra as a figure of history and of myth, using sources ranging from ancient texts to contemporary websites, literature, history, art and film. Use of methodologies that classicists employ to focus on this single aspect of the ancient world; study of a historical problem that is plagued with biases. (I)

5150 (CLA 3150) Athens and the Ancient Greek World. Cr. 3-4

Cultural history of ancient Greece from the time of the first Olympic games (776 BCE) to the reign of Alexander the Great and the advent of the Hellenistic kingdoms (336 BCE); focus on the greatest of the Greek city-states, Athens. (B)

5190 (CLA 3190) Topics on Women in Antiquity. Cr. 3 (Max. 6)

Topics on roles of women and views of gender and sexuality in ancient Greece and Rome, drawn from literature, art, drama, and law. (I)

5200 Special Studies. Cr. 1-4 (Max. 8)

In-depth study of some aspect of Greek and Roman civilization. Topics may be drawn from the fields of literature, archaeology, art and history, and will be announced in Schedule of Classes. All readings in English. (I)

5250 Greek and Roman Drama. Cr. 3-4

Critical interpretations of Greek and Roman tragedy and comedy, as represented, for example, in the works of Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terence, and Seneca. Historical development of theatre design and dramatic staging. (I)

5300 Methods and Materials in Classical Studies. Cr. 3-6

Prereq: CLA 1010; Classics or Art History major. Introduction to various aspects of the material culture of Greek and Roman antiquity and to methods for approaching its study. (B)

5350 (CLA 3350) Plutarch's Lives of the Noble Greeks and Romans. Cr. 3

Structured reading of one of the formative works in the Western canon, which has had lasting influence on biography as a genre and upon individuals such as William Shakespeare, Jean-Jacques Rousseau, Ralph Waldo Emerson, William Wordsworth, George Bernard Shaw, Harry Truman, Robert Lowell, Barbara Chase-Riboud, and many others. (I)

5600 (CLA 3600) Religious Experience Among the Ancient Greeks and Romans. Cr. 3

Offered for graduate credit only. Polytheism among the Greeks and Romans. Topics include: sacrifice, prayer and supplication, festivals, burial, healing, priests and priesthood, temples and sacred sites, divination and extispicy, ruler cult, religion and politics. (I)

5700 (CLA 3700) The Golden Age of Rome. Cr. 3-4

Offered for graduate credit only. Interdisciplinary approach to the most important period of Roman history: the beginning of The Roman Empire under Augustus; history, politics, literature, art. (I)

5720 (GKM 3720) (HS) Modern Greek Cities: An Historical-Ethnographic Study. (GKM 5720) (CLA 3720) Cr. 3

Offered for graduate credit only. Historical and ethnographic survey of the communities and culture of modern Greek urban centers, from the early modern period to the present. (Y)

5800 (CLA 3800) Survey of Greek Literature. Cr. 3-4

Representative sampling of important Greek literary texts in English translation. (B)

5825 (CLA 3825) Survey of Latin Literature. Cr. 3-4

Representative sampling of important Latin literary texts in English translation. (B)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of instructor. Directed independent research in depth on a topic or author not treated in the regular classics offerings, culminating in a course paper. (T)

6250 (CLA 3250) The Ancient City. Cr. 3-4

Infrastructure, architecture, planning, and social and political forces that shaped the great cities of the ancient world, with particular attention to the growth of Rome. (I)

6260 (CLA 3999) Further Studies in Mythology. Cr. 3 (Max. 6)

Prereq: CLA 2000 or equivalent introductory mythology course in any other department. An in-depth study of mythology with special reference to particular classical myths or theories of myth. (I)

7010 (FRE 7010) Introduction to Literary Theory. (GER 7010) (ITA 7010) (NE 7010) (SLA 7010) (SPA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

French in English Translation Courses (FRE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. Except for FRE 6991 and ITA 6500, these courses may NOT count toward a concentration in the foreign language from which the translations were derived.

6991 Contemporary French Criticism and Literary Theory. Cr. 3

Theory and practice of contemporary French criticism; structuralist and post-structuralist writers: Barthes, Greimas, Derrida, and Lyotard. French majors required to do readings in French. (I)

7010 (FRE 7010) Introduction to Literary Theory. (CLA 7010) (GER 7010) (ITA 7010) (NE 7010) (SLA 7010) (SPA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

German in English Translation Courses (GER)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. These courses may NOT count toward a concentration in the foreign language from which the translations were derived.

5350 German Film. Cr. 3

Film as a new medium in late 19th century and early 20th century Germany; films produced during the Weimar Republic and under fascism; post-war West and East German cinema; German film since unification. Taught in English. (F)

7010 Introduction to Literary Theory. (CLA 7010) (FRE 7010) (GER 7010) (ITA 7010) (NE 7010) (SLA 7010) (SPA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

7400 (GER 5400) Cultural Studies and Criticism. Cr. 3-4

Exploration of key concepts and major figures for scholarship in literary and cultural studies. Readings and class in English. Open to students from diverse disciplines. (I)

Italian in English Translation Courses (ITA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. Except for FRE 6991 and ITA 6500, these courses may NOT count toward a concentration in the foreign language from which the translations were derived.

5150 Italian Cinema. Cr. 3 (Max. 9)

Concentrated study of specific trends or the development of individual directors. Topics to be announced in Schedule of Classes. Material Fee As Indicated In The Schedule of Classes (B)

6500 Introduction to Literary Criticism. Cr. 3

Overview of various currents of critical theory, focusing on literary and cinematographic texts. The two-fold pedagogical approach, theoretical and empirical, will use semiotics as a disciplinary tool of analysis and apply it to the textual material studies in this course. (I)

Slavic Studies in English Courses (SLA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. These courses may NOT count toward a concentration in the foreign language from which the translations were derived.

7010 (FRE 7010) Introduction to Literary Theory. (GER 7010) (ITA 7010) (NE 7010) (SPA 7010) (CLA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

7400 (SLA 5400) Cultural Studies and Criticism. Cr. 3-4

Important concepts and major figures in Slavic contributions to literary and cultural studies. Readings and class in English. Open to students from diverse disciplines. (I)

Spanish in English Courses (SPA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. These courses may NOT count toward a concentration in the foreign language from which the translations were derived.

7010 (FRE 7010) Introduction to Literary Theory. (GER 7010) (ITA 7010) (NE 7010) (SLA 7010) (CLA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

Russian in English Translation Courses (RUS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. These courses may NOT count toward a concentration in the foreign language from which the translations were derived.

5600 (RUS 3600) Nineteenth Century Russian Literature. Cr. 3-4

For advanced undergraduate and graduate students interested in Russian literature. Major nineteenth-century authors: Pushkin, Dostoevsky, Tolstoy, Chekhov, and others. Close readings of works introduce traditions and thematic concerns within historical and socio-cultural contexts; relevant intellectual, religious, political factors. Taught in English; readings in English. (F)

5650 (RUS 3650) Russian Literature Since 1900. Cr. 3-4

For advanced undergraduate and graduate students interested in Russian literature. Twentieth century Russian literature as it explores the universal questions of love, death, rebirth, spirituality, and despair against a background of war, revolution, political oppression and economic collapse. Close analysis of major works of prose and poetry as well as literary currents such as Russian modernism, Socialist Realism, and post-modernism. Taught in English; readings in English. (B)

Arabic Courses (ARB)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Medieval Arabic Texts. Cr. 3

Prereq: ARB 2010. Reading and translation of Arabic Medieval texts. Literature, language, religion and biography. (Y)

5020 Media Arabic. Cr. 3

Prereq: two years of Arabic study through ARB 2020. Language pertinent to media communications: written, visual and audio material. Background in origin and development of journalism in the Arab world. Current major newspapers and magazines used as basic reading materials. (W)

5100 (ARB 5100) Teaching of Arabic as a Foreign/Second Language (TAFL). (NE 5100) Cr. 3

Theoretical and conceptual framework of second language learning. Proper training in pedagogy as related to learning Arabic as a foreign/second language. (Y)

5130 Classical Arabic Literature in Translation. Cr. 3

From pre-Islamic period (Jahiliya) to the downfall of the Umayyad dynasty in Andalusia (1492). (W)

5140 Modern Arabic Literature in Arabic and English. Cr. 3

Prereq: ARB 2020. Literature and culture of Arab Nahda period (Renaissance beginning in nineteenth century), down to the present. Fiction, drama, biography, poetry. Course is offered in both Arabic and English. (Y)

5210 (ARB 5210) Arabic Sociolinguistics. (LIN 5210) (NE 5210) Cr. 3

No knowledge of Arabic required. Arabic dialectology; Arabic as a minority language in contact. Theories and techniques developed outside Arabic, and their applicability to Arabic situations. (F)

5230 (ARB 5230) Structure of Arabic. (LIN 5230) (NE 5230) Cr. 3

No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

5240 Quranic Arabic Cr. 3

Prereq: ARB 2020. Structures and functions of the language of the Quran. It introduces linguistic, textual, cultural, and aesthetic aspects of this language from the perspective of medieval and modern scholars of Arabic. (F)

5700 Medical Arabic. Cr. 3

Prereq: ARB 2010. Students develop a medical Arabic lexicon through conversation, dialogues, role playing, mock medical situations, and writing medical reports. (W)

5990 Directed Study. Cr. 1-3 (Max. 9)

Prereq: written consent of chairperson. Readings; periodic consultations and reports. (T)

6120 (NE 6120) Arab Women Through Literature. (ARB 6120) Cr. 3

Prereq: NE 2040 or NE 3040. Arabic literature by women, expressing gender vision of society, history, and women's role in Arab world and North Africa. (Y)

6700 History of Arabic. (LIN 6700) Cr. 3

Prereq: written consent of instructor. History of the evolution of Arabic. Data from phonetics/phonology and morpho-syntax will form the basis of study. (F)

Chinese Courses (CHI)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual in a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5210 (CHI 5210) Introduction to Chinese Linguistics. (LIN 5220) Cr. 3

Writing, sound and grammar systems of Chinese; interaction between Chinese language and Chinese society. (F)

5220 (CHI 5220) Languages of Asia. (JPN 5220) (LIN 5100) Cr. 3

Introduction to major language families in Asia; grammar, sounds, language contacts. (W)

5230 (CHI 5230) Grammar of Chinese. (LIN 5240) Cr. 3

Chinese grammar from perspectives of negation, question formation, aspects and different parts of speech, and the like. (F)

5300 (CHI 5300) Teaching Chinese as a Second Language. (LED 5300) Cr. 1-3

Prereq: CHI 3100 or equiv. Introduction to basic teaching grammar and sound rules and general teaching methodology. (W)

6840 (HIS 3840) Readings in China and the World. (HIS 6840) (ASN 3840) (ASN 6840) (CHI 3840) Cr. 4

Offered for graduate credit only. History of China as it has interacted with the world over the last two thousand years. Focus on global flow of trade goods, ideas and ideologies, religions and people. (Y)

French Courses (FRE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Minor Language Practicum. Cr. 3 (Max. 9)

Prereq: written consent of graduate advisor. Offered for S and U grades only. No degree credit toward Ph.D. Offered for graduate credit only. Controlled application of active language skills for students electing a Ph.D. minor in French. (T)

5100 (WI) Advanced Composition. Cr. 3

Prereq: any two of FRE 2100, 2110, 3200. Focus on advanced composition skills through a close analysis of different types of texts with the goal of developing vocabulary and advanced writing and speaking abilities. (W)

5200 French Phonetics and Pronunciation. Cr. 3

Prereq: any two of FRE 2100, 2110, 3200. Systematic study of French sounds and their relation to orthography, morphology, and grammar; syllable structure and phonetic transcription; prosody and intonation; intensive oral, aural, and written practice (F)

5305 Advanced Grammar and Stylistics. Cr. 3

Prereq: any two of FRE 2100, 2110, 3200. Study of French grammar through the lens of literary texts, a variety of oral and written exercises that will develop the ability to analyze and think critically about French grammar and stylistics (F)

5500 History of the French Language. (FRE 7500) Cr. 3

Prereq: FRE 5200. External and internal history of the French language, including an overview of Late Latin and a detailed examination of the phonological, morphological, syntactic and lexical changes from Latin to French, with linguistic analysis of texts. (B)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of advisor. (T)

6400 Introduction to French Linguistics. Cr. 3

Prereq: FRE 5200. Study of the historical development of French language standardization, language varieties, and various linguistic systems at work in the French language (e.g., phonology, morphology, syntax, semantics). (B)

6450 French Civilization. Cr. 3

Prereq: any two of FRE 3200, 4610, 4620. Introduction to French history and society from origins of France to the Fifth Republic; interrelation of socio-political developments to cultural movements in French art and thought. (B)

6470 Contemporary French Society and Institutions. Cr. 3

Prereq: any two of FRE 3200, 4610, 4620. French political and social institutions and practices since World War II. Comparative study of examples from American institutions and practices. (B)

6510 French Sixteenth Century Literature. Cr. 3

Prereq: FRE 4610 or 4620. Study of the principal genres represented by: Marot, Sceve, Labe, Du Bellay, Ronsard, D'Aubigne, Montaigne and others. Topics to be announced in Schedule of Classes. (B)

6630 French Seventeenth Century Literature. Cr. 3

Prereq: FRE 4610 or 4620. Historical background, religious and literary movements. Development of the Classical ideal in literature, salons, and academies. Representative authors of non-dramatic literature and the theatre (Corneille, Moliere and Racine). Content varies to cover a genre, literary movement, school or period. Topics to be announced in Schedule of Classes. (B)

6650 French Eighteenth Century Literature. Cr. 3

Prereq: FRE 4610 or 4620. The four major philosophes: Montesquieu, Diderot, Voltaire and Rousseau; precursors such as Cyrano, Fontenelle and Bayle. Developments in prose fiction and theatre; representative works of these genres. Content varies to cover a genre, literary movement, school or period. Topics to be announced in Schedule of Classes. (B)

6770 Studies in French Literature. Cr. 3

Prereq: FRE 4610 or 4620. Study of one of the major literary genres: prose, poetry or drama; its development from origins to present time. Emphasis on textual analysis. Topics to be announced in Schedule of Classes. (B)

6810 French Nineteenth Century Literature. Cr. 3

Prereq: FRE 4610 or 4620. Romanticism, Realism, Naturalism, Parnassian poetry, and the theatre of the second half of the nineteenth century. Chateaubriand, Hugo, Flaubert, Zola, Leconte de Lisle, Bécque, and others. Course content will vary to cover a genre, or literary movement, school or period. Topics will be announced in the Schedule of Classes. (B)

6840 French Twentieth Century Literature. Cr. 3

Prereq: FRE 4610 or 4620. Literary movements and representative authors from the turn of the century to the present. Course content will cover a genre or literary movement, school or period. Topics to be announced in Schedule of Classes. (B)

6860 Francophone Literatures. Cr. 3 (Max. 6)

Prereq: FRE 4610 or 4620. Studies in literature of French expression as represented in the distinct traditions of Africa and the West Indies, Canada and Switzerland. Topics to be announced in Schedule of Classes. (B)

7300 Comparative Romance Linguistics. (ITA 7300) (LIN 7300) (SPA 7300) Cr. 3

Prereq: graduate major in French, Italian, or Spanish. French students who have not completed FRE 6400 also require written consent of instructor. Historical development and earliest texts in the Romance languages: Latin substrata, historical diffusion, vulgar Latin, linguistic borrowings, classification, and characteristics of the various Romance languages. (B)

7500 (FRE 5500) History of the French Language. Cr. 3

Prereq: FRE 5200. External and internal history of the French language, including an overview of Late Latin and a detailed examination of the phonological, morphological, syntactic and lexical changes from Latin to French, with linguistic analysis of texts. (B)

7770 Special Studies in French Literature. Cr. 3-4 (Max. 8)

Prereq: minimum of eight credits in 6000-level French literature courses. Works of an outstanding writer, a literary genre, or of literary trends. (I)

7996 Research Project. Cr. 1-4 (Max. 12)

Prereq: written consent of graduate advisor. (T)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of advisor. (T)

8710 Seminar in the French Renaissance. Cr. 3 (Max. 6)

Prereq: minimum of eight credits in 6000-level French literature courses. Specified aspect, movement, author, or group of authors. (B)

8720 Seminar in Seventeenth Century French Literature. Cr. 3 (Max. 6)

Prereq: minimum of eight credits in 6000-level French literature courses. Specified aspect, movement, author, or group of authors. (B)

8730 Seminar in the French Enlightenment. Cr. 3 (Max. 6)

Prereq: minimum of eight credits in 6000-level French literature courses. Specified aspect, movement, author, or group of authors. (B)

8740 Seminar in Nineteenth Century French Literature. Cr. 3 (Max. 6)

Prereq: minimum of eight credits in 6000-level French literature courses. Specified aspect, movement, author, or group of authors. (B)

8750 Seminar in Twentieth Century French Literature. Cr. 3 (Max. 6)

Prereq: minimum of eight credits in 6000-level French literature courses. Specified aspect, movement, author, or group of authors. (B)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: FRE 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following FRE 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: FRE 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following FRE 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: FRE 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following FRE 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in FRE 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

German Courses (GER)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 German Practicum. Cr. 3 (Max. 9)

Prereq: written consent of graduate advisor. Offered for S and U grades only. No Ph.D. degree credit. Offered for graduate credit only. Controlled application of active language skills for students electing a Ph.D. minor in German, or German as a graduate reading language. (T)

5100 Advanced Composition and Conversation. Cr. 3

Prereq: GER 3100 or 3200 or equiv. Emphasizes improvement of student's oral and written command of German. Detailed study of modern German syntax. (B)

5390 (GER 5390) Holocaust Studies. (GER 7390) Cr. 3-4

Interdisciplinary approach to studying the Holocaust that includes history, literature, film, aesthetics, presentation and reception, and other areas that encourage a broad and deep understanding of Holocaust Studies. (I)

5600 Research in German Studies. Cr. 3-4

Prereq: GER 4600, graduate standing. Introductory seminar for graduate students in German studies that will prepare them to write graduate research papers. Focus on a particular topic of current relevance in German studies to help participants develop skills as critical readers, researchers, and writers of scholarship-based textual analysis. (F)

5670 (GER 5670) Nineteenth Century German Studies. (GER 7670) Cr. 3-4 (Max. 8)

Writers, genres, literary and intellectual movements, and thematic explorations that contribute to an understanding of Nineteenth-century German literature and culture. (I)

5770 Modernism. (GER 7770) Cr. 3-4 (Max. 8)

Fin-de-siecle Germany and Austria, modernism and the metropolis, modernism and the new media (film, radio), art and politics of the Weimar Republic. (I)

5720 (GER 5720) Eighteenth Century German Literature and Culture. (GER 7720) Cr. 3-4 (Max. 8)

Writers, genres, literary and intellectual movements, and thematic explorations that contribute to an understanding of eighteenth-century German literature and culture. (I)

5780 (GER 5780) Texts and Contexts Since 1945. (GER 7780) Cr. 3-4 (Max. 8)

Recent and contemporary literary and cultural works in context of the political, social and intellectual developments since 1945. (I)

5790 (GER 5790) Topics in German Studies. (GER 7790) Cr. 1-4 (Max. 12)

Special topics in German studies, focusing on culture, literature, language, or area studies. Topics to be announced in Schedule of classes. (I)

5800 (GER 5800) Literature and Cultures of Minorities. (GER 7800) Cr. 3-4

Focuses on literature by and about marginalized groups and on their cultures in postwar Germany. (I)

5990 Directed Study. Cr. 1-4 (Max. 8)

Undergrad. prereq: written consent of German chairperson; grad. prereq: written consent of German graduate advisor and chairperson. (T)

7390 (GER 5390) Holocaust Studies. Cr. 3-4

Interdisciplinary approach to studying the Holocaust that includes history, literature, film, aesthetics, presentation and reception, and other areas that encourage a broad and deep understanding of Holocaust Studies. (I)

7670 (GER 5670) Nineteenth Century German Studies. Cr. 3-4 (Max. 8)

Writers, genres, literary and intellectual movements, and thematic explorations that contribute to an understanding of Nineteenth-century German literature and culture. (I)

7720 (GER 5720) Eighteenth Century German Literature and Culture. Cr. 3-4 (Max. 8)

Writers, genres, literary and intellectual movements, and thematic explorations that contribute to an understanding of eighteenth-century German literature and culture. (I)

7770 (GER 5770) Modernism. Cr. 3-4 (Max. 8)

Fin-de-siecle Germany and Austria, modernism and the metropolis, modernism and the new media (film, radio), art and politics of the Weimar Republic. (I)

7780 (GER 5780) Texts and Contexts Since 1945. Cr. 3-4 (Max. 8)

Recent and contemporary literary and cultural works in context of the political, social and intellectual developments since 1945. (I)

7790 (GER 5790) Topics in German Studies. Cr. 1-4 (Max. 12)

Special topics in German studies, focusing on culture, literature, language, or area studies. Topics to be announced in Schedule of Classes. (I)

7800 (GER 5800) Literatures and Cultures of Minorities. Cr. 3-4

Focuses on literature by and about marginalized groups and on their cultures in postwar Germany. (I)

7996 Research Project. Cr. 1-4 (Max. 12)

Prereq: written consent of graduate advisor and chairperson. (T)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of graduate advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

Direction. Cr. 7.5

Prereq: GER 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following GER 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: GER 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following GER 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: GER 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following GER 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in GER 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

9992 Doctoral Candidate Status II: Dissertation Research and

Greek (Ancient) Courses (GKA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Ancient Greek for Graduate Students. Cr. 1-4 (Max. 4)

Prereq: written consent of graduate advisor. Offered for graduate credit only; no credit applicable to M.A. in classics degree. Basic grammar and vocabulary of Greek; leads to reading of continuous passages of poetry and prose in Greek. (T)

5100 Ancient Greek Prose Composition. Cr. 2-4

Prereq: GKA 2020 or equiv. Practice in the essentials of writing idiomatic and stylistic Greek prose. Instruction will be guided by readings and imitation of exemplary Greek prose authors. (I)

5200 Ancient Greek Lyric Poetry. Cr. 4

Prereq: GKA 2020 or equiv. Personal lyric poetry as a reflection of individual and society in the culture of the post-Homeric Greek world. (I)

5350 Readings in Ancient Greek History and Culture. Cr. 1-3 (Max. 6)

Prereq: one 3000-level Greek course and written consent of instructor; coreq: enrollment in a CLA course numbered 5000 or above. Readings in Greek primary sources relevant to the associated CLA course (which is taught in English). (T)

5400 Ancient Greek Philosophy. Cr. 4

Prereq: GKA 2020 or equiv. The origin and development of Greek philosophy as seen through representative selections from prominent philosophers such as the Presocratics, Plato, Aristotle, Epicurus, and the Stoics. (I)

5500 Ancient Greek Historians. Cr. 4

Prereq: GKA 2020 or equiv. Prose style and historiographic techniques of ancient historians; selections from Herodotus, Thucydides, Xenophon, and Polybius. (I)

5600 Ancient Greek Epic Poetry. Cr. 4

Prereq: GKA 2020 or equiv. Study in ancient Greek of Homer, Hesiod, Apollonius Rhodius and others. Theory of oral vs. literary composition, the Homeric question, metrics. (I)

5840 Ancient Greek: Attic Orators. Cr. 4

Prereq: GKA 2020 or equiv. grad. prereq: written consent of graduate advisor. Evolution of Greek prose style and historical context of the development of rhetoric in selected works of Attic orators. (I)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: undergrad., written consent of instructor and Classics coordinator; grad. written consent of instructor. (T)

6250 Ancient Greek Drama. Cr. 4-8 (Max. 8)

Prereq: GKA 2020 or equiv. Selected readings from the plays of Aeschylus, Sophocles, or Euripides or from the plays of Aristophanes or Menander. History and theory of the development of Greek drama and its subsequent influence on world literature. (I)

7810 Studies in Ancient Greek Poetry. Cr. 4 (Max. 12)

Prereq: undergrad. major in Classics with at least 16 credits in Ancient Greek beyond 1020; written consent of instructor and graduate advisor. A major poet or genre. Topics to be announced in Schedule of Classes. (B)

7820 Studies in Ancient Greek Prose. Cr. 4 (Max. 12)

Prereq: undergrad. major in Classics with at least 16 credits in Ancient Greek beyond 1020. Study of a major prose author or genre. Topics to be announced in Schedule of Classes. (B)

7999 Ancient Greek: Master's Essay Direction. Cr. 1-4

Prereq: written consent of advisor. (T)

8999 Ancient Greek: Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

Greek (Modern) Courses (GKM)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Modern Greek for Graduate Students. Cr. 1-4 (Max. 4)

Open only to graduate students. Prereq: written consent of Modern Greek instructor. Offered for graduate credit only. Basic grammar and vocabulary of modern Greek. Emphasis on conversation, reading and writing. (T)

5590 (GKM 3590) Byzantine Civilization. (GKM 5590) (CLA 3590) (CLA 5590) Cr. 3

Survey of Byzantine culture, religion, society, and literature from late Antiquity to 1453, through secondary and primary sources in translation. (Y)

5720 (GKM 3720) (HS) Modern Greek Cities: An Historical-Ethnographic Study. (GKM 5720) (CLA 3720) (CLA 5720) Cr. 3

Offered for graduate credit only. Historical and ethnographic survey of the communities and culture of modern Greek urban centers, from the early modern period to the present. (Y)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: undergrad., written consent of instructor and Classics coordinator; grad. written consent of instructor and Classics graduate advisor. (T)

Hebrew Courses (HEB)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5240 (HEB 5240) Survey of Modern Hebrew Literature in English. (NE 5240) Cr. 3

Offered for graduate credit only. From the nineteenth century to present; tradition vs. enlightenment; pioneerism, local color, and urban literature; Holocaust; the New Wave in modern Israeli literature. Course taught in English. (Y)

5990 Directed Study. Cr. 3-6 (Max. 9)

Prereq: undergrad., written consent of chairperson; grad., written consent of chairperson and graduate officer. Assigned readings of advanced texts; guided texts. (T)

Italian Courses (ITA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Minor Language Practicum. Cr. 3 (Max. 9)

Prereq: written consent of graduate advisor. Offered for S and U grades only. No degree credit toward the Ph.D. Offered for graduate credit only. Controlled application of active language skills for students electing a Ph.D. minor in Italian. (T)

5200 Italian Phonetics and Diction. Cr. 3

Prereq: ITA 3100. Systematic study of Italian phonetics, with practical exercises. Diction, proper breathing, dialectal variations, and some linguistic theory. (Y)

5570 Topics in Italian Studies. Cr. 3 (Max. 9)

Prereq: ITA 4610, ITA 4620,. In-depth study of author or group of authors, genre, historic period, or particular literary or cultural movement. Topics to be announced in Schedule of Classes. (B)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of advisor. (T)

6400 History of the Italian Language. Cr. 3

Prereq: ITA 3200. Italian language from beginnings to present time. Representative texts from various periods. (Y)

6610 Dante: Divine Comedy I. Cr. 3 (Max. 6)

Prereq: ITA 3200. A close reading of Dante's *Commedia*, and its sources, background, and interpretation with a focus on the *Inferno* and the first half of the *Purgatorio*. (B)

6620 Dante: Divine Comedy II. Cr. 3

Prereq: ITA 6610. A close reading of Dante's *Commedia* and its sources, background and interpretation, with a focus on the second half of the *Purgatorio* and the *Paradiso*. (B)

6680 Studies in Renaissance Literature and Culture. Cr. 3 (Max. 9)

Prereq: ITA 4610. The major contributions of the Italian Renaissance, including lyric poetry from Petrarch to Marino; Boccaccio and the *Novella* Tradition; Humanism; the epic poetry of Boiardo, Ariosto and Tasso; Machiavelli and the political essayists. Topics to be announced in Schedule of Classes. (Y)

6690 Studies in Baroque Literature and Culture. Cr. 3

Prereq: ITA 4610. The major contributions of the Italian Renaissance, including lyric poetry from Petrarch to Marino; Boccaccio and the *Novella* Tradition; Castiglione and the dialogue tradition; Machiavelli and the political essayists. Topics to be announced in Schedule of Classes. (B)

6700 Studies in Eighteenth-Century Literature and Culture. Cr. 3 (Max. 9)

Prereq: ITA 4620. Particular author, genre or literary movement in the historical and cultural context of eighteenth-century Italy. Topics to be announced in Schedule of Classes. (B)

6800 Studies in Nineteenth-Century Literature and Culture. Cr. 3 (Max. 9)

Prereq: ITA 4620. Particular author, genre or literary movement in the historical and cultural context of nineteenth-century Italy. Topics to be announced in Schedule of Classes. (B)

6870 Studies in Modern Italian Fiction. Cr. 3 (Max. 9)

Prereq: ITA 4620. Study of a genre, movement, theme, or period. Topic announced in Schedule of Classes. (Y)

6900 Studies in Twentieth-Century Literature and Culture. Cr. 3 (Max. 9)

Prereq: ITA 4620. Particular author, genre or literary movement in the historical and cultural context of twentieth-century Italy. Topics to be announced in Schedule of Classes. (B)

7010 (FRE 7010) Introduction to Literary Theory. (GER 7010) (NE 7010) (SLA 7010) (SPA 7010) (CLA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

7300 (FRE 7300) Comparative Romance Linguistics. (LIN 7300) (SPA 7300) Cr. 3

Prereq: graduate major in French, Italian, or Spanish. Historical development and earliest texts in the Romance languages: Latin substrata, historical diffusion. Vulgar Latin, linguistic borrowings, classifications, and characteristics of the various Romance languages. (B)

7996 Research Project. Cr. 1-4 (Max. 12)

Prereq: written consent of Italian advisor. (T)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of Italian advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

Japanese Courses (JPN)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5220 (CHI 5220) Languages of Asia. (LIN 5100) Cr. 3

Offered for graduate credit only. Introduction to major language families in Asia; grammar, sounds, language contacts. (W)

Language Learning Courses (LGL)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5750 (ENG 5750) Theories of Second Language Acquisition. (LIN 5750) Cr. 3

The complex processes involved in learning a foreign/second language, including the cognitive, affective, and social factors influencing learner success and the effectiveness of instruction. (Y)

5810 Teaching Foreign Languages: Receptive Skills. (LED 5810) (LED 7810) (LGL 7810) Cr. 3

Prereq: written consent of instructor. Current research and theory on acquisition of reading and listening skills in a foreign language applied to classroom instruction. Difference between receptive and productive language use; how methods of foreign language teaching treat the instruction of the receptive skills. (B)

5820 Teaching Foreign Languages: Productive Skills. (LED 5820) (LED 7820) (LGL 7820) Cr. 3

Prereq: written consent of instructor. Current research on acquisition of speaking and writing skills in a foreign language. Difference between productive and receptive language use; how various methods of foreign language teaching treat the instruction of productive skills. (B)

5830 Technology in the Foreign Language Classroom. (LED 5830) (LED 7830) (LGL 7830) Cr. 3

Prereq: written consent of instructor. Types of current technology; review of research on effectiveness of language classroom technologies; evaluation of technologies; development of activities for use in classroom. (B)

5850 Foreign Language Instruction. (LED 5850) (LED 7850) (LGL 7850) Cr. 3

Prereq: written consent of instructor. Theoretical basis of second language teaching models; historical overview of methodologies; current trends in teaching of reading, writing, listening, speaking, and culture. Implications of methodology on materials, classroom techniques, and assessment. (B)

5860 Foreign Language Testing. (LED 5860) (LED 7860) (LGL 7860) Cr. 3

Prereq: written consent of instructor. Means of assessing students' knowledge of a foreign language. Topics include: ACTFL Oral Proficiency Interview; assessment of reading, writing, speaking, listening, vocabulary, grammar and culture; through testing and other forms of assessment. (Y)

7810 (LGL 5810) Teaching Foreign Languages: Receptive Skills. (LED 5810) (LED 7810) Cr. 3

Prereq: written consent of instructor. Latest research on acquisition of reading and listening skills in a foreign language. Difference between receptive and productive language use; how methods of foreign language teaching treat the instruction of the receptive skills. (B)

7820 (LGL 5820) Teaching Foreign Languages: Productive Skills. (LED 5820) (LED 7820) Cr. 3

Prereq: written consent of instructor. Current research on acquisition of speaking and writing skills in a foreign language. Difference between productive and receptive language use; how various methods of foreign language teaching treat the instruction of productive skills. (B)

7830 (LGL 5830) Technology in the Foreign Language Classroom. (LED 5830) (LED 7830) Cr. 3

Prereq: written consent of instructor. Types of current technology; review of research on effectiveness of language classroom technologies; evaluation of technologies; development of activities for use in classroom. (B)

7850 (LGL 5850) Foreign Language Instruction. (LED 5850) (LED 7850) Cr. 3

Prereq: written consent of instructor. Theoretical basis of second language teaching models; historical overview of methodologies; current trends in teaching of reading, writing, listening, speaking, and culture. Implications of methodology on materials, classroom techniques, and assessment. (B)

7860 (LGL 5860) Foreign Language Testing. (LED 5860) (LED 7860) Cr. 3

Prereq: written consent of instructor. Means of assessing students' knowledge of a foreign language. Topics include: ACTFL Oral Proficiency Interview; testing of reading, writing speaking and listening skills; means of testing grammar and culture; testing as it relates to program goals. (Y)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of advisor. Essay course required for degree. (T)

Latin Courses (LAT)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Latin for Graduate Students. Cr. 1-4 (Max. 4)

Prereq: written consent of graduate advisor. Offered for graduate credit only. Basic grammar and vocabulary of Latin; leads to reading of continuous passages of poetry and prose in Latin. (T)

5300 Readings in Roman History and Culture. Cr. 1-3 (Max. 6)

Prereq: one 3000-level Latin course, written consent of instructor; coreq: enrollment in a CLA course numbered 5000 or above. Readings in Latin primary sources that are relevant to the associated CLA course (which is taught in English). (T)

5810 Roman Historians. Cr. 4

Prereq: LAT 2020 or equiv. Selected readings from Tacitus, Livy, Caesar or Sallust illustrating the Roman rhetorical and ethical analysis of republican and imperial history. (I)

5850 Epic. Cr. 4

Prereq: LAT 2020 or equiv. Readings in Latin of the works of epic poets such as Ennius, Vergil, Lucan, Statius and others. (I)

5860 Lyric and Elegy. Cr. 4

Prereq: LAT 2020 or equiv. Readings in Latin of lyric and elegiac poetry by authors such as Catullus, Tibullus, Horace, and Propertius. (I)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: undergrad., written consent of instructor and Classics coordinator; grad., written consent of instructor and Classics graduate advisor. (T)

6100 Latin Prose for Learning and Teaching. Cr. 3

Prereq: LAT 3210; LAT 3220 or LAT 3150; written consent of instructor. Offered for graduate credit only. Online course for future and current teachers of K-12 Latin. The grammar and syntax of Latin prose of the Republican period, through selected readings from authors such as Cato, Cicero, Caesar, Sallust, and Nepos; focus on narrative prose rather than oratory. Composition exercises to reinforce the study of grammar and stylistics. Course covers ways in which teachers can incorporate prose composition into their classes as exercises in fluency, and as a way to teach grammar in order to prepare their students for standardized tests in Latin. Students will prepare and share lesson plans. Web course. (S)

6500 Roman Epistolography. Cr. 4

Prereq: LAT 2020 or equiv. Social, literary, and historical significance of the letters of such writers as Cicero, Pliny and Seneca. (I)

6820 Roman Rhetoric. Cr. 4

Prereq: LAT 2020 or equiv. Study of Roman rhetorical theory and practice. (I)

6840 Roman Drama. Cr. 4

Prereq: LAT 2020 or equiv. Study of Roman comedy and tragedy through study of comedies of Plautus or Terence, or tragedies of Seneca. Studies in the early history of Roman drama may include readings in the literary remains of Accius, Pacuvius, and Naevius. (I)

6890 Roman Satire. Cr. 4

Prereq: LAT 2020 or equiv. Readings in the works of satirists such as of Horace, Persius and Juvenal. (I)

7810 Studies in Latin Poetry. Cr. 4 (Max. 12)

Prereq: undergrad. major in Classics with at least 16 credits in Latin beyond 1020. Study of a major poet or genre of poetry. Topics to be announced in Schedule of Classes. (B)

7820 Studies in Latin Prose. Cr. 4 (Max. 12)

Prereq: undergrad. major in Classics with at least 16 credits in Latin beyond 1020. Study of a major prose author or prose genre. Topics to be announced in Schedule of Classes. (B)

7999 Master's Essay Direction. Cr. 1-4 (4 req.)

Prereq: written consent of graduate advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

Near Eastern Studies Courses (NE)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Globalization, Social History and Gender in the Arabian Gulf. (HIS 5960) (HIS 7960) Cr. 3

Social history of the Arabian Gulf (especially Bahrain, Qatar, and the UAE) in the age of globalization. Contemporary history with special emphasis on gender relations as an index of current social developments in the region. (Y)

5100 (ARB 5100) Teaching of Arabic as a Foreign/Second Language (TAFL). Cr. 3

Theoretical and conceptual framework of second language learning. Proper training in pedagogy as related to learning Arabic as a foreign/second language. (Y)

5110 History and Development of Islamic Political Thought. (PS 5760) Cr. 3

Prereq: NE 2030, NE 3040. Historical analysis of political Islam through study of the precepts and historical vicissitudes impacting the Islamic world from within and from external forces. (F,W)

5210 (ARB 5210) Arabic Sociolinguistics. (LIN 5210) Cr. 3

No knowledge of Arabic required. Arabic dialectology; Arabic as a minority language in contact. Theories and techniques developed outside Arabic, and their applicability to Arabic situations. (F)

5220 Muslim Personal Law. Cr. 3

Study of Muslim family law, with attention to the status of women and children in the law. Areas include: betrothal, marital contracts, forms of marital dissolution, laws of inheritance, and child custody. Focus on classical interpretation of the law, and its application in modern times. (F)

5230 (ARB 5230) Structure of Arabic. (LIN 5230) Cr. 3

No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

5300 Quran: History and Interpretation. (NE 7300) Cr. 3

Traditional and revisionist narratives of the canonization of the Quran; textual features of the Quran; history of quranic hermeneutics and exegesis (Y)

5700 Topics in Middle Eastern Studies. Cr. 1-4 (Max. 8)

Special topics in Middle Eastern politics, language, and literature. (Y)

5710 Islam and the Challenge of Modernity. Cr. 3

Influence of Enlightenment values and colonial institutions on the social, political, and ideological structures of the Islamic World. (B)

5990 Directed Study. Cr. 1-3 (Max. 9)

Prereq: undergrad., written consent of chairperson; grad., written consent of chairperson and graduate advisor. (T)

6005 Survey of Jewish Civilization and History. (HIS 3010)

(HIS 6005) Cr. 4

Offered for graduate credit only. History of the Jewish people from their biblical origins to the contemporary period. Study of primary documents as a means of understanding how Jews have responded to the challenges of living in both the Diaspora and a Jewish State. (I)

6031 Methodologies and Research in Oral History: Near Eastern and Asian Societies. Cr. 3

Offered for graduate credit only. Techniques, methodologies and legalities of studying and interpreting alternative data for historical research. Social and cultural sensitivities of Near Eastern and Asian societies and the gathering of historical information through oral research. (W)

6120 Arab Women Through Literature. (ARB 6120) Cr. 3

Prereq: NE 2040 or NE 3040. Arabic literature by women, expressing gender vision of society, history, and women's role in Arab world and North Africa. (Y)

6500 Religion and Society. Cr. 3

Role of religion in societies from ancient to contemporary times. Religion as related to science, violence, patriarchy, feminism, art, government, ethics, and issues of religious pluralism. (I)

7010 (FRE 7010) Introduction to Literary Theory. (GER 7010) (ITA 7010) (SLA 7010) (SPA 7010) (CLA 7010) Cr. 3

Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. (B)

7100 Islam and the West. Cr. 3

Areas covered include: emergence of Muslim political power in seventh century Middle East; Iberian Peninsula and religious pluralism; Crusades and their impact on religion and society in Middle East; colonialism and transfer of Enlightenment values to Islamic world; Muslim migration to Europe and America. (I)

7300 (NE 5300) Quran: History and Interpretation. Cr. 3

Traditional and revisionist narratives of the canonization of the Quran; textual features of the Quran; history of quranic hermeneutics and exegesis (Y)

7999 Master's Essay Direction. Cr. 1-3

Prereq: written consent of advisor. (I)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (I)

Polish Courses (POL)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5990 Directed Study. Cr. 1-3 (Max. 12)

Prereq: POL 3020 or equiv., written consent of chairperson. (T)

Russian Courses (RUS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5990 Directed Study. Cr. 1-3 (Max. 12)

Prereq: undergrad., written consent of chairperson; grad., written consent of chairperson and graduate officer. For students who wish credit for program of work not included in regularly scheduled courses, either in language or in literature. Knowledge of Russian required. (T)

Spanish Courses (SPA)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Minor Language Practicum. Cr. 3 (Max. 9)

Prereq: written consent of graduate advisor. Offered for S and U grades only. No degree credit toward Ph.D. Offered for graduate credit only. Controlled application of active language skills for students electing a Ph.D. minor in Spanish. (T)

5100 (WI) Advanced Composition. Cr. 3

Prereq: SPA 3100 or placement. Study and utilization of Spanish in written form: colloquial usage, literary Spanish, commercial Spanish, idiomatic expressions. Brief compositions and translation exercises. Conducted entirely in Spanish. (Y)

5200 Spanish Phonetics. Cr. 3

Prereq: SPA 3100. A systematic study of Spanish sounds; conducted in Spanish. (B)

5300 Advanced Grammar and Stylistics. Cr. 3

Prereq: SPA 5100 or placement. Intensive study of grammar and syntax. Free composition and conversation. Conducted in Spanish. (B)

5400 Introduction to Professional and Literary Translation. Cr. 3

Prereq: SPA 3100. Introduction to the practice and principles of translation, both from English to Spanish and Spanish to English, for intermediate to advanced Spanish students. Practice in translating: literary works, legal and medical documents, commercial advertisements, and other texts, while becoming familiar with the history and aspects of the theory of translation. Students will become aware of the importance of translation in areas such as cultural diplomacy, literary studies, law, business and medicine. (B)

5550 Spanish Culture and Its Tradition. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Spain's cultural history: painting, sculpture, architecture and music, through films, records, newspapers, and other texts. (B)

5560 Spanish American Cultures and their Traditions. (LAS 5560) Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Spanish America before and after the discovery of the New World. Art, music, customs, contemporary institutions, through films, records, newspapers, gallery visit to Detroit Institute of Art, and the text. (B)

5570 Topics in Hispanic Culture or Language. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Specific themes, genres, movements or periods. Topics to be announced in Schedule of Classes. (Y)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of advisor. (T)

6400 Introduction to Hispanic Linguistics. Cr. 3

Prereq: SPA 5200. Principles of linguistics and their application to Spanish. (B)

6410 Spanish Medieval Literature: Origins to 1500. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Main currents and masterworks of Spanish literature from its origins to 1500. (Formerly SPA 6500.) (B)

6420 Early Modern Spanish Studies. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Literary genres of the early modern period (poetry and narrative: picaresque, pastoral, morisco, and chivalric). (B)

6430 Spanish Literature of the Baroque Period. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Great poets of the Spanish seventeenth century: Lope de Vega, Gongora, Quevedo; as well as the prose of Quevedo and Gracian. Literary selections studied within the unique cultural climate of the Spanish Baroque. (Formerly SPA 6510.) (B)

6440 Spanish Literature of the Eighteenth Century. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Literature of the Spanish Enlightenment; major works and literary trends and movements in the Spanish eighteenth century up to Romanticism. (Formerly SPA 6520.) (B)

6450 Spanish Romanticism. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Origins and development of Romanticism in Spain: theatre, poetry, costumbrismo, and other narrative. (Formerly SPA 6520.) (B)

6460 The Spanish Novel of the Nineteenth Century. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Representative works of the Realist and Naturalist movements. (Formerly SPA 6993.) (B)

6470 The Spanish Novel of the Twentieth Century. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Novelists of the twentieth century, including those of the Silver Age (1900-1936) and those associated with Tremendismo, Social Realism, and the contemporary experimental novel. (Formerly SPA 6993.) (B)

6490 Spanish Poetry of the Nineteenth and Twentieth Centuries. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Representative figures and trends in Modern and contemporary Spanish poetry. Post-Romanticism, Symbolism, the Silver Age (1900-1936), and contemporary poetry. (B)

6560 Cervantes. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. A detailed study of Don Quijote. Other short works of Cervantes. (B)

6570 The Comedia. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Analysis of plays by Lope de Vega, Tirso de Molina, Calderon, Maria de Zayas and other dramatists of Spain's Golden Age. (B)

6590 Genres and Topics in Peninsular Spanish Literature. Cr. 3 (Max. 9)

Prereq: SPA 4610, 4620, 4630, or 4640. Topics such as twentieth-century Spanish theatre, the Picaresque novel, and eighteenth-century Spanish theatre, to be announced in Schedule of Classes. (B)

6600 Spanish American Colonial Literature. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Major figures from the sixteenth to the nineteenth centuries. Poetry, prose, and theatre; the literature of the conquest; conflicts and tension between the dominant and the conquered societies. (B)

6620 Latin American Novel in the 20th and 21st Centuries. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Roots of the modern novel in Spanish America; its stages of evolution through the vanguard period into the contemporary stage, with emphasis on representative figures such as Carpentier, Cortazar, and Garcia Marquez. (B)

6630 Spanish American Poetry. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Major figures of the twentieth century and their texts, from the Vanguard period to contemporary poetry. (B)

6670 Latin American Novel to 1900. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Late colonial period to 1900. (B)

6690 Genres and Topics in Spanish American Literature. Cr. 3 (Max. 9)

Prereq: SPA 4610, 4620, 4630, or 4640. Topics in the literature of Spanish America, such as the short story or theatre, to be announced in Schedule of Classes. (B)

6700 Spanish Literature of the Silver Age: 1900-1936. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Writers of the first three decades of the twentieth century; current narratological theories applied to intertextual maneuvers and philosophical concepts. (I)

6710 Unamuno's Existential Fiction. Cr. 3

Prereq: SPA 4610, 4620, 4630, or 4640. Important novels of Miguel de Unamuno; emphasis on characters and their agonization in a circumscribed area. (I)

7300 (FRE 7300) Comparative Romance Linguistics. (ITA 7300) (LIN 7300) Cr. 3

Prereq: graduate major in French or Italian or Spanish. Historical development and earliest texts in the Romance languages: Latin substrata, historical diffusion. Vulgar Latin, linguistic borrowings, classifications, and characteristics of the various Romance languages. (B)

7510 History of the Spanish Language. Cr. 3

Prereq: SPA 5200. Origins, development and linguistic status of the Spanish language in Spain and Spanish America. (B)

7770 Special Studies in Spanish Literature. Cr. 3 (Max. 12)

Prereq: minimum of eight credits in 6000-level Spanish Literature courses. Study of the works of an outstanding writer, a literary genre, or literary trends. (F,W)

7996 Research Project. Cr. 1-3 (Max. 12)

Prereq: written consent of Spanish advisor. (T)

8420 Seminar in Hispanic Linguistics. (LIN 7320) Cr. 3 (Max. 9)

Seminar topics will vary according to the principal divisions of Spanish linguistics: phonology, morphology, lexicography, syntax, and dialectology. Topics to be announced in Schedule of Classes. (I)

8510 Seminar in the Golden Age. Cr. 3 (Max. 9)

Prereq: graduate major. Topics to be announced in Schedule of Classes. (I)

8530 Seminar in Spanish Literature of the Eighteenth and Nineteenth Centuries. Cr. 3 (Max. 9)

Prereq: graduate major. Topics to be announced in Schedule of Classes. (I)

8550 Seminar in Spanish Literature of the Twentieth Century. Cr. 3 (Max. 9)

Prereq: graduate major in Spanish. Topics to be announced in Schedule of Classes. (I)

8610 Seminar in Spanish American Narrative. Cr. 3 (Max. 9)

Prereq: graduate major in Spanish. Narrative genres in Spanish America including short story, essay, novel, short novel; development, history, period characterization. Topics to be announced in Schedule of Classes. (I)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: SPA 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following SPA 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: SPA 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following SPA 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: SPA 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following SPA 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in SPA 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Communication Sciences and Disorders

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Graduate Officer: Derek Daniels

Undergraduate Advisors: Faith Williams

Coordinator of SLP Clinical Programs: Karen S. O'Leary

Web: <http://www.clas.wayne.edu/CSD>

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Anthony Cacace, John Panagos (Emeritus), Jinsheng Zhang

Associate Professors

Derek Daniels, Margaret Greenwald, Li Hsieh, Natalia Rakhlin, Thomas H. Simpson,

Assistant Professor

Shelly Jo Kraft

Instructors

Tausha Beardsley, Maryellen Lienen, Stephanie McLearn, Karen S. O'Leary, Kimberly Stewart

Lecturers

Aaron Hardy-Smith

Part-Time Faculty

Pat Backoff, Marlene Cummings, Ashley Hallberg, Christine Hogan-Henk, Kelly Maatz, John O'Leary

Adjunct Faculty

Ching-I Lu

Henry Ford Health System: Kenneth R. Bouchard, Kate Marchelletta, Virginia Ramachandran, Brad Stach

University of Michigan: Bruce Edwards, Jaynee Handelsman, Paul Kileny, Teresa Zwolan

Graduate Degrees

MASTER OF ARTS with a major in Speech-Language Pathology

DOCTOR OF AUDIOLOGY

*DOCTOR OF PHILOSOPHY with a major in Communication
Sciences and Disorders*

Audiology is the study of the normal and impaired auditory system. Speech-language pathology focuses on impaired speech, language, fluency, and voice function of children and adults. The Doctor of Audiology (Au.D.) and Master of Arts with a major in Speech-Language Pathology degree programs offer students intensive and diverse academic and clinical experiences.

The course of study should be developed as early as possible with the student's major advisor, and candidacy must be established by filing an approved Plan of Work after twelve credits have been earned.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Aca-

demical Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

APPLICATION REQUIREMENTS for all departmental graduate programs are: 1) a minimum undergraduate grade point average of 3.0, 2) completion of the Graduate Record Examination, 3) submission of three letters of recommendation, 4) submission of a written Statement of Intent, 5) submission of official transcripts. International applicants must provide, in addition, official results of the TOEFL, TWE, and SPEAK/TSE. Please access the department's website at <http://www.clas.wayne.edu/csd/> for additional information. Admission to all programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

Assistantships

Graduate student assistantships may be available in the Department. Students should consult the Graduate Officer of the Department for information.

Accreditation: The Master of Arts in Speech-Language Pathology and the Doctor of Audiology programs are accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association, 2200 Research Blvd, Rockville, MD 20850, Telephone: 800-638-8255.

Speech-Language Pathology (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Application requirements are stated above. Application must be made using the on-line application form available via <http://www.gradadmissions.wayne.edu/apply.php> AND the CSDCAS Centralized Application Service at <https://portal.csdcas.org/>. Deadline for receipt of all application materials for fall admission is January 15. For additional information please access the department's website at <http://www.clas.wayne.edu/csd>.

It is essential that prospective graduate students in this area confer with an advisor in the area of Speech-Language Pathology concerning academic, clinical and professional programs to meet certification requirements as set forth by the American Speech-Language-Hearing Association.

DEGREE REQUIREMENTS: The Master of Arts degree is offered by this Department under the following options:

Plan A: 54 - 60 credits, including an eight-credit thesis.

Plan B: 54 - 60 credits, including a three-credit essay.

Plan C: 54 - 60 credits in course work, plus written and/or oral comprehensive examinations in the major (total credits determined by major area of study).

Audiology (Au.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Application requirements are stated above. Application must be made using the on-line application form via <http://www.gradadmissions.wayne.edu/apply.php> AND the CSDCAS Centralized Application Service at <https://portal.csdcas.org/>. Deadline for receipt of all application materials for fall admission is January 15. Please access the department's website at <http://www.clas.wayne.edu/CSD> for additional information.

Prerequisite courses for admission to the Doctor of Audiology (Au.D.) program include coursework in behavioral and social sciences, mathematics, natural science, human communication, language acquisition, phonetics or acoustics, and an introductory course in human communication disorders. Most applicants will have also completed introductory coursework in speech-language pathology and audiology.

The Au.D. program is designed to prepare audiology professionals to meet requirements for licensure (and certification, if desired) and is consistent with the standards of the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

The program is specifically designed for individuals who have completed an undergraduate degree program in an accredited college or university and who have met the prerequisite requirements for admission to the Au.D. program. This is a four-year (eleven semester) full-time academic and clinical program. Most applicants who have completed an undergraduate degree in communication disorders meet our course work requirements for admission. Applicants with undergraduate degrees in other fields may need to complete prerequisite course requirements prior to admission to the graduate program.

DEGREE REQUIREMENTS: The Doctor of Audiology degree requires successful completion of 121-125 graduate credits in the major plus written and/or oral comprehensive examinations.

Communication Sciences and Disorders (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Application requirements are described above. Details of the program and application process are outlined on the department's website at <http://www.clas.wayne.edu/csd>.

Candidacy: In order to become a candidate for the Ph.D. degree, an applicant must successfully complete both a written and an oral qualifying examination.

DEGREE REQUIREMENTS: A minimum of ninety graduate credits beyond the baccalaureate is required for completion of the Ph.D. program. Most students exceed this requirement in the course of completing the degree. The student and his/her advisor work cooperatively to plan a program of study designed to establish the necessary skills and knowledge for successful completion of the degree and in preparation for careers in research, higher education, and advanced clinical practice. As part of the program of study, the student will complete thirty credits in Doctoral Dissertation Research and Direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses SLP 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Audiology Courses (AUD)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5400 Introduction to Audiology. Cr. 3

Introduction to physics of sound, anatomy of the hearing mechanism, audiometry, hearing aids, habilitation and rehabilitation of the hearing handicapped. (F,W)

5420 Introduction to Aural Rehabilitation. Cr. 3

Prereq: AUD 5400; written consent of department. Principles and practices of aural rehabilitation including hearing aids. Material Fee As Indicated In The Schedule of Classes (W,S)

6000 Electrophysiological Procedures. Cr. 4

Prereq: AUD 5400; graduate standing in audiology or speech-language pathology. Offered for graduate credit only. Two distinct electrophysiological procedures, auditory evoked potentials and otoacoustic emissions, are presented. Both procedures consist of several sub-tests used to assess the auditory system from the middle ear to the cortex, in normal and disordered ears. (W)

6010 Acoustic Immittance Measures. Cr. 2

Prereq: admission to graduate program in audiology. Offered for graduate credit only. Knowledge required to perform and interpret aural acoustic immittance measures. Test results obtained from normal ears and effects of pathological conditions on these clinical tests. (W)

6030 Instrumentation in Audiology. Cr. 3

Prereq: open only to graduate students; offered for graduate credit only. Operation, hook-up, scientific notation, systems of measurement, calibration and repair of instruments and software used in clinical audiology. (W)

6040 Auditory and Vestibular Pathologies. Cr. 4

Prereq: graduate standing in audiology. Offered for graduate credit only. Disorders of the auditory and vestibular systems. Etiology, pathological characteristics, medical and non-medical therapies. (I)

6310 Audiology Clinical Practicum Series. Cr. 3 (Max. 9)

Prereq: AUD 6410, 6411, 6412. Open only to audiology graduate students. Offered for graduate credit only. Progression of knowledge and skill level, from introductory basic clinical skills through advanced clinical protocols for difficult to manage patients. Material Fee As Indicated In The Schedule of Classes (T)

6400 Anatomy, Physiology, and Psychophysiology of Audition. Cr. 4

Prereq: graduate standing in audiology or speech-language pathology. Offered for graduate credit only. Structure and function of the human auditory system. Psychophysical theories of hearing. (F)

6410 Basic Audiologic Evaluation. Cr. 3

Prereq: graduate standing in audiology or speech-language pathology recommended. Offered for graduate credit only. Principles and application of pure-tone and speech audiometry, clinical masking, and impedance/immittance testing. (F)

6411 Audiology Clinical Laboratory I. Cr. 2

Prereq: AUD 6410. Open only to graduate students. Offered for graduate credit only. Development of basic competencies related to clinical procedures and methods for evaluation and treatment of clients; maintenance and use of technology in the university audiology clinic. Student will observe and begin to perform evaluations under faculty supervision. Material Fee as indicated in Schedule of Classes (F)

6412 Audiology Clinical Laboratory II. Cr. 2

Prereq: AUD 6040, 6411. Open only to graduate students. Offered for graduate credit only. Continuation of basic competency development related to clinical procedures and methods for evaluation and treatment of clients, maintenance and use of technology in an audiology clinical practice. Students perform evaluations under faculty supervision. Material Fee as indicated in Schedule of Classes. (W)

6413 Audiology Clinical Laboratory III. Cr. 2

Open only to audiology graduate students. Prereq: AUD 6411 and AUD 6412. Offered for graduate credit only. Continuation of competency development related to clinical procedures and methods for evaluation and treatment of clients, including advanced testing procedures. Course includes a rotating placement at a local health system. (S)

6430 Principles of Amplification I. Cr. 3

Prereq: AUD 6410. Open only to graduate students. Offered for graduate credit only. Electroacoustic and clinical aspects of acoustic amplifiers and developmental history of hearing aids. (W)

6530 Principles of Amplification II. Cr. 3

Prereq: AUD 6430. Open only to graduate students. Offered for graduate credit only. Fundamentals of digital technology, compression, channeling and programming, and applications to various hearing impairment parameters. (F)

7300 Clinical Internship. Cr. 3 (Max. 12)

Prereq: AUD 5400 and AUD 6410. Open only to audiology graduate students. Supervised observation, training and practice in audiological procedures. Placements in local audiology settings as assigned by clinical rotation coordinator. (T)

7320 Issues, Ethics and Scope of Practice in Audiology. Cr. 2 (Max. 9)

Prereq: AUD 6000, 6430, and 8430. Code of Ethics and Scope of Practice as published by the professional organizations for audiology. Issues and case studies in ethical practice, malpractice, legal responsibilities, best practice, and counseling. (S)

7350 Contemporary Issues in Audiology. Cr. 1-4 (Max. 16)

Prereq: admission to audiology program. Integrated seminar; topics announced in Schedule of Classes. (Y)

7410 Psychoacoustics. Cr. 3

Basic hearing science including psychophysical methods underpinning clinical testing procedures, signal detection theory, and speech perception. (I)

7420 Hearing Loss Prevention Programs. Cr. 3

Prereq: six graduate credits in audiology recommended. Assessment of damage risk criteria for noise-induced hearing loss. Implementation and management of hearing loss prevention programs in industry, schools, and community settings. (W)

7430 Pediatric Audiology. Cr. 3

Prereq: AUD 6410. Introduction to embryology, tests, test procedures, and counseling of parents with hearing-handicapped children. (S)

7490 Educational Audiology. Cr. 3

Prereq: AUD 6430, 7430. Preschool guidance and counseling, modern educational models and placement options, and the role of the audiologist in educational management. (I)

7500 Aural Rehabilitation. Cr. 3

Prereq: AUD 5420, 6430, 6530. Treatment procedures, measurement and electrophysiological instrumentation, ethical dilemmas. (S)

7520 Counseling in Audiology. Cr. 1

Open only to audiology graduate students. Prereq: AUD 6410 and AUD 6411. Basic counseling principles and techniques applied to patients and their family members during evaluation and treatment of auditory and balance disorders. (S)

7540 Genetic Auditory Disorders. Cr. 3

Prereq: graduate standing in audiology, speech-language pathology, or communication sciences and disorders. Medical genetics and its application to hearing loss and craniofacial disorders; genetic etiology, diagnosis, therapeutic implications. Ethical, legal and social issues: cloning, gene therapy, and prevention. (W)

7550 Intra-operative Neurophysiologic Monitoring. Cr. 2

Prereq: AUD 6000, graduate standing in audiology or communication sciences and disorders. Presentation of the techniques used to monitor neurological centers during head/neck surgery. Operating room observations required. (S)

7990 Directed Study. Cr. 1-3 (Max. 6)

Prereq: consent of advisor. Literature review of an approved topic in audiology under supervision of the graduate faculty. Course may include an experimental investigation. Comprehensive written report is required. (Y)

8300 Audiology Fellowship. Cr. 8 (Max. 24)

Prereq: AUD 7300. Advanced supervised clinical practice in an off-campus setting over the final three semesters of professional study. Material Fee as given in Schedule of Classes. (T)

8350 Research Seminar. Cr. 3 (Max. 15)

Prereq: SLP 7000 or equiv. Topics announced in Schedule of Classes. Emphasis on clinical research methods. (Y)

8430 Equilibrium/Vestibular System Evaluation. Cr. 4

Anatomy, physiology and functional assessment of the vestibular system including instrumentation, procedures, and interpretation of ENG, dynamic posturography, and rotational velocity testing recordings. Hands-on laboratory exercises included. (F)

8440 Medical Issues: Tinnitus, Central Auditory Processing and Auditory Neuropathy. Cr. 3

Prereq: minimum 16 graduate credits in audiology. Role of the audiologist in the medical setting; advanced clinical skills and knowledge; health care issues and professional interaction in the medical setting. (F)

8450 Advanced Auditory/Vestibular Electrodiagnosis for Balance Assessment and Treatment. Cr. 4

Prereq: graduate standing in audiology. Advanced evaluation of dizzy/balance patients; traditional test battery use with complex balance patients; recently developed electrophysiological techniques and computerized assessments; expansion of clinical and technical skills; walking and gait analysis. (W)

8460 Advanced Sensory Aids. Cr. 3

Prereq: AUD 6530. New developments in assisted listening devices and cochlear implant protocols. (I)

Speech-Language Pathology Courses (SLP)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5080 Phonetics. (LIN 5080) Cr. 3

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesio logic approaches. Material Fee As Indicated In The Schedule of Classes (T)

5090 Anatomy and Physiology of the Speech Mechanism. Cr. 3

General science of normal speech; anatomy, physiology and mechanics of respiration, phonation, resonance, articulation. (F,S)

5120 Speech Science. Cr. 3

Coreq: SLP 5080, SLP 5090; written consent of instructor. A grade of C+ or better is required in all pre-requisite/co-requisite courses. Speech production, acoustics of sound, perception of the speech signal. (F,W)

5300 Introduction to Speech-Language Pathology. Cr. 3

Speech-language pathology in clinical and educational settings; classification of communication disorders and related management strategies. (F,S)

5310 Clinical Methods in Communication Disorders. Cr. 3

Prereq: SLP 5300, SLP 5320; coreq: SLP 5080, SLP 5090; written consent of department. A grade of C+ or better is required in all pre-requisite/corequisite courses. Procedures and materials for clinical diagnosis of articulatory, language, rhythm, and voice deficits of organic and non-organic causation. (T)

5320 (SLP 5320) Normal Language Acquisition and Usage. (LIN 5360) Cr. 3

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. Material Fee As Indicated In The Schedule of Classes (T)

5360 (WI) Clinical Practice in Speech-Language Pathology. Cr. 3 (Max. 9)

Prereq: SLP 6460, 6480, and 5310, each with grade of B or better; written consent of department. Supervised experience in application of methods of diagnosis and treatment of clinical cases. Material Fee As Indicated In The Schedule of Classes (T)

6360 Advanced Clinical Practice in Speech-Language Pathology. Cr. 3 (Max. 12)

Prereq: SLP 5360 or equiv. with grade of B or better. Open only to graduate students. Offered for graduate credit only. Supervised experience in application of methods of diagnosis and treatment of clinical cases. Material Fee As Indicated In The Schedule of Classes (T)

6460 Language and Phonological Disorders. Cr. 3

Prereq: SLP 5300, SLP 5320; coreq: SLP 5080; written consent of department. A grade of C+ or better is required in all prerequisite/corequisite courses. Introduction to the clinical management of articulation and language disorders. (F,W)

6480 Organic and Fluency Disorders. Cr. 3

Prereq: SLP 5300, SLP 5320; coreq: SLP 5080; written consent of department. A grade of C+ or better is required in all prerequisite/corequisite courses. Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (F,W)

6640 Language Development and Disorders: Infants and Preschool Children. Cr. 3

Prereq: SLP 5300 and 5320; graduate standing. A grade of C+ or better is required in all prerequisite/corequisite courses. Offered for graduate credit only. Theory, assessment and intervention with young children and their families. Emphasizes clinical problem solving, diagnosis, prevention and management in the context of cognitive, linguistic and neurological development. (F)

7000 Research Methods in Communication Disorders. Cr. 1

Prereq: graduate admission. Introduction to methods of research design and methods of analysis (quantitative and qualitative) in speech and hearing sciences and disorders. (F)

7010 (SLP 7010) Acoustics of Speech. (LIN 7010) Cr. 3

Prereq: SLP 5080, 5090. A grade of C+ or better is required in all prerequisite/corequisite courses. Acoustic consequences of phonetically-relevant articulatory movements. (F)

7100 Research Methods: Evidenced- Based Practice. Cr. 1

Prereq: SLP 7000; graduate standing in speech-language pathology, or communication sciences and disorders. A grade of C+ or better is required in all prerequisite/corequisite courses. Using evidence-based practice in communication disorders and on methods for conducting original research. (W)

7320 Professional Issues in Speech-Language Pathology. Cr. 1

Prereq: second-year graduate student in SLP. Practice issues, including ethics, scope of practice, multicultural concerns, professional conduct, reimbursement, and professional resources. (W)

7360 Internship in Speech Pathology. Cr. 6 (Max. 12)

Prereq: consent of instructor. Advanced professional experience in clinical speech language pathology. (T)

7380 Clinical Process in Speech-Language Pathology. Cr. 3 (Max. 9)

Prereq: graduate standing in speech-language pathology. Development of clinical skills and knowledge in diagnostic and treatment processes. Introduction to professional issues, counseling and ethical practices in speech-language pathology practice. Material Fee As Indicated In The Schedule of Classes (F)

7520 Counseling in Speech-Language Pathology. Cr. 1

Open only to speech-language pathology graduate students. Prereq: admission to M.A. program in speech-language pathology. Basic counseling principles and techniques applied to patients and their family members during evaluation and treatment of communication and swallowing disorders. (S)

7590 Dysphagia. Cr. 2

Prereq: SLP 5090. A grade of C+ or better is required in all prerequisite/corequisite courses. Assessment and management of neurologic and mechanical swallowing disorders in children and adults. (S)

7600 Phonological Disorders. Cr. 3

The etiology, diagnosis and advanced treatment regimens of phonological disorders in children and adults. (W)

7610 Stuttering. Cr. 3

The etiology, diagnosis and treatment of stuttering disorders in children and adults. (W)

7620 Voice Disorders. Cr. 2-3

The etiology, diagnosis and treatment of voice disorders in children and adults. (F)

7621 Craniofacial Syndromes. Cr. 2

Prereq: graduate standing in speech-language pathology. Theoretical and applied issues in resonance disorders that result from oral clefting and other craniofacial syndromes. (S)

7630 Neuroscience of Communication Disorders. Cr. 3

Neuroscience, neurophysiology, neuropsychology, neuroimaging, normal aging processes and neurodevelopment in speech-language pathology. (F)

7640 Language Disorders in the School-Age Population. Cr. 3

Prereq: SLP 6640. A grade of C+ or better is required in all prerequisite/corequisite courses. Assessment and intervention in assessment, diagnosis, treatment, and management of language and speech disorders in school-age populations. Emphasis on service delivery in context of curriculum and role of speech-language pathologist in school-based practice. (F)

7660 Neuromuscular Speech Disorders. Cr. 3

Theory, assessment and intervention in neurologic speech disorders in children and adults (dysarthria, acquired apraxia of speech). (W)

7680 Acquired Linguistic and Cognitive Disorders in Adults. Cr. 4

Theory, assessment, and management/treatment of adult patients with aphasia, traumatic brain injury, right-hemisphere brain damage, and dementia. (W)

7700 Advanced Research Methods in Communication Disorders. Cr. 1

Prereq: SLP 7000 or equiv. A grade of C+ or better is required in all prerequisite/corequisite courses. Development of advanced research writing skills, for presentation of research in written and oral format. Development of research presentation skills; presentation of research project in departmental forum. (W)

7990 Directed Study. Cr. 1-9 (Max. 9)

Prereq: consent of chairperson, if replacing regular course work. Graduate study in areas not covered in scheduled curriculum, including library and field work. (Y)

7991 Directed Study: Ph.D. Cr. 1-9 (Max. 9)

Prereq: consent of chairperson and graduate officer. Open only to doctoral students. Directed research for major, and pilot work for dissertation. (Y)

7999 Master's Essay Direction. Cr. 1-3

Prereq: consent of advisor. (T)

8390 Seminar in Speech-Language Pathology. Cr. 3 (Max. 18)

Prereq: consent of instructor. Topics to be announced in Schedule of Classes. No topic may be repeated for credit. (Y)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: SLP 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following SLP 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: SLP 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following SLP 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: SLP 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following SLP 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in SLP 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Criminal Justice

Office: 3293 Faculty/Administration Building; 313-577-2705

Chairperson: Shanhe Jiang

Graduate Director: Jennifer Wareham

Administrative Assistant III: Debra Mazur

Academic Services Officer: Marianka Holloway

Academic Advisor II: Alicia Ortez

Website: <http://www.clas.wayne.edu/CRJ>

Graduate Degree

MASTER OF SCIENCE with a Major in Criminal Justice

The Master of Science degree in Criminal Justice is designed to prepare students for positions in criminal justice and related agencies as well as prepare students who wish to pursue a Ph.D. in Criminal Justice or related fields. Students are provided with a broad educational foundation in criminal justice grounded in law and the social sciences. Study begins with an analysis of crime and the entire justice system. Advanced study inquires into the political, organizational, social, and behavioral aspects of various components of the system of criminal justice. Research courses give students the tools with which to independently analyze issues of crime and justice as well as the requisite skills for career development. Courses are offered in the following core areas: contemporary criminal justice, causes of crime, research methodology and statistics, and a specialization of the student's choice.

Students in the Criminal Justice Graduate Program take core classes in Criminal Justice and are eligible to take elective courses in other Liberal Arts and Sciences departments and in departments in other colleges. This allows substantial flexibility in arranging a program of study that meets the student's goals.

Criminal Justice (M.S. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Strong undergraduate social science preparation is recommended, and additional undergraduate course work may be specified in criminal justice or related areas where such preparation is inadequate.

Admission to the graduate program in Criminal Justice is based on: 1) evidence of a completed baccalaureate degree from an accredited college or university, 2) the quality of the applicant's undergraduate record, 3) two letters of recommendation, and 4) a personal statement. In determining admission for the individual applicant, the Graduate Committee evaluates the student's undergraduate record (with special emphasis on upper division courses: junior/senior year), the level of difficulty of course work, as well as grade point average (g.p.a.) in the student's major, the strength of the recommendations, and the quality of the personal statement. The minimum standard for admission as a regular Master's student is a cumulative weighted undergraduate g.p.a. of 3.0 or better. Applicants with an undergraduate g.p.a. between 2.75 and 2.99 may be considered for admission, but are required to take the Graduate Record Examination (GRE) and provide a written exception statement justifying why they are capable of graduate work and explaining why their undergraduate g.p.a. is below 3.0.

Applicants to the Master of Science program in Criminal Justice must: 1) complete and submit the Graduate School's on-line admission application at <http://www.gradadmissions.wayne.edu>; 2) have their official transcripts mailed directly from the applicant's undergraduate school/college (transcripts from all schools attended must be submitted) to the Office of Graduate Admissions, Wayne State University, 5057 Woodward, Suite 6000, Detroit, MI 48202 (student transcripts may not be transmitted via the applicant); 3) have two (2) letters of recommendation, preferably from former professors or

instructors, submitted online; and 4) submit a personal statement. Personal statements should answer the question why you wish to pursue a Master of Science degree in Criminal Justice and be no longer than one single-spaced page. Statements must be submitted as part of the online application process.

Questions concerning the admission process should be directed to the Criminal Justice Department at (313) 577-2705.

DEGREE REQUIREMENTS

The Master of Science degree is awarded upon successful completion of thirty-two credits in selected course work, including required core courses (see below) and electives, as described in the student's Plan of Work and the satisfactory completion of a master's thesis, a master's essay, or the master's capstone seminar. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Admission Requirements, Graduate Programs, p. 299, respectively. Students should also obtain a copy of the Criminal Justice Department's *Graduate Handbook: Degree Requirements, Policies and Procedures*. The degree is offered as Plan A (Thesis), Plan B (Master's Essay), or Plan C (Master's Capstone Seminar) option, as follows:

Plan A: Thirty-two credits in course work including a six-credit thesis (CRJ 8999).

This plan is designed for students who intend to pursue doctoral work in the social sciences and who demonstrate exceptional ability in research methods. Consult the Department Chairperson or the Graduate Director for further details.

Plan B: *Thirty-two credits in course work, including a three credit essay demonstrating substantial research and mastery of a selected topic* (CRJ 7999).

Plan C: Thirty-two credits in course work, including the three credit capstone course (CRJ 7870).

Law Course: As part of the requirements for the Master's degree, all students must take a course on the law. This requirement can be fulfilled in one of three ways: (1) an undergraduate course on the law taken as an undergraduate student; (2) an undergraduate course on the law taken as a graduate student; or (3) a graduate course on the law taken as a graduate student (which can be used as an elective under Area B).

CORE COURSES (13 credits)

- CRJ 7010 – Contemporary Criminal Justice: Cr. 3
- CRJ 7020 – The Nature of Crime: Cr. 3
- CRJ 7860 – Research Methods in Criminal Justice: Cr. 3
- CRJ 7400 or PS 5630 or SOC 6280
 - Data Management and Analysis for Criminal Justice: Cr. 3
 - Statistics and Data Analysis in Political Science I: Cr. 4
 - Social Statistics: Cr. 4

AREA A: Take at least two of the following courses (6 credits):

- CRJ 7200 – Public Policy and Criminal Justice: Cr. 3
- CRJ 7220 – Delinquency and Justice: Cr. 3
- CRJ 7230 – Policing and Society: Cr. 3
- CRJ 7240 – Corrections: Cr. 3

AREA B: Electives (5 to 9 credits). At least 3 elective credits must be in CRJ courses:

- Students electing a master's thesis (Plan A) take approved electives totaling at least 5 to 6 credits;
- Students electing a master's essay (Plan B) take approved electives totaling at least 8 to 9 credits
- Students electing a master's capstone class (Plan C) take approved electives totaling at least 8 to 9 credits;

Elective Courses: The elective courses are to be chosen after a conference with the Graduate Director to determine the plan which is most consistent with the student's educational and career goals. These courses will be specified in the student Plan of Work. Some elective credit may have to be used to satisfy the College of Liberal Arts and Sciences requirement that at least six credits in course work be at the 7000 level or higher, and that at least six credits (excluding core courses) be taken in the major area. With the exception of one 5000-level elective course, all remaining courses toward the degree must be taken at the 6000 level or higher.

AREA C: (3-6 credits)

- CRJ 7870, CRJ 7999 or CRJ 8999
 - Master's Capstone Seminar in Criminal Justice: Cr. 3
 - Master's Essay Direction: Cr. 3
 - Master's Thesis Research and Direction: Cr. 4-6

Transfer Credits: The maximum number of credits that may be transferred in from other accredited colleges and universities is between six and eight semester credits for two courses. Transfer courses must be taken at the graduate level with a passing grade of 'B' or higher; the student must have had graduate status at the time the courses were taken.

Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Online M.S. in Criminal Justice Program

Beginning Fall 2014, students may complete the Master of Science in Criminal Justice online. Online sections of the core courses and various electives will be consistently offered. In the application for graduate admission, students must indicate whether they will be completing the M.S. in Criminal Justice in 1) the traditional program, 2) the completely online program. While students admitted to the online program will be expected to complete almost all of their courses online, they can seek permission from the Graduate Director to take selected classes on campus.

The online program is identical to the traditional classroom-based program and focuses on a broad range of criminal justice issues, emphasizing both the problem of crime and the criminal justice system's response to it. Students learn the latest evidence-based practices for crime control, how to understand and interpret data and how to find resources to implement innovative methods.

Criminal Justice (J.D./M.S. Joint Degree Program)

The Law School and the Department of Criminal Justice offer a joint degree program in law and criminal justice (J.D./M.S. in Criminal Justice). Students must be separately admitted to both the Law School and the Master of Science in Criminal Justice Program. Students must complete all the requirements for both degrees. Law School courses count for up to nine elective credits toward the Master of Science in Criminal Justice degree. A maximum of four Criminal Justice courses may be applied to the requirements for the J.D. degree. A student must complete the first year of law school before any Criminal Justice courses may be taken toward the joint degree. Criminal justice courses may be taken concurrently with law school courses during the second and subsequent years. The first step for the joint degree is to be admitted into the law program at Wayne State University. The second step is to contact the Law School advising office and the Department of Criminal Justice Graduate Advisor to inquire on how to apply for the joint degree program.

Assistantship

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

The Department of Criminal Justice offers a graduate teaching assistantship for one academic year, which may be extended for an additional academic year. Qualifications include high undergraduate academic performance, high Graduate Record Examination scores (if applicable), and admission as a regular master's student in the Criminal Justice master's degree program. Interested individuals may apply at any time between September 1 through June 1 for the following academic year by sending a resume and a cover letter to the: Graduate Director, Department of Criminal Justice, Wayne State University, 3291 Faculty/Administration Building, Detroit, MI 48202. Additional information may also be obtained by contacting the Graduate Director at (313) 577-2705.

Criminal Justice Courses (CRJ)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only can be found in the undergraduate bulletin, along with all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5500 Child Abuse and Neglect. Cr. 3

Prereq: CRJ 3400 or former CRJ 2410 or CRJ 4410. Dynamics and psychopathology of child abuse: its incidence and impact on delinquent/criminal behavior, family, community, and the criminal justice system. (F)

5810 (SOC 5810) Law in Human Society. Cr. 3

Law and the legal structure in its social context. Development, enforcement, and interpretation of law; emphasis on the American governmental system. Reciprocal effects of law and the society in which it develops; comparative analysis. For pre-law, criminal justice, and political science students, as well as for sociology majors. (Y)

5994 (PCS 5000) Dispute Resolution. (PS 5890) (PSY 5710) Cr. 3

Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (T)

5995 Special Topics in Criminal Justice. Cr. 3 (Max. 9)

Prereq: CRJ 1010; junior, senior, or graduate standing; maximum 6 credits for CRJ majors. Selected topics in criminal justice issues. (I)

5996 Special Topics in Criminology. Cr. 3 (Max. 9)

Prereq: CRJ 1010, junior or senior standing; maximum six credit allowance for CRJ majors. Special criminology topics. (I)

5997 Special Topics in Law and the Legal System. Cr. 3 (Max. 9)

Prereq: CRJ 1010; junior or senior standing. Maximum six credits allowance for CRJ majors. No credit after former CRJ 5790. Analysis of selected topics in the law and the legal system. (I)

7010 Contemporary Criminal Justice. Cr. 3

Survey of classic literature and important contemporary studies of all major facets of criminal justice system, including law, police, prosecution, defense, judiciary, probation, corrections, and parole. (F)

7020 The Nature of Crime. Cr. 3

Definition and measure of crime, crime statistics, types of criminal behavior; focus on causes of crime in context of various theoretical perspectives. (W)

7200 Public Policy and Criminal Justice. Cr. 3

Analysis of interrelationship of criminal justice system components and the political setting surrounding the formulation and administration of public policies for crime control. (B:F)

7220 Delinquency and Justice. Cr. 3

Empirical research on institutions which influence delinquency, including families, peers, and schools. Empirical and conceptual evaluation of delinquency theories; focus on their relationship to juvenile justice and policy. (B:W)

7230 Policing and Society. Cr. 3

Prereq: CRJ 1010 or former CRJ 2000 and CRJ 4600. Critical examination of role of police in contemporary society. Seminar topics include: history, culture, and social and organizational context of policing; current issues and future directions. (B:W)

7240 Corrections. Cr. 3

Prereq: CRJ 4300. Legal, social, and political issues in both institutional and community corrections. Topics may include incarceration trends, penal philosophy, sanctions, community-based corrections, overcrowding, and related issues. (B:F)

7400 Data Management and Analysis for Criminal Justice. Cr. 3

Prereq: CRJ 7860. Basic techniques for accessing and managing criminal justice-related data, introduction to quantitative analysis, and introduction to program evaluation. Contemporary data analysis tools in criminal justice. (W)

7860 Research Methods in Criminal Justice. Cr. 3

Focus on logic of research designs, sampling techniques, data collection, instrument construction, available data sources in the field of criminal justice. (W)

7870 Master's Capstone Seminar in Criminal Justice. Cr. 3

Prereq: graduate standing, CRJ 7010, CRJ 7020, CRJ 7860, minimum 26 credits completed. Students write essays demonstrating their knowledge and critical analysis of criminological and criminal justice theory, research methods, and public policy issues. (F,W)

7990 Directed Study. Cr. 1-3 (Max. 3)

Prereq: 24 graduate credits in major and written consent of advisor. (T)

7995 Special Topics in Criminal Justice and Criminology. Cr. 3 (Max. 9)

Prereq: graduate standing. Specialized topics in criminal justice. Topics may vary from semester to semester. May be repeated for a maximum of nine credits when subject matter differs. (I)

7999 Master's Essay Direction. Cr. 3

Prereq: written consent of advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 6

Prereq: written consent of advisor. (T)

Economics

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Chairperson: Stephen J. Spurr

Administrative Assistant: Delores G. Tennille

Website: <http://www.clas.wayne.edu/Economics/>

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Associate Professors

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Assistant Professors

Shooshan Danagoulian, Liang Hu, Jennifer Ward-Batts, Young-Ro Yoon

Lecturer

Hyungseok Joo

Adjunct Lecturer

David Strauss

Graduate Degrees

MASTER OF ARTS with a major in Economics

DOCTOR OF PHILOSOPHY with a major in Economics

The Department encourages applications from students with broad intellectual interests as well as strong quantitative skills, regardless of their undergraduate majors.

The M.A. in Economics can be a terminal degree leading to careers in business, government and non-governmental organizations, or junior college teaching. Because many master's students study part-time, the Department schedules as many core courses in the evening as possible.

The Ph.D. curriculum provides thorough training for professional economists through course work, tutorials and research workshops. It gives students a solid foundation in economic theory and econometrics and offers several carefully selected fields of specialization. The Department's Ph.D. graduates choose careers in academia, research, and business.

Economics (M.A. Program)

Admission to this program is contingent on admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants to this program must hold a bachelor's degree, with an undergraduate grade point average of at least 3.0 for regular admission. Exceptions may be authorized only by the Department's Admissions Committee. Consistent with Graduate School requirements, international applicants must demonstrate English proficiency by obtaining a satisfactory score on the Test of English as a Foreign Language (TOEFL) or other test acceptable to the Graduate School.

Applicants are expected to have completed the following courses or their equivalents as undergraduate or post-bachelor students:

ECO 5000 – Intermediate Microeconomics: Cr. 4

ECO 5050 – Intermediate Macroeconomics: Cr. 4

ECO 5100 – Introductory Statistics and Econometrics: Cr. 4

MAT 2010 or a similar introductory course in differential and integral calculus provides minimal mathematics requirements. Additional courses in calculus and linear algebra are desirable although not required.

Regular admission may be granted to an applicant who has not completed these courses, but in this case they must be completed before taking 6000- or 7000-level courses.

DEGREE REQUIREMENTS

Thirty-two graduate credits are required. Although the University offers various plans for M.A. degrees, the Department of Economics offers the Master of Arts degree under Plan C only, as described below.

For the M.A. Program, students must take Economics 6000, 6050, and 6100, which constitutes the theory core, as early in their program as possible. Students must also take a two-course sequence at the 7000 level, chosen from one of the following: Macroeconomics (ECO 7050 and 7060), Microeconomics (7000 and 7010), Econometrics (7100 and 7110), Industrial Organization (7200 and 7210), International Economics (7300 and 7310), Labor and Human Resources (7400 and 7410), or Health Economics (7550 and 7560). Students who concentrate in fields other than Health Economics or Industrial Organization must have taken a full year of calculus, at a minimum. In addition, the permission of the M.A. Director and the instructor is required. Neither a thesis nor an essay is required. Three written examinations are required. Students must pass written exams covering the microeconomics and macroeconomics core courses and a written exam covering their 7000 - level concentration. In addition, students take three elective classes at the 6000 or 7000 level.

Students should file a Plan of Work with the M.A. Director as soon as possible after being admitted to the M.A. Program. A Plan of Work developed early helps students make sure that they take courses in the right order and complete their program quickly and efficiently.

Candidacy: The Graduate School does not authorize candidacy unless the applicant's grade point average is 3.0 or better. To be eligible for candidacy, the student must also file a Plan of Work, approved by the master's program advisor, with the graduate officer of the College of Liberal Arts and Sciences. The M.A. Director requires all M.A. students to file a Plan of Work by the end of the first semester in the Economics M.A. program. The Graduate School does not allow M.A. students to register if a Plan of Work has not been filed by the time twelve graduate credits have been earned.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Economics and Law (M.A. / J.D. Joint Degree Program)

This Department in cooperation with the Law School offers a joint degree program leading to a Master of Arts degree with a major in Economics and a Juris Doctor degree in law. Students in this program must be admitted to both the Law School and the Department of Economics and must complete all requirements for the Economics M.A. degree and all requirements for the J.D. degree. After admission to the Law School, the student must complete the first year of the J.D. program before electing additional economics courses. For details on admission requirements and degree requirements for the joint J.D./M.A. program, visit the department website at the following address: <http://www.clas.wayne.edu/Economics/>

Economics (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants to this program must hold a bachelor's degree and have a grade point average of at least 3.0. Applicants must include verbal, quantitative and analytical Graduate Record

Examination scores and three letters of recommendation from officials or teaching staff of the institution(s) most recently attended. Applicants from other countries must demonstrate English proficiency by obtaining a satisfactory score on the Test of English as a Foreign Language (TOEFL). All candidates must submit a Statement of Purpose as part of their applications.

Applicants are expected to arrive with the following preparation:

ECO 5000 – Intermediate Microeconomics: Cr. 4

ECO 5050 – Intermediate Macroeconomics: Cr. 4

ECO 5100 – Introductory Statistics and Econometrics: Cr. 4

MAT 2010 and 2020 or similar introductory courses in differential and integral calculus providing minimal mathematics requirements. Additional courses in calculus and linear algebra are highly desirable.

DEGREE REQUIREMENTS

Ph.D. students in economics must successfully complete ninety credits in graduate study, consisting of sixty credits in course work and thirty credits in dissertation research. The thirty credit dissertation registration requirement is fulfilled by registering for the courses ECO 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Advancement to candidacy will require about three years of full-time study beyond the bachelor's degree and is granted upon completion of the following requirements:

1. Completion of a Plan of Work, which must be approved by the Director of Graduate Studies in Economics and by the Dean of the Graduate School. The Plan of Work must be filed by the completion of the first year of doctoral study.

2. Completion of course work in economic theory (ECO 7020, 7021, 7000, 7010, 7050, 7060) and in two of the following five fields: advanced macroeconomics, health economics, industrial organization; international economics; and labor economics. Proficiency must be demonstrated by passing qualifying examinations in microeconomic theory, macroeconomic theory, and two selected fields.

3. Completion of course work in quantitative methods (ECO 7100, 7110, and 7120).

4. An oral examination on research.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Minor Requirements: Students must complete at least eight credits in a minor field, subject to the approval of the Director of Graduate Studies in Economics. These courses may include other economics courses not specified in the major requirements.

Doctoral Dissertation Outline and Record of Approval: This form must be approved by the student's dissertation advisory committee, the Director of Graduate Studies in Economics, and the Dean of the Graduate School.

The Doctoral Dissertation: The doctoral candidate is required to submit a doctoral dissertation on a topic satisfactory to his/her Faculty Dissertation Committee.

Public Lecture: Upon acceptance of the dissertation, the student will deliver a final lecture in accordance with Graduate School procedures.

Fellowships, Assistantships and Awards

Sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate of this bulletin.

Teaching and research assistantships providing tuition, stipends and health insurance are available each year to highly qualified doctoral

students. Fellowships and tuition scholarships are also available to doctoral students. Applications are accepted for the Fall and Winter Semesters. Applications for financial aid for the Fall Semester should reach the Department by June 1 for U.S. students, and by May 1 for international students. Financial aid applications for the Winter Semester should reach the Department by October 1 for U.S. students, and by September 1 for international students. Later applications will be considered if positions are available. Applications must include verbal, quantitative, and analytical Graduate Record Examination scores, three letters of recommendation from officials or teaching staff at the institution(s) most recently attended, and a Statement of Purpose concerning one's desire to study economics. Applicants from other countries must also demonstrate proficiency in spoken English before being assigned to teaching duties.

The Department encourages its graduate students to compete for the fellowships and scholarships awarded by the Graduate School, foundations, professional organizations, government units, and corporations.

Two departmental awards have been created to encourage research and publication in economics: the Samuel M. Levin Essay Award for the best research paper includes a prize of \$1500; the Mendelson Research Grants provide summer stipends of \$1500 to selected doctoral students working on their dissertations.

Economics Courses (ECO)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin. Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696

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Field A — Economic Theory

6000 Price and Allocation Theory. Cr. 4

Prereq: ECO 5000 or equiv.; MAT 2010 or equiv. Introduction to the theory of consumer choice and the theory of production, and other selected topics. Primarily for M.A. students and for Ph.D. students who want to review. (F)

6050 Macroeconomics. Cr. 4

Prereq: ECO 5050 or equiv. No credit after ECO 7050. Offered for graduate credit only. Determination of national income, unemployment and interest rates; theories of inflation; effectiveness of macroeconomic public policies. Primarily for M.A. students and for Ph.D. students who want to review. (W)

7000 Microeconomic Theory I. (ECO 5030) Cr. 4

Prereq: ECO 5000, ECO 7020; MAT 2010 or MAT 5010 and MAT 2020 or equiv. Theory of choice; theory of cost and production; theory of the competitive firm. Price and output in non-competitive markets. General competitive equilibrium and welfare economics. (W)

7010 Microeconomic Theory II. Cr. 4

Prereq: ECO 7000. Continuation of ECO 7000. Includes general equilibrium analysis and game theory. (F)

7020 (ECO 5020) Fundamentals of Economic Analysis I. Cr. 4

Prereq: ECO 5000, and calculus 1: MAT 2010 or MAT 5010 or equiv. ECO 5020 offered for undergraduate credit only; ECO 7020 offered for graduate credit only. This course assumes sound knowledge of first and second semester calculus, and teaches additional mathematics necessary for Ph.D. study in economics, and covers additional mathematics necessary for Ph.D. study in mathematics, and to a lesser extent some economic implications. Course content includes: matrices, vectors and linear algebra; partial and total derivatives; scalar and vector functions; Jacobian derivative matrices and determinants; implicit function theorem; derivatives of implicit func-

tions with one or more endogenous variables; unconstrained maximization with two or more variables; Lagrangians and constrained maximization; envelope theorem; differential and difference equations, and systems of differential and difference equations. (F)

7021 Fundamentals of Economic Analysis II. Cr. 4

Prereq: MAT 2020 and ECO 5000; coreq: ECO 7020. Mathematical methods specific to macroeconomics and econometrics. Applications of matrix operations, distribution functions, estimation methods, difference equations, differential equations, inter-temporal optimization, calculus of variations, control theory. (F)

7050 Macroeconomic Theory I. Cr. 4

Prereq: ECO 5050 or equiv. Determination of national income, employment, interest rates and the price level; static and dynamic models; cycle and growth models; classic, Keynesian and neo-Keynesian models. (W)

7060 Macroeconomic Theory II. Cr. 4

Prereq: ECO 7050 or equiv. Mathematical and statistical methods: differential and difference analysis. Intertemporal economic theory: the household, the firm, and economic growth. Overlapping generations models and the Ricardian theory of government finance. Theories of the business cycle: real business cycle models, Keynesian and New Classical theories of the business cycle. (F)

Field B — Quantitative Methods

6100 Introduction to Econometrics. Cr. 4

Prereq: MAT 2010 and ECO 5100. Basic statistics, basic probability, hypothesis testing, and bivariate and multivariate regression analysis. Estimators studied are least squares, maximum likelihood and generalized least squares. Various model specification issues addressed: omitted variables, extraneous variables, category variables, multicollinearity, heteroscedasticity, and autocorrelation. (F)

6120 Statistics and the Law. Cr. 3

Prereq: MAT 1800 or equiv. Available for Law School credit only to Law students. Not for Economics major credit. Offered for graduate credit only. Application of statistics and economic analysis to issues arising in the legal system and the practice of law. Topics include: descriptive statistics, elements of probability, regression, and price theory. (W)

7100 Econometrics I. Cr. 4

Prereq: ECO 6100 or equiv and ECO 7020. Probability and statistics: moment generating functions, common families of statistical distributions, multiple random variables and properties of a random sample. Estimation and hypothesis testing: method of moments, generalized method of moments, maximum likelihood estimators, instrumental variable estimators, Bayes estimators, likelihood ratio tests, finite sample properties and asymptotic properties of OLS. (F)

7110 Econometrics II. Cr. 4

Prereq: ECO 7100. Modeling and estimation: generalized least squares, panel data models (fixed effects and random effects), system of equations (endogeneity, identification), models with discrete dependent variables (probit, logit), models with limited dependent variables (truncation, censoring), stationary time-series (ARMA), vector-autoregression (VAR, VMA), non-stationary time-series (unit roots, cointegration). (W)

7120 Econometrics III. Cr. 4

Prereq: ECO 7100 and ECO 7110. Advanced economic techniques in microeconomics and macroeconomics. In the first half of the course, emphasis on specification, estimation, interpretation, and testing of microeconomic models. The second half will cover statistical models for the analysis of economic time series data, with applications in macroeconomics and finance. (Y)

Field C — Industrial Organization

5230 Environmental Economics. Cr. 4

Prereq: ECO 1000 or ECO 2010. Externalities as the cause of environmental degradation and climate change. Externality in turn results from the failure of the market to develop prices that reflect the full global cost of production and consumption. The course also pays attention to normative issues. The population over which the normative issues are defined may include animals, plants and inanimate objects. Behavioral economics, in particular, will be brought to bear on the discussion throughout the course. (F,W)

6200 (ECO 5200) Advanced Regulation and Regulated Industries. Cr. 4

Prereq: ECO 5000. No credit after ECO 5200. Open only to graduate students. Offered for graduate credit only. Transportation economics. Regulation of transportation as an example of public control of business; the rationale for having public regulation, and the analysis of its economic effects; reform of the scope and practice of regulation; public ownership; regulation of occupational and product safety standards and environmental standards. (Y)

6210 (ECO 5210) Advanced Market Power and Economic Welfare. Cr. 4

Prereq: ECO 5000. No credit after ECO 5210. Open only to graduate students. Offered for graduate credit only. Monopoly, oligopoly, and competition in U.S. industry; sources of market power and their effect on prices, profits, and technological progress. Case studies. Selected topics in antitrust policy. (Y)

6250 (ECO 5250) Advanced Economic Analysis of Law. Cr. 4

Prereq: ECO 5000. No credit after ECO 5250. Open only to graduate students. Offered for graduate credit only. Economic analysis of property rights, torts, contracts, criminal law, the law of business organizations and financial markets, and the law of taxation. Economic analysis of litigation; the use of economics and statistics in litigation. Advanced mathematical analysis of selected topics. (Y)

7200 Industrial Organization I. Cr. 4

Prereq: ECO 6000. Theories of competition and market power. Topics include concentration, scale economies, product differentiation, entry barriers, collusion, mergers, price discrimination, information, and advertising. (B)

7210 Industrial Organization II. Cr. 4

Prereq: ECO 6000. Economic analysis of antitrust policy and public regulation of industry. Rationale for regulation and mandates of various regulatory agencies. Problems in public utility rate-making. Misallocations induced by regulation. Role of competition in regulated industries. (B)

Field D — International Economics

6300 (ECO 5300) Advanced International Trade. Cr. 4

Prereq: ECO 5000. No credit after ECO 5300. Open only to graduate students. Offered for graduate credit only. Factors in international relations; patterns of international specialization; balance of international payments; foreign exchange; commercial policy of United States and other countries; foreign investment and economic development; international economic cooperation. Advanced mathematical analysis of selected topics. (Y)

6310 (ECO 5310) Advanced International Finance. Cr. 4

Prereq: ECO 5000 and ECO 5050. No credit after ECO 5310. Open only to graduate students. Offered for graduate credit only. Major policy issues in the field of international finance with emphasis on open economy macroeconomics. Topics include the balance of payments and the foreign exchange market; monetary and fiscal policies in open economies; the floating exchange rate system; international financial markets; and European monetary integration. Advanced mathematical analysis of selected topics. (Y)

7300 International Trade Theory. Cr. 4

Prereq: ECO 6000. Classical and modern models of the determinants of international trade and their empirical verification; impact of trade on earnings of production factors; economic analysis of various trade policy instruments; strategic trade policy; economic analysis of international trade rules and institutions; political economy of trade policy. (B)

7310 International Monetary Theory. Cr. 4

Prereq: ECO 6050. Foreign exchange rate and balance of payments adjustment theory under alternative exchange rate regimes; stabilization policies in open economies; financial capital movements; monetary unions; economic growth and the balance of payments. (B)

Field E — Labor and Human Resources**6400 (ECO 5400) Advanced Labor Economics. Cr. 4**

Prereq: ECO 5000. No credit after ECO 5400. Open only to graduate students. Offered for graduate credit only. Economics of labor markets. Determinants of earnings and methods of compensation, labor supply and demand, effects of taxes and subsidies on labor supply, choices of occupation and level of schooling, promotion and turnover, employment discrimination, economics of crime and punishment, regulation of professions, unions. Advanced mathematical analysis of selected topics. (Y)

6415 (ECO 5410) Advanced Economics of Race and Gender. Cr. 4

Prereq: ECO 5000. No credit after ECO 5410. Open only to graduate students. Offered for graduate credit only. Theory and empirical evidence of race and gender differentials in the labor market. Topics include the difference in occupations and earnings, discrimination, poverty, and public policies. Advanced mathematical analysis of selected topics. (Y)

6420 Labor Relations and Public Policy. Cr. 3

Prereq: ECO 2010 or graduate standing. Offered for graduate credit only. Overview of labor force trends; U.S. unionism; management of labor relations; collective bargaining: procedure and substance; bargaining power in the private and public sectors. Comparative trends and principles in industrial relations systems of other societies also examined. (F,S)

6455 (UP 6455) Discrimination and Fair Housing. (AFS 6455) (PS 6455) (SOC 6455) (US 6455) Cr. 3

Prereq: senior or graduate standing; for undergraduates: written consent of Director of Undergraduate Studies prior to registration. Multidisciplinary investigation into the nature, motivations, consequences, and legal/public policy implications of racial/ethnic discrimination in housing and related markets in U.S. metropolitan areas. (B)

6460 (ECO 5460) Economic Demography. Cr. 4

Open only to graduate students. Prereq: ECO 5000 and ECO 5100. No credit after ECO 5460. Offered for graduate credit only. Economic analysis of fertility, fertility control, mortality and aging, marriage, divorce, family structure, household-decision-making, human capital investments, and migration. Welfare and policy implications. Advanced mathematical analysis. (Y)

6480 (ECO 5480) Advanced Economics of Work. Cr. 3

Prereq: ECO 2010. Open only to students in MAELR program. Not open to other graduate students; not open to economics majors. Offered for graduate credit only. Theoretical and empirical treatment of: labor market characteristics; labor demand and supply; issues of race, gender, and age; compensation and pay; issues of health and productivity; bargaining processes and the effects of unions; unemployment and job search; globalization. (Y)

7400 Labor Economics and Human Resources. Cr. 4

Prereq: ECO 6000. Labor force participation and composition; factors affecting wage levels (money and real) and wage structure. Theoretical and empirical analyses of occupational choice, labor mobility, promotion, turnover, unemployment, the effects of taxation, retirement and income inequality. (B)

7410 Economics of Human Resources. Cr. 4

Prereq: ECO 6000 and 6100. Theoretical and empirical analyses of labor supply and family allocation of time; the return to education; role of general and firm-specific human capital and job mobility in wage growth over a career; race and gender differences in the labor market; intergenerational transfers and mobility. (B)

Field F — Public Finance**6510 (ECO 5500) Advanced Public Finance. Cr. 4**

Prereq: ECO 5000. No credit after ECO 5500. Open only to graduate students. Offered for graduate credit only. Role of government in a market economy: sources of market failure—public goods and externalities; principles of taxation and expenditures; tax incidence; federal tax structure; selected government expenditure programs. Advanced mathematical analysis of selected topics. (Y)

6520 (ECO 5520) Advanced State and Local Public Finance. (UP 6750) Cr. 4

Prereq: ECO 5000. No credit after ECO 5520. Open only to graduate students. Offered for graduate credit only. Theory and practice of state and local government taxation and expenditure. Attention devoted to State of Michigan and municipalities in Detroit metropolitan area. Topics include: government organization, voting and mobility models, property and sales taxes, user charges, grants, education expenditure, and economic development. Advanced mathematical analysis of selected topics. (Y)

Field G — Health Economics**6550 (ECO 5550) Advanced Economics of Health Care. Cr. 4**

Prereq: ECO 5000. No credit after ECO 5550. Open only to graduate students. Offered for graduate credit only. Allocation of health care resources, with respect to demand and supply of health care. Roles of hospitals, physicians, and health insurance; market imperfections and their role in the economics of health care. Advanced mathematical analysis of selected topics. (Y)

7550 Economics of Health Care I. Cr. 4

Prereq: ECO 6000. No credit after ECO 5550. Basic introduction to health care economics including allocation of health care resources, economics of information, and the role of advertising. (B;W)

7560 Economics of Health Care II. Cr. 4

Prereq: ECO 6000. No credit after ECO 5550. Particular roles of hospitals, physicians, and health insurance in the economy. Analysis of government policies. (B)

Field H — Economic Development**6600 (ECO 5600) Advanced Development Economics. Cr. 4**

Prereq: ECO 5000. No credit after ECO 5600. Open only to graduate students. Offered for graduate credit only. National poverty and economic growth viewed from a historical and theoretical perspective; particular emphasis on national and international policies. Advanced mathematical analysis of selected topics. (Y)

6650 (UP 6550) Regional, State, and Urban Economic Development: Policy and Administration. (PS 6440) Cr. 3

Prereq: graduate standing. Offered for graduate credit only. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

Field I — Macro and Financial Economics

6700 (ECO 5700) Advanced Money and Banking. Cr. 4

Prereq: ECO 2020 and ECO 5050. Open only to graduate students. Offered for graduate credit only. Role of the Federal Reserve System, the commercial banks, and the non-bank public (including financial intermediaries) in determining the money supply; central banking and techniques of monetary control; indicators and targets of monetary policy; and how money affects economic activity. Advanced mathematical analysis of selected topics. (Y)

6730 (ECO 5730) Economic Growth. (ECO 6730) Cr. 4

Prereq: ECO 5050. Open only to graduate students. No credit after ECO 5730. Offered for graduate credit only. Analytical methods used in classical and modern theories of economic growth. Topics include technological change, determinants of growth, convergence and income distribution. Introduction to the empirical analysis of economic growth and to important facts relative to policies and performances of countries. Advanced mathematical analysis of selected topics. (T)

7700 Advanced Macroeconomics I. Cr. 4

Prereq: ECO 7050 and ECO 7060. For Ph.D. students who wish to take macroeconomics as a field of concentration. Topics vary, and may include: economic growth, vector autoregressions, cointegration, fractional integration, breaks in economic time series, efficiency wage theories of labor market, contracting, incomplete markets and business cycles, buffer stock models of saving. Time series methods applied to economic time series such as real and nominal exchange rates and cross-country macroeconomic data. (B)

7710 Advanced Macroeconomics II. Cr. 4

Prereq: ECO 7050 and ECO 7060. Continuation of ECO 7700. (B)

Field J — Urban and Regional Economics

6800 (ECO 5800) Advanced Urban and Regional Economics. Cr. 4

Prereq: ECO 5000. No credit after ECO 5800. Open only to graduate students. Offered for graduate credit only. Introduction to the economic foundations of urban problems; land use, housing, poverty, transportation, local public finance; regional industry mix, income, growth and development; the national system of cities and location of firms. Advanced mathematical analysis of selected topics. (Y)

Directed Readings and Special Courses

7996 Research in Economics. Cr. 2-8 (Max. 16)

Prereq: written consent of advisor. Open to qualified students who desire opportunity for research and directed study. May be conducted as seminar. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ECO 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ECO 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ECO 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ECO 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ECO 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ECO 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ECO 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

English

Office: Room 9408, 5057 Woodward; 313-577-2450
Chairperson: Kenneth Jackson
Associate Chairperson: Lisa Maruca
Director of Composition: Jeff Pruchnic
Director of Graduate Studies: Caroline Maun
Academic Services Officer: Tia Finney
Website: <http://clas.wayne.edu/english>

Professors

Ellen Barton, Walter F. Edwards, Jerry Herron, renee hoogland, Kenneth Jackson, Richard C. Marback, Geoffrey Nathan, Ljiljana Progovac, Richard Raspa, Martha Ratliff, John R. Reed, Michael H. Scrivener, Steven Shaviro, Barrett Watten

Associate Professors

Robert Aguirre, Sarika Chandra, Jonathan Flatley, Jaime Goodrich, Donovan Hohn, Lisa Maruca, Caroline Maun, Jeff Pruchnic, Frances Ranney, Lisa Ze Winters

Assistant Professors

Simone Chess, Hilary Fox, Robert Henderson, Chera Kee, John Patrick Leary, Elizabeth Reich, Scott Richmond, Donnie Johnson Sackey,

Senior Lecturers

Todd Duncan, Margaret Jordan, Michael L. Liebler, Karen Springsteen, Thomas Trimble, Chris Tysh

Lecturers

Ryan Flaherty, Jared Grogan, Shenika Hankerson, Adrienne Jankens, Amy Latawiec, Joseph Torok, Nicole Varty, Clayton Walker

Lecturer and Director, Writing Center

Jule Wallis

Emeritus / Emerita Professors

Lesley Brill, Bradford S. Field, Jeanne A. Flood, Isabel Graham, Henry L. Golemba, Yates Hafner, William A. Harris, Julie Klein, Arthur F. Marotti, Ross Pudaloff, Ruth E. Ray, Alfred Schwarz, Edward Sharples, Elizabeth S. Sklar, Robert M. Strozier II, Anca Vlasopolos, Renata Wasserman, Beongcheon Yu

Graduate Degrees

MASTER OF ARTS with a major in English

DOCTOR OF PHILOSOPHY with a major in English

The English Department is engaged in researching and reconceptualizing what it means to read and write English in the twenty-first century and invites energetic, intellectually adventurous students to join in this pursuit. The graduate program is designed for students who show promise in the formal study and teaching of language, literature, film, rhetoric, composition, and culture, and seek to pursue the Master of Arts and/or Doctor of Philosophy in these areas. The M.A. program can be used to prepare for doctoral work and/or as a terminal degree used to develop expertise in particular areas of study (e.g., professional writing, creative writing). The doctoral program provides focus for all graduate studies in English and ensures that students receive an education at the highest possible level. The Ph.D. curriculum is offered in three concentrations: Literary and Cultural Studies; Rhetoric and Composition Studies; and Film and Media Studies.

English (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Formal application must be made through the Graduate Admission website. Application deadlines are November 1 (for Winter admission) and March 1 (for Fall admission). The English Department requires that all applicants provide the following on the Graduate Admissions Website: <http://clas.wayne.edu/english>

1. Statement of purpose
2. Two academic letters of reference
3. Sample essay from a previous English course

DEGREE REQUIREMENTS

The Master of Arts degree is offered as a Plan A, B, or C option.

Plan A: Thirty-three credits, including a three-to-six-credit thesis.

Plan B: Thirty-three credits, including a three-credit essay and demonstration of proficiency in at least one foreign language (for further details, consult the Director of Graduate Studies).

Plan C: Thirty-three credits, including a portfolio of representative work approved by the Director of Graduate Studies.

Major Requirements: The M.A. program in English is designed to prepare students to go on to doctoral work or to train students with specific interests (e.g., professional writing, creative writing) that may not lead to further advanced study in English. The M.A. program requires thirty-three credits of course work, which must include:

- 1) Five 7000-level courses in English at Wayne State University
- 2) English 7999 (Master's Essay, three credits), ENG 8999 (Master's Thesis, three to six credits), or the submission of a zero-credit portfolio. The thesis option is generally available only to students pursuing an interest in creative writing and working under the supervision of a creative writing faculty member. These options correspond to the Graduate School's Plans A, B, or C described above.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

English (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Formal applications must be submitted on the Graduate Admissions website: <http://gradadmissions.wayne.edu>. Students may apply to the Ph.D. program with either a B.A. or M.A. degree. Students that apply with a B.A. will have the opportunity to receive an M.A. degree before the completion of their Ph.D. by completing the M.A. requirements described above. The application deadline is January 15, but every Ph.D. student must begin the program in the fall semester. The English Department requires that all applicants provide the following information on the Graduate Admissions website:

1. Statement of purpose indicating areas of research interest
2. At least two academic letters of reference
3. A sample of the student's scholarly or critical writing
4. GRE General Test Scores

DEGREE REQUIREMENTS

The Ph.D. program requires ninety credits of course work beyond the B.A. degree, which must include:

1. Sixty credits of course work (for students entering the program with an M.A., up to thirty credits may be transferred from another institution)

2. Completion of distribution requirements within and outside concentration areas listed below

3. Thirty credits of dissertation courses (ENG 9991, 9992, 9993, 9994) taken in consecutive academic year semesters following the completion of regular course work and the Qualifying Exam

4. All courses must be at the 7000- or 8000- level; permission from the Director of Graduate Studies is required to take courses at lower levels unless such courses are required by the English Department (e.g., ENG 6001, Pedagogical Practicum I, or ENG 6004, Pedagogical Practicum II, for graduate teaching assistants)

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Course Requirements: The Ph.D. program has three concentrations: Literary and Cultural Studies; Rhetoric and Composition Studies; and Film and Media Studies. Each doctoral student must select a concentration early enough in her or his program to fulfill the course distribution requirements.

1. All new Ph.D. students are required to take an introductory course (ENG 7001, Issues in Critical Theory) in their first semester of studies. Accordingly, ENG 7001 is offered every fall term.

2. Each student must take at least two courses in his or her concentration, usually at the 7000-level. These courses provide students with a broad coverage of representative texts and issues.

3. Each student also must take at least two courses outside her or his concentration. Courses taken outside the concentration are usually at the 7000-level and may be selected from the other two English Department concentrations or from other areas of English Department graduate study (linguistics, creative writing, etc.).

4. Each student must then take at least two 8000-level seminars in her or his concentration. 8000-level seminars are more specialized explorations of a research problem within a professor's area of expertise.

5. Each student must take at least one course focused on contemporary pedagogical theory and best practices in teaching (e.g., ENG 6002: Teaching of Literary and Cultural Studies, ENG 7064: Teaching of Writing, or ENG 7065: Writing Technologies). Consult the Director of Graduate Studies for a list of approved classes.

6. Each Graduate Teaching Assistant must take ENG 6001, Pedagogical Practicum I, in the first semester in which she or he holds the assistantship, and ENG 6004, Pedagogical Practicum II, in the second semester in which she or he holds the assistantship. Accordingly, ENG 6001 is offered every fall term and ENG 6004 is offered every winter term.

Foreign Language Requirement: Students are required to demonstrate a reading knowledge of at least one foreign language. The preferred method for demonstrating proficiency is to pass a translation examination. For further details, consult the Director of Graduate Studies.

Final Qualifying Examination: One year before she or he plans to take the Qualifying Examination (QE), each student meets with her or his advisor to declare the field and emphasis in which she or he plans to be examined. Designated fields reflect the current division of the discipline as published by the Modern Language Association. Emphases are designed to underscore the necessity of embedding doctoral work in ongoing critical debates among the various disciplines and sub-disciplines that make up English studies. An emphasis should identify a topical or thematic category and/or articulate a theoretical or methodological approach. Students will also need to list two (or more) courses that support the declared emphasis. The student writes a brief description of her or his field and emphasis and the dissertation director presents this to the Department Graduate Committee. The Graduate Committee selects the other two members of the QE Committee. The QE Committee then works with the student to construct a list of texts on which she or he is to be examined (roughly 100-120 texts). The exam itself should be scheduled no later than the semester following the completion of course work. The QE Committee composes questions for a six-hour written examination. Within one week after taking the written exam, the student then takes a ninety-minute oral examination. The student passes or fails the exam in its entirety. No later than one month after successful completion of the Qualifying Examination, the student selects a dissertation committee consisting of three members of the English Department graduate faculty and one appropriately qualified individual who is not a member of the English Department. Members of this committee may or may not have been members of the student's QE Committee.

A final Public Lecture Presentation-Defense, after the dissertation has been completed, is also required. For a description of this, see Dissertation Public Lecture Presentation-Defense, p. 40.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Assistantships: Departmental assistantships are awarded on a competitive basis to doctoral students. Assistantships are awarded each spring and take effect the following fall. Inquiries and applications should be addressed to the Director of Graduate Studies.

Albert Feigenson Endowed Memorial Scholarship: Award open to full-time students majoring in music or English, with high scholastic standing and demonstrated financial need.

Professor Arnold Goldsmith Annual Scholarship: Award open to all full-time undergraduate and graduate students in English who maintain a 3.0 g.p.a. and demonstrate financial need.

Christopher T. Leland Endowed Scholarship in Creative Writing: Award open to full-time and part-time graduate and undergraduate students who exhibit achievement in creative writing.

Dennis Turner Memorial Scholarship in Film Studies: Award open to full-time students demonstrating a strong interest in film studies and maintaining a minimum 3.0 g.p.a.

DeRoy Fellowship: Award open to students entering the Ph.D. program. Students with an interest in film and media studies are especially urged to apply, but the fellowship is open to all entering students and is awarded on the basis of academic performance and promise.

Doretta Burke Sheill Endowed Memorial Scholarship: Award open to students majoring in English with high scholastic achievement, character, leadership, and financial need.

Loughead-Eldredge Endowed Scholarships in Creative Writing: Award open to M.A. students in creative writing who are in good academic standing and are enrolled for at least six credits.

Pearl Applebaum Warn Endowed Scholarship in English: Award open to returning full- or part-time students twenty-seven years and older, with high scholastic achievement and demonstrated financial need.

Stephen H. Tudor Memorial Scholarship in Creative Writing: Award open to full-time degree-seeking students majoring in English who have completed at least fifteen credits in residence and demonstrate high achievement in creative writing.

Terrance King Endowed Memorial Fellowship in English: Award open to an exceptionally promising Ph.D. student, based on the quality of the dissertation project.

Thomas R. Jasina Endowed Scholarship in English: Award open to full- or part-time students with high achievement and demonstrated financial need.

English Courses (ENG)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Advanced Expository Writing. Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced study and practice in various forms of expository prose, especially the essay. Topics to be announced in the Schedule of Classes. (I)

5020 Topics in Media and Modern Culture. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Topics may include: history of television, the internet, video games, other visual media; topics announced in the Schedule of Classes. Material fee as stated in the Schedule of Classes. (B)

5030 Topics in Women's Studies. (GSW 5030) Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Thematic, critical or generic study of women and literature. Topics to be announced in the Schedule of Classes. (Y)

5035 Topics in Gender and Sexuality Studies. (GSW 5035) Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced course on issues of sexuality and gender as mediated through literary and cultural study. Attention to critical theory as well as various literary and cultural forms. Topics to be announced in the Schedule of Classes. (Y)

5040 Film Criticism and Theory. Cr. 4 (LAB: 3; LCT: 3)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Survey of the major film theories from Munsterberg to contemporary film semiotics; examination of various attempts made at a systematic understanding of the cinema. Material Fee as indicated in the Schedule of Classes (Y)

5050 Historical Topics in Film and Media. Cr. 4 (Max. 12) (LAB: 3; LCT: 3)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Specialized, in-depth topics in film cycles and movements of a historical nature, such as French new wave, film noir, etc. Topics to be announced in the Schedule of Classes. Material Fee as indicated in the Schedule of Classes (B)

5060 Styles and Genres in Film. Cr. 4 (Max. 12) (LAB: 3; LCT: 3)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Study of significant works within selected genres, such as the western, horror, comedy, animation. Topics to be announced in the Schedule of Classes. Material Fee as indicated in the Schedule of Classes (Y)

5070 Topics in Film and Media. Cr. 4 (Max. 12) (LAB: 3; LCT: 3)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Critical and theoretical topics including style and work of specific filmmakers and philosophical approaches to film and other media. Topics to be announced in the Schedule of Classes. Material Fee as indicated in the Schedule of Classes (Y)

5075 Topics in New Media. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced course on the expressive forms of new media. Attention to recent work in humanities computing, digital humanities, and/or new media studies. Topics to be announced in the Schedule of Classes. (Y)

5080 Topics in Global and Transnational Studies. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Study of literature and culture from a global and/or transnational perspective. Topics to be announced in the Schedule of Classes. (Y)

5090 Topics in Literary and Cultural Theory. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Study of literary and cultural theory in various contexts – urban, metropolitan, ethnic, global – with reference to primary texts. Topics to be announced in the Schedule of Classes. (Y)

5095 Topics in Visual Culture. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced course in visual culture and its theory, and in the practice of reading images in a variety of literary and visual forms. Topics to be announced in Schedule of Classes. (Y)

5110 Chaucer. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Readings from *The Canterbury Tales* and from Chaucer's other works in their cultural context. (I)

5120 Topics in Medieval Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Themes, genres, writers in English and continental Medieval literature. Topics to be announced in the Schedule of Classes. (I)

5150 Shakespeare. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. For English majors and others interested in more intensive study. Some attention to Shakespearean scholarship. (B)

5170 Literature of the English Renaissance: 1500-1660. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Survey of literature in all genres from Skelton through Milton, with an emphasis on non-dramatic poetry and prose. (I)

5180 Milton. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Emphasis on Milton's major poetry with attention to his prose and to historical background. (I)

5190 Topics in Renaissance Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Studies of particular authors or groups of authors from 1500-1660 or of literary works from period, generic, thematic or methodological focuses. Topics to be announced in the Schedule of Classes. (I)

5200 Restoration and Eighteenth Century Literature. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. A survey of English literature from 1660 to 1800. Readings from authors such as John Dryden, Graph Ben, Mary Aspell, Alexander Pope, Lady Mary Montagu, Jonathan Swift. (B)

5240 Topics in Restoration and Eighteenth Century Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Special topics for detailed study of a genre, movement or author to be announced in the Schedule of Classes. (I)

5260 Literature of the Romantic Period. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. A survey of English literature from 1789-1832. Emphasis on the major poets (Blake, Wordsworth, Coleridge, Keats, Shelley and Byron), with some attention to the major essayists (De Quincey, Hazlitt and Lamb) and novelists (Austen and Scott). (B)

5270 Literature of the Victorian Period. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. A survey of English literature from 1832-1901. Emphasis on major poets (Tennyson, Arnold, Swinburne), novelists (Dickens, Eliot, Hardy), and prose writers (Carlyle and Ruskin). (B)

5290 Topics in Nineteenth Century Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Readings emphasize thematic, generic, historic or aesthetic concerns in literature of the period. Topics to be announced in the Schedule of Classes. (B)

5300 Twentieth Century British Literature. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Selected works in all genres from 1900 to the present. (B)

5320 Topics in Twentieth Century British Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Selected writers, themes, genres, or movements, such as Eliot, Auden, Shaw, Lawrence, the modern novel, Bloomsbury, The Great War, the Thirties. Topics to be announced in the Schedule of Classes. (I)

5410 American Literature: 1800-1865. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Survey of writers, themes and movements which have had dramatic influence in defining American culture. Writers such as Dickinson, Douglass and Emerson, and literary movements like Transcendentalism and Romanticism are studied as well as the forces that produced them, especially race, class and gender. (I)

5420 American Literature: 1865-1914. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Survey of important literary texts that arose from cultural phenomena like post-reconstruction, urbanization, immigration, the suffrage movement, and native rights. Literary movements like Realism and Naturalism will be studied as well as influential writers such as Cahan, Chopin, Dreiser and Dunbar. (I)

5450 Modern American Literature. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Survey of culturally-significant writers, themes and movements since 1914, such as: the Harlem Renaissance, Modernism, Postmodernism; authors like Ellison, Hemingway, Morrison, Stein. (Y)

5460 Topics in American Literature of the Twentieth Century. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Twentieth century literature from specific perspectives, such as generic, historical, thematic. Topics to be announced in the Schedule of Classes. (I)

5480 Topics in African American Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Thematic, generic or historical perspectives: topics such as early black writers, Harlem Renaissance, African-American poetry, contemporary black writers. Topics to be announced in the Schedule of Classes. (Y)

5490 Topics in American Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Thematic, generic, or historical perspectives; may cover writers of different periods. Topics such as American humor, the theme of work, Southern literature, the city in literature. Topics to be announced in the Schedule of Classes. (I)

5500 Topics in English and American Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Generic, historical or thematic perspectives. Topics to be announced in the Schedule of Classes. (B)

5510 Major Authors. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced study of one author, a pair of related authors, or a coterie of authors. Topics to be announced in the Schedule of Classes. (I)

5520 Irish Literature. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Major twentieth century Irish writers in the context of Irish history and politics, such as W.B. Yeats, James Joyce, major dramatists. (I)

5565 Postmodernism. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced study of postmodern literature and culture, with attention to its international development and to critical theory. Possible authors: Beckett, Calvino, Nabokov, Acker, DeLillo, Pynchon. (B)

5590 Topics in Comparative Literature. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. The study of literary texts from an international point of view. Topics to be announced in the Schedule of Classes. (I)

5595 Anglophone Literature. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced course in the study of literatures written in English beyond the United States and Great Britain. Attention to globalization, post-colonialism, and transnationalism. Authors may include: Rushdie, Coetzee, Kincaid, Kureishi, Ondaatje, Achebe, and Gordimer. (Y)

5680 Children's Literature. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Study of children's literature from a literary perspective. Attention to the place of children's literature in literary history, its relationship to canonical literary works, and the development of its specific literary forms and genres. (I)

5690 History and Future of the Book. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Study of significant moments in the history of reading, writing, and the production and dissemination of texts. Attention to orality and literacy, authorship and originality, publishing and economics, as well as writing technologies past and present. (I)

5695 Topics in Writing and Publishing. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement, or graduate standing. Study of recent trends and issues within the publishing industry, textual editing, scholarly publishing, print and electronic publication formats, and history and future of publishing. Topics to be announced in the Schedule of Classes. (B)

5700 Introduction to Linguistic Theory. (LIN 5700) Cr. 3

Introduction to the scientific study of language and methodologies of linguistic analysis: phonetics and phonology, morphology, syntax and semantics. (Y)

5710 Phonology. (LIN 5290) Cr. 3

Prereq: ENG/LIN 2720 or ENG/LIN 5700; grad prereq: ENG/LIN 5700. The sound systems of a variety of human languages compared

and contrasted in an introduction to the diversity and similarities in human sound systems. Theories of the nature of sound systems and methods of analysis in phonology and morphophonology will be presented. (Y)

5715 Morphology. (LIN 5715) Cr. 3

Undergrad Pre-req: ENG/LIN 2720 or ENG/LIN 5700; Graduate pre-req: ENG/LIN 5700. Morphology is a core area of Linguistics. The course will introduce the basic issues in the study of the internal structure of words, as well as the analytical techniques applied to morphological analysis. Students will learn how to analyze words of various (Indo-European and non-Indo-European) languages into morphemes, as well as to recognize morphological patterns and to utilize theoretical concepts in order to describe and analyze such patterns. In particular, the course will develop a theory of morphology in generative grammar, paying special attention to the question of whether particular morphological phenomena are primarily syntactic or primarily phonological in nature. (F)

5720 Linguistics and Education. (LIN 5720) Cr. 3

Introduction to linguistics with emphasis on applications to education. (Y)

5730 English Grammar. (LIN 5730) Cr. 3

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (Y)

5740 Syntax. (LIN 5300) Cr. 3

Prereq: ENG/LIN 2720 or ENG/LIN 5700; grad prereq: ENG/LIN 5700. The theory of grammatical systems examined through analysis of sentence formation in a variety of human languages, diversity and universals in grammar, and theories of syntax. (Y)

5745 Semantics. (LIN 5745) Cr. 3

Undergraduate pre-req: ENG/LIN 2720 or ENG/LIN 5700; graduate pre-req: ENG/LIN 5700. Semantics is a core area of Linguistics. This course investigates meaning in natural language. It examines two foundational assumptions of natural language semantics: (i) that the meaning of a declarative sentence is its truth conditions and (ii) that the truth conditions of an expression are determined compositionally (that is, they are determined as a function of its parts and how they are put together). Students will then learn to distinguish between the entailments, implicatures, and presuppositions of an expression, where only the first are part of the expression's truth conditions. (W)

5750 Theories of Second Language Acquisition. (LGL 5750) (LIN 5750) Cr. 3

The complex processes involved in learning a foreign/second language, including the nature of inter language and the individual and collective factors influencing learner success and the effectiveness of instruction. (Y)

5760 American Dialects. (LIN 5760) Cr. 3

Survey of chief social and geographic dialects of American English and introduction to theory of language variation. (I)

5770 (Sociolinguistics. (LIN 5770) Cr. 3

Identification of sociolinguistic principles used by English speakers and writers in choosing among the different English codes, styles, registers and social dialects in American and other communities. (B)

5790 Writing Theory. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Review of linguistic, rhetorical, and/or literary theories of written language. Analysis of the principles, purposes, types, and modes of written discourse. (Y)

5795 Topics in Rhetoric and Writing. Cr. 3 (Max. 9)

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Advanced course in rhetoric and writing. Atten-

tion to recent work in composition studies, rhetorical theory, and writing. Topics to be announced in the Schedule of Classes. (I)

5820 Internship Practicum. Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement and written consent of departmental Undergraduate Advisor; grad. prereq: written consent of Graduate Director. Students work 8-20 hours per week as tutors, writers, editors or researchers in publishing firms, businesses, government, and community organizations. Classroom sessions focus on reading and writing analytical texts related to workplace experience, and creating a portfolio of works created from the internship. (T)

5830 Introduction to Technical and Professional Writing Practices. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Intensive writing course that develops communication skills used in the workplace. Designed for students preparing to become technical writers/editors and students who will write as part of their professional work. (B)

5840 Theoretical Approaches to Technical and Professional Writing. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Survey of the theory and practice of technical and professional communication. Topics include the rhetoric and teaching of technical communication, analysis of on-the-job writing and rhetorical situations, and use of new communications technology. (B)

5850 Introduction to Scholarly Writing for Non-native English Speakers. Cr. 2

Open only to non-native speakers of English. Prereq: graduate standing; written consent of ELI Director. Intensive practice in writing at the graduate level for non-native speakers of English. (F,W)

5860 Topics in Creative Writing. Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement, and ENG 2800 or ENG 3800; or graduate standing. Topics include new genres, new media, and writing for public audiences. Models drawn from works written in diverse communities and cultures. Frequent individual conferences. (Y)

5870 Poetry Writing Workshop. Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement, and ENG 2800 or ENG 3800; or graduate standing. The writing of poetry, conducted on a seminar basis; discussion and criticism of the work of students in the course. Frequent individual conferences. (Y)

5880 Fiction Writing Workshop. Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement, and ENG 2800 or ENG 3800; or graduate standing. The writing of fiction, conducted on a seminar basis; discussion and criticism of the work of students in the course. Frequent individual conferences. (Y)

5885 Topics in Creative Non-Fiction Writing. Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement, and ENG 2800 or ENG 3800; or graduate standing. Study and practice of hybrid forms that blend reportage and imaginative writing. Attention to essays, memoir, and personal writing. Frequent individual conferences. (Y)

5890 Writing for Theatre. (THR 5130) Cr. 3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement, and ENG 2800 or ENG 3800; or graduate standing. Advanced study, in a workshop setting, of dramatic structure and writing for the theatre, terminating in the writing of an original stage play. Frequent individual conferences. (B)

5990 Directed Study in English. Cr. 1-3 (Max. 6)

Prereq: satisfactory completion of General Education IC requirement and written consent of departmental Undergraduate Advisor; grad.

prereq: written consent of Graduate Director. Advanced work for superior students whose program cannot be adequately met by scheduled classes. Course requires substantial written work. (T)

6001 Pedagogical Practicum I. Cr. 3

Open only to new graduate teaching assistants. Offered for graduate credit only. Instruction and resources to prepare newly-appointed graduate teaching assistants for teaching in the Wayne State composition program. (F)

6002 Teaching of Literary and Cultural Studies. Cr. 3

Open only to doctoral students. Offered for graduate credit only. Instruction in the teaching of literary and cultural studies through both individualized and group training (F,W)

6004 Pedagogical Practicum II. Cr. 3

Open only to second-semester graduate teaching assistants in the department. Prereq: ENG 6001. Instruction and resources to support graduate teaching assistants during their second semester teaching in the Wayne State composition program. (W)

6010 Tutoring Practicum. Cr. 3

Prereq: satisfactory completion of General Education IC requirement or graduate standing. Integration of theories of language, learning and composition into a teaching practicum for prospective teachers at the secondary level and beyond. (Y)

6720 Topics in Language. (LIN 6720) Cr. 3 (Max. 12)

Topics such as: pragmatics, historical linguistics, history of English, language and gender, language and variation, language and evolution. Topics to be announced in the Schedule of Classes. (Y)

6800 Advanced Creative Writing. Cr. 3 (Max. 6)

Prereq: graduate standing or satisfactory completion with grade of B or above in one of the following: ENG 5695, ENG 5860, ENG 5870, ENG 5880, ENG 5885, or ENG 5890. Writing in any of the creative forms. Work by students presented in seminar meetings; frequent individual conferences. Topics to be announced in the Schedule of Classes. (B)

7001 Issues in Critical Theory. Cr. 3

Prereq: admission to doctoral program; written consent of graduate advisor. Must be taken in first semester of doctoral studies. Training in fundamental critical and professional issues through reading and writing about problems, issues and texts central to English studies. (F)

7002 History of Critical Theory. Cr. 3 (Max. 6)

Prereq: graduate standing. Instruction in the history of critical theory through examination of critical and/or representative texts in that history. (B)

7003 Contemporary Literary Theory. Cr. 3 (Max. 6)

Prereq: graduate standing. In-depth reading of and education in contemporary literary works that are important to the discipline of English studies. (B)

7004 Theoretical Issues in Cultural Studies. Cr. 3 (Max. 6)

Prereq: graduate standing. Intensive reading in and writing about central theoretical issues in cultural studies. (B)

7005 Film Theory. Cr. 4 (Max. 8)

Prereq: graduate standing. Basic knowledge of film theory; especially for students who will have a concentration in film and media studies. (B)

7006 Media Theory. Cr. 4 (Max. 8)

Prereq: graduate standing. Important issues and theories in media studies. (B)

- 7007 Composition Theory. Cr. 3 (Max. 6)**
Prereq: graduate standing. Seminar on such topics as: the writing process, computers in composition, theory of basic writing, theory of technical/professional writing. (Y)
- 7011 Studies in Medieval Literature. Cr. 3 (Max. 6)**
Prereq: graduate standing. Selected topics such as: Arthurian legend, the alliterative revival, problems in Chaucer criticism. (I)
- 7012 Sixteenth-Century Literature. Cr. 3 (Max. 6)**
Prereq: graduate standing. Readings in representative works in literature in English of the 16th century. (B)
- 7014 Seventeenth-Century Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Reading and writing about representative texts of 17th century literature in English. (B)
- 7015 Studies in Shakespeare. Cr. 3 (Max. 6)**
Prereq: graduate standing. Special problems in current scholarship and criticism. (B)
- 7016 English Drama from the Medieval Cycle Plays to 1642. Cr. 3 (Max. 6)**
Prereq: graduate standing. Survey of representative English dramas from the medieval period to mid-seventeenth century. (B)
- 7021 Studies in Restoration and Eighteenth Century Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Studies of particular authors or genres. (I)
- 7022 Studies in Romantic Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Topics such as Wordsworth and Coleridge, crisis and triumph of the romantic imagination. (I)
- 7023 Studies in Victorian Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Poetry, non-fictional prose, drama, fiction. (I)
- 7024 The Rise of the Novel. Cr. 3 (Max. 6)**
Prereq: graduate standing. Tracing the development of the novel. (B)
- 7025 Fin de Siecle. Cr. 3 (Max. 6)**
Prereq: graduate standing. Studies in turn of the century literature and culture. (B)
- 7031 Naturalism and Realism. Cr. 3 (Max. 6)**
Prereq: graduate standing. In-depth study of naturalist and realist writings, and of naturalism and realism as categories of classification. (B)
- 7032 Modernism and Modernity. Cr. 3 (Max. 6)**
Prereq: graduate standing. Studies in modernism as a literary and cultural movement and/or in modernity as a social, economic and cultural formation. (B)
- 7033 Postmodernism and Postmodernity. Cr. 3 (Max. 6)**
Prereq: graduate standing. Studies in postmodernism as a literary and cultural movement and/or in postmodernity as a social, economic and cultural formation. (B)
- 7035 Cyberculture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Studies in cyberculture as a literary and cultural movement. (B)
- 7041 Early American Literatures and Cultures. Cr. 3 (Max. 6)**
Prereq: graduate standing. Studies in the literatures and cultures of the Americas from their beginnings to and/or into the nineteenth century. (B)
- 7042 Nineteenth-Century American Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Advanced study of such topics as Puritanism, Transcendentalism, Fugitive Slave Narratives and Indian Captivity Narratives as evidenced in such authors as Dickinson, Douglass, Franklin, Hawthorne, Hutchinson, Jacobs, Whitman. (B)
- 7043 Twentieth-Century American Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Advanced study of literary representations of crucial cultural issues as demonstrated among writers, movements, and selected texts. Possible writers include T.S. Eliot, Toni Morrison, Gertrude Stein; movements like Modernism and Postmodernism, and cultural phenomena like assimilation and reification may be treated. (B)
- 7044 African-American Literature and Culture. Cr. 3 (Max. 6)**
Prereq: graduate standing. Advanced study of topics in African-American literature. (B)
- 7045 Ethnic American Literatures and Cultures. Cr. 3 (Max. 6)**
Prereq: graduate standing. Study of the varieties of ethnic literature and culture in the Americas. (B)
- 7046 Comparative American Literatures and Cultures. Cr. 3 (Max. 6)**
Prereq: graduate standing. Stud of the literatures and cultures of the Americas from a comparative perspective. (B)
- 7051 Introduction to Film and Media Studies. Cr. 4 (Max. 8)**
Prereq: graduate standing. Historical and theoretical introduction to film and media studies. (Y)
- 7053 Film and Media Genres. Cr. 4 (Max. 8)**
Prereq: graduate standing. Survey of the genres of film and media studies. (B)
- 7056 Comparative Media. Cr. 3 (Max. 6)**
Prereq: graduate standing. Instruction in media from a comparative perspective, including but not limited to film, digital, visual, and auditory media. (B)
- 7061 Rhetorical Theory. Cr. 3 (Max. 6)**
Prereq: graduate standing. Survey of major rhetorical theories. (B)
- 7062 Designing Research in Composition and Rhetoric. Cr. 3 (Max. 6)**
Prereq: graduate standing. Survey of major research methodologies in rhetoric and composition. (B)
- 7063 Historical Studies in Composition and Rhetoric. Cr. 3 (Max. 6)**
Prereq: graduate standing. Survey of historical approaches to rhetoric and composition. (B)
- 7064 The Teaching of Writing. Cr. 3 (Max. 6)**
Prereq: graduate standing. Survey of major pedagogical theories in composition studies. (Y)
- 7065 Writing Technologies. Cr. 3 (Max. 6)**
Prereq: graduate standing. Study of rhetorical and pedagogical issues related to writing and technology. (B)
- 7066 Writing in Multiple Settings. Cr. 3 (Max. 6)**
Prereq: graduate standing. Survey of research into writing in specific settings such as urban and/or rural sites, workplaces, communities and organizations, or classrooms. (B)
- 7710 (ENG 7710) Advanced Studies in Linguistic Structure. (LIN 7710) Cr. 3 (Max. 9)**
Prereq: graduate standing. Current issues in linguistic theory, including but not limited to topics in phonology, morphology, syntax, semantics. Topics to be announced in the Schedule of Classes. (I)

7720 Advanced Studies in Language Use. (LIN 7720) Cr. 3 (Max. 9)

Prereq: graduate standing. Current problems in language use, including issues in language variation, pidgins and creoles, first language acquisition, perception and production, and linguistic stylistics. Topics to be announced in the Schedule of Classes. (I)

7770 Discourse Analysis. (LIN 7770) Cr. 3 (Max. 9)

Prereq: graduate standing. Analysis of inter-sentential relationships and of larger patterns. Implied and actual exchanges. Information ordering. Multi-level and intersectional analysis of expository prose. Topics to be announced in the Schedule of Classes. (B)

7800 Seminar in Creative Writing. Cr. 3 (Max. 6)

Prereq: graduate standing. Intensive advanced study in creative writing and/or relevant critical theory. Topics such as: Writing the Novel, Narrative Perspective, Creative Text and Reader Response, to be announced in the Schedule of Classes. (Y)

7840 Technical and Professional Communication. Cr. 3 (Max. 6)

Prereq: graduate standing. Survey of contemporary research in Technical and Professional Communication. (B)

7990 Directed Study in English. Cr. 1-8 (Max. 8)

Prereq: written proposal submitted to graduate officer in preceding semester; written consent of advisor and graduate director. Advanced work for English majors whose program of study cannot be adequately met by scheduled classes. (T)

7999 Master's Essay Direction. Cr. 1-3

Prereq: written consent of advisor. (T)

8001 Seminar in Literary and Cultural Studies. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in literary and cultural studies. Topics to be announced in the Schedule of Classes. (B)

8002 Seminar in Literary and Cultural Studies Before 1700. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in literary and cultural studies before 1700. Topics to be announced in the Schedule of Classes. (B)

8003 Seminar in Literary and Cultural Studies: 1660-1914. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in literary and cultural studies between 1660 and 1914. Topics to be announced in the Schedule of Classes. (B)

8004 Seminar in Literary and Cultural Studies After 1870. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in literary and cultural studies after 1870. Topics to be announced in the Schedule of Classes. (B)

8005 Seminar in American Literatures and Cultures. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in American literatures and cultures. Topics to be announced in the Schedule of Classes. (B)

8006 Seminar in Film and Media Studies. Cr. 4 (Max. 8)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in film and media studies. Topics to be announced in the Schedule of Classes. (B)

8007 Seminar in Rhetoric and Composition Studies. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in rhetoric and composition studies to be announced in the Schedule of Classes. (B)

8008 Seminar in Theory. Cr. 3 (Max. 6)

Prereq: doctoral standing and written consent of graduate advisor. Advanced special topics in theory to be announced in the Schedule of Classes. (B)

8999 Master's Thesis Research and Direction. Cr. 1-8 (Max. 8)

Prereq: graduate standing and written consent of graduate advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of graduate advisor and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ENG 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ENG 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ENG 9992 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ENG 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ENG 9993 and approval of Ph.D. Officer of the Graduate School. Required in academic-year semester following ENG 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ENG 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in the Schedule of Classes. (T)

Geology

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Sarah J. Brownlee

Lecturer

Valentina Taranovic

Geology (M.S. Program)

The Master of Science with a major in Geology consists of advanced studies that are designed to prepare the student to assume a position of responsibility as a professional geologist; or to enter a program leading to the doctor of philosophy in geology or a related discipline at another university. The Master of Science in geology is designed to provide the students with special training in the environmental aspects of this discipline in keeping with the urban setting of Wayne State University. Students receiving the degree of Master of Science in geology will be especially prepared to work in a capacity that deals with or provides solutions to environmental problems in which an intimate relationship between the environment and earth science is an important factor.

The master's degree program involves the rigorous, in-depth study of major concepts pertaining to the earth, and the techniques used to study them. Entrance into the program assumes a firm foundation in the basic and elemental concepts of geology.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, candidates are required to have an undergraduate major in geology, or a strong background in geology supported by courses in related sciences, and a grade point average of at least 3.0 in the major. Prerequisite study should include many of the following courses: mineralogy, petrology, sedimentation, geomorphology, environmental geochemistry, and structural geology, plus a course in any two of the following fields: paleontology, stratigraphy, geological site assessment, geostatistics, or geophysics. Two semesters of calculus, a year of chemistry and a year of physics are also necessary. Deficiencies in prerequisites may be made up concurrently with graduate work.

The verbal and quantitative parts of the Graduate Record Examination are required for admission to the graduate program, and the applicant must file three personal letters of recommendation and a personal statement describing goals and motivations for pursuing an M.S. Geology degree before acceptance.

Students transferring from other fields should make an appointment with the Graduate Officer or the Department Chairperson who will review the applicant's background and make recommendations regarding the graduate program.

DEGREE REQUIREMENTS

The master's degree is offered by this department only under the following option:

Plan A: *Thirty-two credits including an eight credit thesis.*

Students must complete twenty-four credits in graduate course work from the following courses: GEL 5000, 5120, 5150, 5210, 5450, 5510, 5600, 6400 and 6500. If additional credits are required, then, courses may be selected from other graduate courses in chemical and/or civil engineering, or graduate courses in chemistry or physics. Graduate courses in disciplines other than geology require the approval of the thesis advisor and the graduate committee. Eight credits in thesis (GEL 8999) are also required. All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

The graduate program may be modified by the Geology Department to conform to the needs of individual candidates.

Candidacy for the Master's degree is established by submitting an acceptable Plan of Work to the Graduate Officer of the College of Liberal Arts and Sciences. This plan must be submitted and approved by the College by the time twelve graduate credits have been earned. Once candidacy is established, the student, in consultation with his/her advisor and the Geology Department graduate officer, will select the thesis committee. The committee will be comprised of a minimum of three members of the graduate faculty with the student's advisor serving as one member and committee chairperson. Two of the three members of the committee (including the advisor) must be from the Department of Geology. The third member may be from another department if this third member will be making a significant contribution to the applicant's course work and/or thesis study.

Cognate Requirements: Although there are no cognate courses required for the Master of Science degree, geology majors should consult their advisor regarding cognate courses which will be of value to their particular program. Depending on interests and future goals, courses in mathematics, physics, chemistry, and computer science, and especially those in chemical and civil engineering may be of particular value.

Assistantships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

A limited number of graduate teaching assistantships may be available for academically superior students. Their availability can be ascertained by writing to the Geology Department graduate office.

Geology Courses (GEL)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Geological Site Assessment. Cr. 4

Prereq: GEL 1010 or GEL 1000. Geologic methods for Phase I Environmental Site Assessments. Application of geostatistics to site characterization. (B)

5030 Earth Science for Educators. Cr. 4

Open only to middle or high school teachers. Review of all major earth science concepts including: physical geology, oceanography, meteorology and astronomy. Material Fee As Indicated In The Schedule of Classes (I)

5120 Environmental Geochemistry. Cr. 4

Prereq: GEL 1010 and two semesters of college chemistry or equivalent. Survey of some of the geochemical interactions which take place in Earth environments (water, soils, atmosphere, etc.) brought about by natural and human-induced chemical processes. Material Fee As Indicated In The Schedule of Classes (B)

5150 Soils and Soil Pollution. Cr. 4

Prereq: GEL 1010, CHM 1220 and CHM 1230. Physical, chemical and mineralogical properties and classification of soils. Behavior of pollutants in soils and methods for reclamation. (S)

5200 Oceanography for Educators. Cr. 4

Open only to middle- or high school teachers. Offered for graduate credit only. Origin of the ocean basins; ocean currents, waves and tides; life in the oceans and marine ecology; marine resources and pollution. (B)

5210 Applied Geophysics Cr. 4

Prereq: GEL1010, GEL 3300; MAT 2010; PHY 2130 and 2140 (or PHY 2170 and 2180). Introduction to applied geophysical methods used in subsurface exploration. Students will learn the basics of near-surface seismic, gravity, magnetic, electrical resistivity, and electromagnetic methods and data analysis. Material Fee as indicated in Schedule of Classes. (B)

5450 Hydrogeology. Cr. 4

Prereq: GEL 1010 and MAT 2010 or equiv. Characteristics and behavior of groundwater in earth materials. Principles of groundwater flow and solute transport. Introduction to numerical models and methods. (B)

5490 Glacial Geology of North America. Cr. 4

Prereq: GEL 1010, GEL 1020. Survey treatment of glacial processes; emphasis on the impact of the Laurentide Ice Sheet on the Great Lakes region. Course is offered at advanced undergraduate and graduate levels. (F)

5510 Environmental Fate and Transport of Pollutants. Cr. 4

Prereq: CHM 1220, 1230, 1240, 1250, or equiv.; MAT 2010 or equiv. Basic principles of chemical behavior in the environment; sources, fate, and transport of contaminants. (F)

5600 Special Topics in Geology. Cr. 4

Subjects of general interest to geology majors. Topics may include: mapping; soil and groundwater pollution; petroleum geology; engineering geology; mathematical methods in Earth Science; or others. (I)

6210 Current Topics in Environmental Sciences. (C E 6210) Cr. 3

Prereq: PHY 2130/2140 or 2170/2180; CHM 1220 and 1230; GEL 1010 or C E 4210; and BIO 1500. Introductory course for senior undergraduate and graduate students in environmental science/engineering and geology. Emphasis on effects of environmental changes on human society. (B:W)

6400 Nuclear Geology. Cr. 4

Prereq: PHY 2130/2140 or PHY 2170/2180; CHM 1220 and CHM 1230 and GEL 1010; or equivs. Introduction to various physical and chemical age-dating methods applied to geological and cosmological objects. (B)

6500 Economic Geology. Cr. 4

Prereq: GEL 2130, 3160, 3300, 3400. May require passport card. Geology, tectonic setting and genesis of metallic and nonmetallic mineral and hydrocarbon deposits. Resource economics and environmental issues related to resource extraction. Check with instructor for field trip destination; field trip to Canada frequently part of course. (B)

7990 Directed Study in Geology. Cr. 2-8 (Max. 8)

Prereq: written consent of instructor, advisor, and graduate officer. (T)

7997 Research in Geology. Cr. 3-4 (Max. 8)

Prereq: written consent of instructor and advisor. Independent work in laboratory or field. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

History

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Professors

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Assistant Professors

Jennifer Hart, Karen Marrero, Tracy Neumann

Lecturers

Sylvia Taschka

Emeriti Distinguished Professors

Ronald Aronson, Philip P. Mason, Melvin Small

Emeriti Professors

Tilden Edelstein, Edwin Hall, Charles K. Hyde, Christopher H. Johnson, Harry Magoulias, Alan Raucher, Monica Schuler, Samuel F. Scott, Francis Shor, David Weinberg.

Emeriti Associate Professors

Stanley Shapiro

Graduate Degrees and Certificates

MASTER OF ARTS with a major in History

MASTER OF ARTS with a major in Public History

JOINT MASTER OF ARTS with a major in History and a Juris Doctorate

JOINT MASTER OF ARTS with a major in History and a Master of Library and Information Science

DOCTOR OF PHILOSOPHY with a major in History and specializations in Europe, America, Labor, Gender, Asia, Africa, Science and Technology, and World History

GRADUATE CERTIFICATE in World History (Bridge Program)

The graduate program in history offers advanced education for qualified students who wish to develop the analytical and research skills appropriate to the study of history. Basic to all graduate programs in this discipline is an emphasis upon the location and classification of historical evidence, the interpretation of this evidence, and its synthesis in written and oral forms. The purpose of historical research and writing is to advance understanding of the past, to place the problems of the contemporary world in historical perspective, and to furnish insight about the future.

Advanced degrees in history serve several audiences, chief among them being those intent upon a teaching career at the secondary, junior college or university level; those interested in employment in government research, as foreign service officers, or in the manage-

ment of archival resources and public and private historical agencies; and those who wish to study history as a means of understanding contemporary society and social issues. Private sector businesses and institutions consider a history degree, because of its emphasis on reading, writing, and analytical thinking, to be one of the more valuable for their generalists.

The M.A., M.A.P.H., and the Ph.D. programs provide sufficient flexibility to meet the professional needs of these various interests at differing levels of achievement. All M.A. and M.A.P.H. students must show mastery of their subject matter and demonstrate an ability to do basic historical research. Attainment of the Ph.D. requires the ability to use such research tools as statistics and foreign languages, as well as extensive mastery of a series of historical fields and a demonstrated capacity for original research. The doctoral dissertation is the culmination of the historian's training and constitutes an enlargement of our knowledge and understanding of history. Normally one to two years of study will be required for the completion of the M.A. and M.A.P.H.; fulfillment of all requirements for the Ph.D. will usually involve four years of full-time study beyond the Master of Arts degree.

Joint Degree Programs

A joint degree is one in which some courses may be taken for credit applicable to both degrees. The Department administers several joint-degree graduate programs. A joint J.D./M.A. degree program is offered in cooperation with the Law School. A joint M.A./M.L.I.S. program is offered in conjunction with the Master of Library and Information Science program. Additionally, the Department participates in a graduate certificate program in archival administration in cooperation with the Walter P. Reuther Library of Labor and Urban Affairs and the Master of Library and Information Science Program.

History (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Earning a graduate degree is an undertaking which requires a considerable commitment of time and financial resources. The Department of History expects applicants to its graduate program to arrive well-prepared to undertake this rigorous course of study. Accordingly, the following application deadlines posted by the University are strictly adhered to.

Admission to the Fall Term - February 1 (early admission), May 15

Admission to the Winter Term - November 1

Admission to the Spring/Summer Term - February 1

The Department normally considers only applicants whose undergraduate grade point is at least 3.00 overall and at least 3.25 in a minimum of eighteen semester credits in history and related subjects at the advanced undergraduate level. Applicants should have or be in the process of acquiring relevant foreign language preparation to enter the area in which they wish to study. The Department requires that all applicants submit a letter of intent, a research paper as evidence of writing skills, a copy of scores from the Graduate Record Exam general test, at least two letters of recommendation from former instructors, and provide copies of transcripts from each college or university previously attended.

DEGREE REQUIREMENTS

Candidates for the master's degree in history must complete a total of thirty-five credits under Plans A or B as outlined below. All students must take History 7830 (Methods and Research in History) during the first year in the program and, regardless of which Plan they pursue, all students must complete at least two 8000-level seminars.

Plan A: Twenty-seven credits in graduate course work, of which at least twenty-two must be taken in history, plus an eight credit thesis.

Plan B: Thirty-two credits in graduate course work, including at least twenty-seven credits in history, plus a three credit essay.

Under *Plans A and B*, the student must 1) complete course work in two fields of history (for fields, consult the *Departmental Graduate Handbook*); 2) complete a minimum of five courses numbered 7000 or above, exclusive of the thesis (HIS 8999) or essay (HIS 7999) (HIS 7990, Directed Study, will count toward the four-course requirement only if taken for more than two credits); 3) complete two graduate seminars numbered 8000 or above; and 4) pass a final oral examination on the thesis or essay and graduate course work.

Candidacy must be established by filing an official Plan of Work with the Department when twelve credits have been earned.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

History (M.A.P.H. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. Earning a graduate degree is an undertaking that requires a considerable commitment of time and financial resources. The Department of History expects applicants to its graduate program to arrive well-prepared to undertake this rigorous course of study. Accordingly, the following application deadlines posted by the University are strictly adhered to.

Admission to the Fall Term - February 1 (early admission), May 15
Admission to the Winter Term - November 1
Admission to the Spring/Summer Term - February 1

The Department normally considers only applicants whose undergraduate grade point is at least 3.00 overall and at least 3.25 in a minimum of eighteen semester credits in history and related subjects at the advanced undergraduate level. The Department requires that all applicants submit a letter of intent, a research paper as evidence of writing skills, a copy of scores from the Graduate Record Exam general test, at least two letters of recommendation, at least one from former instructor-the other may be from a supervised internship or employment in a historical agency or library/archive, and provide copies of transcripts from each college or university previously attended.

DEGREE REQUIREMENTS

For the Master's in Public History degree at least 33 credits are required. 15 credits will be completed in core courses that include an internship and master's project. 18 credits will be completed in a public history track. Candidates must petition the Graduate Committee for any exceptions to the M.A.P.H. requirements.

The two core courses, HIS 7835 and HIS 7855, will be required of all students. Other requirements will include a methodology course relevant to their track and professional goals and six courses as required for the track selected. Students will be required to take at least three courses open only to graduate students at the 7000-level or above. They also must complete a 3-credit, 135-hour internship to acquire marketable experience. Students will select a track no later than the end of their first semester of coursework. MAPH students can select a track in one of the following areas: Museum Studies; Cultural Resource Management; Public Policy; African American History and Culture; Labor and Urban History; Gender, Sexuality, and Women's Studies.

Candidacy must be established by filing an official Plan of Work with the Department when twelve credits have been earned.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic

Regulations for the College of Liberal Arts and Sciences and Academic Regulations, Graduate, respectively.

History and Law (M.A./J.D. Joint Degree Program)

A joint degree is one in which some courses may be taken for credit applicable to both degrees. The joint degree program in law and history leads to the receipt of a J.D. from the Law School and an M.A. from the History Department of the College of Liberal Arts and Sciences. Law students may apply to the History Department for admission to the M.A. program, and upon admission may enroll in history courses after successful completion of their first year of legal studies. In the M.A. program, students may focus their studies on chronological history, including Roman, Western European and American backgrounds of law; on subjects related to specific areas of law practice such as labor, business or political history; or on the historical context of the lawyer's role in public policy making in domestic and international affairs. The joint degree program can be completed in three-and-one-half to four years of full-time study. A brochure more fully describing the joint degree program in law and history is available from the History Department or the Law School.

History and Library and Information Sciences (M.A./M.L.I.S. Joint Degree Program)

A joint degree is one in which some courses may be taken for credit applicable to both degrees. Students who enroll in the joint program will earn both the M.A. in History and the M.L.I.S. Graduates will increase their job market potential and be prepared to enter a new workforce that is capable of appraising and describing historical records, creating websites, and preserving electronic documents. Applicants to this fifty-seven credit program must be admitted to both the Department of History and the Library and Information Science master's degree programs. A brochure more fully describing the joint degree program in law and history is available from the History Department or the M.L.I.S. program.

History, World (Bridge Graduate Certificate)

This Certificate is oriented to the interests of history teachers and those training to become history teachers who wish to learn world historiography and gain the ability to survey regional histories and transnational themes crucial to teaching world history successfully. It provides graduate-level credentials in an area of growing demand at both the secondary and post-secondary levels.

As a bridge program this Graduate Certificate allows students to apply all of their coursework for the Certificate to the Master of Arts with a Major in History if they decide to pursue that degree after completing the Certificate.

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students must hold a baccalaureate degree from an accredited college or university, possess a grade point average of 3.0 or higher, and demonstrate at least a 3.25 grade point average in a minimum of eighteen semester credits in history and related subjects at the advanced undergraduate level.

CERTIFICATE REQUIREMENTS

The certificate requires fifteen credits of graduate-level course work including one three-credit core course — HIS 8310, Seminar in World History — and twelve credits of courses including three continental areas chosen from: Africa, Asia, Latin America, Middle East, and Europe. One transnational course (i.e. citizenship, constitutional and legal history, gender, migration and ethnic, international relations, labor, and urban) may be taken in lieu of one in the continental distribution selections. A list of courses available to Certificate students is available from the Department. Students must maintain a minimum

3.0 grade point average and complete the Certificate within three years.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

History (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Earning an advanced graduate degree requires considerable commitment of time and financial resources. The Department of History expects applicants to its graduate program to commence study well-prepared to undertake this rigorous course-work sequence. Accordingly, the application deadline of February 1 is strictly followed.

The Department normally considers only applicants whose prior g.p.a. is at least 3.00 overall and at least 3.25 in a minimum of eighteen semester credits in history and related subjects. While attainment of an M.A. in History is not required of the doctoral applicant per se, the Graduate Committee will be looking for a strong background in history comparable to those holding the M.A. in the discipline in all doctoral applicants.

REQUIRED ADMISSIONS DOCUMENTS:

1. Formal Application.
2. Application fee.
3. All transcripts from all colleges and universities previously attended.
4. GRE scores from the general exam.
5. A letter of intent that outlines career goals and the area of study the applicant wishes to pursue.
6. A research paper as evidence of writing and research skills.
7. At least three letters of recommendation from former professors.

The Department of History coordinates all materials for the doctoral admissions application process. Any items that are not submitted online should be sent directly to the Department's Director of Graduate Studies.

Admission to the doctoral program is considered only once a year with a deadline of February 1 for the submission of all materials for admission to the immediate following fall term. The Graduate Committee meets in late February to consider all doctoral admissions applications and all graduate funding decisions. Applicants will be notified by the end of March of their admission status.

DEGREE REQUIREMENTS

The Doctor of Philosophy degree requires ninety credits beyond the baccalaureate degree. The M.A. in History earned at WSU may count for thirty-five of these; but only thirty credits in post-bachelor's programs may be transferred from another institution. The total ninety credits must include:

1. History 7830, Methods and Research in History, or its equivalent.
2. A minimum of four 8000-level research seminars, including one advanced readings course in the dissertation field.
3. A minimum of thirty credits in coursework numbered 7000 or above.
4. A minimum of forty credits of coursework in History.

5. Eight credits of coursework in a cognate area chosen by the candidate and their advisor.

6. Additional coursework for a total of sixty credits.

7. Thirty credits of dissertation registration.

The final thirty credits of the degree consist of dissertation research and writing. The thirty-credit dissertation registration requirement is fulfilled by the courses HIS 9991, 9992, 9993, and 9994 (Doctoral Candidate Status I, II, III, and IV, respectively), in consecutive academic year semesters. For a detailed description of the program in history, interested students should consult the Department's Graduate Handbook.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Foreign Language Requirement: Upon entering the program, students will be expected to offer a plan for satisfying the language requirement. They will be expected to demonstrate a reading knowledge of two languages (or one language, if specialization is in American history) to the appropriate University language department. With permission of the graduate director, a student may substitute certain specific auxiliary skills, such as statistics or oral history for one language.

Advisor: Upon entering the program, students will also be expected to select, in consultation with the Department's director of graduate studies, a faculty member who will serve as the student's advisor, both in general study and with respect to his or her dissertation. In consultation with the advisor, the student will then prepare a Plan of Work listing the courses that will prepare him or her in three fields of history (including a field in which the dissertation will be written), and a related cognate field outside the Department.

Curricula: The Department of History offers doctoral level course work in the following geographical-chronological fields: ancient (not for dissertation topic), medieval, early modern Europe, modern Europe, France, Germany, Great Britain, Russia, Africa, America to 1877, and America since 1865. It also offers doctoral level course work in the following topical fields: African-American, constitutional and legal, economic, gender and women's history, immigration/ethnic, labor, urban history and the history of United States foreign relations, and archival administration. Students must choose at least two geographical-chronological fields, one of which must be a geographic-chronological field outside American history.

Admission to Candidacy requires completion of the following requirements:

1. Filing of an approved Plan of Work with the Graduate School;
2. Satisfactory completion of written and oral qualifying examinations in two major and one minor history fields. Cognate requirements will be met through satisfactory completion of course work in the cognate.

Dissertation: The dissertation is a work of original historical research and presentation on a topic selected by the student with the approval of the student's advisor and accepted as successfully completed by both the advisor and a dissertation committee. Upon completion of the dissertation, the student will be required to make a public lecture presentation-defense and to submit the dissertation for certification to the Graduate School.

Fellowships and Assistantships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Each year a number of graduate assistantships and fellowships are awarded to qualified graduate students. For information, write the Department's Director of Graduate Studies.

In addition, the History Department offers the following graduate-level departmental awards:

Dr. Gerald Dreslinski Graduate Award: Annually, the History Department awards a graduate student who excels in the field of early American history an award in support of research, worth up to \$1100. Faculty members nominate candidates for the award. Deadline: March 1st.

Rolf and Jennie Johannesen Endowed Memorial Scholarship: Annual award worth up to \$500 to undergraduate and graduate students in history, whose research is in either classical civilization or, more broadly, the effects of the classical period on later eras.

Alfred H. Kelly Endowed Memorial Award for Graduate Student Research in History: Annual award of up to \$1000 to a graduate student of any discipline. This award is based on the merits of a research proposal made by the student, and covers research expenses generally not paid by other travel awards.

Joan Nicolay Foundation Award: Graduate Students in United States Civil War History can receive up to \$1100 in research support through this award. Applicants must submit a c.v., a one-page research proposal, and a budget proposal. This award is only open to History students. Deadline: March 1st.

Michael D. Patterson Memorial Award: Graduate students may receive an award worth up to \$1100 in research support (including travel). Students must submit an application letter describing proposed research project, a current c.v., and a copy of their transcript. This award is open only to History students. Deadline: March 1st.

Charles F. Otis and Dr. Jeffrey L. Reider Scholarship in the History of Gender and Sexuality: Annually, the History Department awards an Otis-Reider scholarship, worth up to \$1100 in support (including travel) to a student (preferably at the graduate level) for research on the history of gender and sexuality. Applicants must submit a letter that details their project and use of funds, a c.v., and a copy of their transcript. This award is open only to History students. Deadline: March 1st.

Joe L. Norris Endowed Memorial Scholarship and the Richard D. Miles Endowed Memorial Scholarship: Annual award up to \$500 to graduate majors who write an outstanding HIS 7000 or 8000-level paper.

History Courses (HIS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Colonial North America. (HIS 7010) Cr. 4

European expansion to North America, interaction among European, Native American, and African peoples, and imperial competition over the New World through the Seven Years' War. (I)

5020 Revolutionary America. (HIS 7020) Cr. 4

Social, political, and cultural background to America's independence movement; development of American national identity, social relations, and early politics through the election of 1800. (I)

5030 Early American Republic: 1789-1850. (HIS 7030) Cr. 4

Emphasis on the political culture with special attention to the founding of the American Republic, the emergence of a modern economy, slavery, social reform, and the sectional crisis. (B)

5040 Civil War and Reconstruction: 1850-1877. (HIS 7040) Cr. 3

Emphasis on the coming of the Civil War, the war's impact on American society, and the reconstruction of the United States after the war. (B)

5050 The Emergence of Modern America: 1877-1917. (HIS 7050) Cr. 4

Emphasis on the rise of big business, social and intellectual change, protest movements, and government policies. (B)

5070 Contemporary American History: 1945 to the Present. (HIS 7070) Cr. 4

Social, political, intellectual, economic, diplomatic, and cultural trends in the United States since World War II. (Y)

5075 The Sixties: Conflict and Change. Cr. 4

Historical roots of conflicts and changes in what is called the "long Sixties," the period 1955 to 1975, paying special attention to the social movements that addressed issues around race, gender, and war. (W)

5110 Class, Race, and Politics in America. (AFS 6100) (SOC 7330) (UP 7030)(PS 6050) Cr. 3

Prereq: senior standing. Historical and analytic investigation into the role of class and race in American politics. (I)

5120 American Foreign Relations to 1933. (HIS 7120) Cr. 4

United States involvement in the international system from the Revolution through World War I and Versailles. Emphasis on the War of 1812 and the Mexican and Spanish-American Wars. (B)

5130 American Foreign Relations Since 1933. (HIS 7130) Cr. 4

United States involvement in the international system from the twenties to the present. Emphasis on World War II to Vietnam and the role of the United States in the Cold War and the Third World. (B)

5160 Constitutional History of the United States to 1860. (HIS 7160) (LEX 7123) Cr. 4

Anglo-American constitutional development from European expansion and New World Settlement through the onset of the Civil War.

Changing relationship between colonies and imperial center, emergence of revolutionary republic in North America, framing of new constitutional orders, and nineteenth-century developments through 1860. (B)

5170 Constitutional History of the United States from 1860 to 1940. (HIS 7170) Cr. 4

United States constitutional development from the beginning of Civil War through the Judicial Revolution of 1937. Emergence of new constitutional agenda between 1860 and the 1890s. Progressive constitutionalism, changes in relations between branches of government and in the federation, New Deal constitutionalism, and struggles for enfranchisement of blacks and women. (B)

5200 Women, Gender, and Sexuality in US History. (HIS 7200) Cr. 3

the history of women in the United States and the role of gender and sexuality in shaping women/qs and men/qs experience and identity. (B)

5210 The Peopling of Modern America, 1790-1914: A History of Immigration. (HIS 7210) Cr. 3-4

Causes and consequences of immigration; immigrants and labor; immigrant culture and institutions; relationship between immigration, industrialization, and urbanization; racism, nativism, and immigration restriction. (B)

5220 The Changing Shape of Ethnic America: World War I to the Present. (HIS 7220) Cr. 3-4

Assimilation, cultural pluralism and the "melting pot"; persistence of ethnic cultures; class and ethnicity; internal migrations; America's recent immigrants; race and ethnic relations in the city; the "new ethnicity." (B)

5231 The Conquest in Latin America. (LAS 5231) (HIS 7231) Cr. 3

Varying perspectives on European conquests in Latin America. (I)

5234 Race in Colonial Latin America. (LAS 5234) (HIS 7234) Cr. 3

Use of race to organize colonial society in Latin America. (I)

5235 The Civil Rights Movement. (AFS 3230) (AFS 5230)(HIS 3230) Cr. 3

Historically-driven survey of the Civil Rights Movement; focus on African Americans' efforts to enjoy the full benefits of American citizenship. (Y)

5239 Latin American Migration to the United States. (LAS 5239) (HIS 7239) Cr. 3

Causes, dynamics, and impact of Latin American migration to the United States. (I)

5240 Michigan History in Perspective. Cr. 3

Social, economic, environmental, and political history of Michigan from prehistory to the present. (W)

5241 American Slavery. (HIS 7241) (AFS 5241) (AFS 7241) Cr. 4

Rise, expansion, and demise of slavery in the United States. Study of the five generations of Americans who lived with this institution; the unique imprint of slavery on American history and collective memory. (Y)

5251 History of Feminism. (HIS 7251) (GSW 7020) Cr. 4

An upper-division/graduate-level course on the main ideological, intellectual, and political sources and developments in the history of feminism in the United States. (B)

5261 African American History and Memory. (AFS 5261) (HIS 7261) Cr. 3

An examination of the ways different groups and institutions remember and forget African American history. Each term the course will have a specific focus that will be advertised in advance. (F)

5290 American Labor History. (HIS 7290)(ECO 5490) Cr. 4

Analysis of American workers and unions in the nineteenth and twentieth centuries. (B)

5300 History of American Capitalism. (HIS 7300) Cr. 4

History and development of American capitalism from the colonial period through the 2008 financial crisis. (B)

5320 Black Labor History. (AFS 5320) Cr. 3

Prereq: upper division standing. Offered for undergraduate credit only. History of black labor from the colonial period to the present. Topics include the development of a dual racial labor system in America; black workers in the development and evolution of the American labor movement; and black responses to white working class behavior. (B)

5330 History of Ancient Greece. (HIS 7330) Cr. 3

Ancient Greek culture, emphasizing political events, social and economic institutions, and cultural achievements. (B)

5335 History of the Hellenistic Age. Cr. 3

The History of Greece and the Eastern Mediterranean world from Alexander the Great to the Roman conquest: 323 B.C. to 30 B.C. (Y)

5340 History of Ancient Rome. (HIS 7340) Cr. 3

Institutional and cultural development. (B)

5345 Rome and the Barbarians. Cr. 3

The relationship between ancient Rome and the pre-state societies that existed beyond its frontiers from about 300 B.C.E to about 500 C.E. (Y)

5360 The Early Middle Ages: 300-1000. (HIS 7360) Cr. 3

Interaction of Roman, Christian, and barbarian elements in the emergence of Europe as a cultural entity between the fourth and tenth centuries. (B)

5370 The High Middle Ages: 1000-1300. (HIS 7370) Cr. 3

Economic, social, and cultural developments that transformed Western European civilization during the eleventh, twelfth and thirteenth centuries. (B)

5385 History of Christianity to the Reformation. (HIS 7385) Cr. 3

Survey of Christianity from Jesus to the Reformation. Balanced coverage of Christianity in Europe, Asia, and Africa. (Y)

5386 The History of Christianity from the Reformation to the Present. Cr. 3

Examines the Reformation, the export of Christianity to the New World, Africa, and Asia; and the challenges posed to Christian cultural hegemony in the west by science and modernism. (I)

5395 Social History of the Roman Empire. (HIS 7395) Cr. 3-4

Social institutions of the Roman empire, including the family, patronage, slavery, economy, and religion. (Y)

5400 Early Modern Europe. (HIS 7400) Cr. 4

Development of modern centralized state; social and cultural changes, including the Enlightenment. (B)

5407 The Scientific Revolution. (HIS 7407) Cr. 3

Rise of modern science; major changes in study of astronomy, medicine, physics, mathematics, and other sciences from 1500 to 1700. (B)

5410 The French Revolution and Napoleon. (HIS 7410) Cr. 4

The dramatic changes of the late eighteenth and early nineteenth century that altered the course of French and European development and laid the basis for political modernization. (Y)

5425 American Environmental History. (HIS 7425) Cr. 3

Offered for undergraduate credit only. From the pre-Columbian period to the present day; emphasis on twentieth-century urban history, using Detroit as a model for the changing human/environment relationship over the past three centuries. (F)

5440 Twentieth Century Europe. (HIS 7440) Cr. 4

Total war and disillusionment, attempts to restore stability and security, totalitarianism as an answer, more war and reconstruction, a divided Europe, and the search for Europe's place in the world. (B)

5450 Europe, 1918-1939: Mass Politics and Culture in the Age of Hitler, Stalin, and Mussolini. (HIS 7450) Cr. 4

Social and cultural trends in modern European society; ideological struggles of interwar period. Topics include: impact of World War I; development of communism, fascism, Nazism; Freud and the liberal defense; existentialism; postwar disillusionment. (Y)

5460 History of the Holocaust. (HIS 7465) Cr. 4

Holocaust as a tragic conjuncture of general European and Jewish history. Topics include: development of anti-Semitism in Europe and the rise of Nazism; European Jewry in the interwar period; the Third Reich's treatment of the "Jewish Question" in the 1930s; Jewish resistance; fate of the survivors; implications of the Holocaust for contemporary society. (Y)

5470 Modern Germany. (HIS 7470) Cr. 3-4

The history of modern Germany against the background of its tradition and culture. Concentration on the Prussian-Austrian conflict, the emergence of German intellectual life, unification and modernization, and the crises and wars of the twentieth century. (I)

5480 Nazi Germany. (HIS 7480) Cr. 3-4

Hitler and Nazi Germany. Topics include: impact of World War I, the Weimar Republic, the growth of the Nazi party, the seizure of power, internal and foreign policies, and the war experience. (B)

5495 History of the Russian Revolution. (HIS 7495) Cr. 3-4

The Russian Revolution, including fall of tsarist Russia, reign of the Provisional Government, and establishment of power by the Communist Party. (Y)

5500 The Soviet Union. (HIS 7500) Cr. 4

Bolshevik seizure of power, collectivization of agriculture and forced-draft industrialization, Nazi German invasion, Khrushchev and deStalinization, predominance of the new middle class, nationality problems, and problems of detente. (Y)

5530 History of World War I and II: A Social and Political History of Two World Wars. Cr. 4

Provides an in-depth and truly global look at the history of both wars. Topics will include the political events leading up to the wars and their political aftermath, as well as their short- and long-term effects on societies. (B)

5535 History of Terrorism. Cr. 3

Examines terrorism from its beginnings until its most recent manifestations. It starts with a critical examination of the term terrorism itself, but the main focus of this course will not be on discussions about the concept and its various meanings, but rather on high profile instances of what is commonly referred to as terrorism. The course will take a transnational approach and engage in comparative history. (B)

5540 World Environmental History since 1900. (GLS 5540) Cr. 4

This course examines the transformation of the relationship between human society and the natural environment in global context since 1900. Available for undergraduate credit only. (F)

5550 Britain 1485-1714. (HIS 7550) Cr. 4

Impact of religious, political and social change on British people during sixteenth, seventeenth, and early eighteenth centuries. (I)

5555 Britain in the Age of Empire. (HIS 7555) Cr. 4

History of Britain and the rise of the British Empire, 1700-1800, focusing on political, economic, intellectual, and social developments. Special emphasis on shifting notions of what it meant to be "British" during the period. (B)

5556 History of Modern Britain. (HIS 7556) Cr. 4

Modern British history from 1815 to the present day: political, economic, intellectual, and social developments, in Britain itself and across the Empire. (B)

5585 Studies in Science, Technology, and Society. (HIS 3585) Cr. 3

Open only to graduate students. Offered for graduate credit only. Introduction to the field of Science and Technology Studies; how conflicts about science and technology are generated and resolved; how broader societal institutions help shape, and are shaped by, science and technology. (W)

5660 France Since 1815. (HIS 7660) Cr. 4

Struggle between old and new political forces, impact of industrialization, search for freedom with order, effect of total war, problems of decolonization and European integration, and cultural transformations. (Y)

5665 Cities in the World. (HIS 7665) Cr. 4

History of cities, space, and society. (I)

5670 Modern American Cities. (UP 5670) Cr. 4

History of U.S. cities since World War II. Topics include suburbanization, deindustrialization, gentrification, and globalization. (I)

5715 Everyday Africa. Cr. 4

Moving beyond the conventional narrative; an alternative history based on the everyday lives of individuals and communities, challenging the way we understand Africa's past and present. (F)

5725 African Cities. Cr. 4

An exploration of the emergence of cities in sub-Saharan Africa and major themes in the history of urban Africa: work, leisure, popular culture, politics, conflict, gender, generation, ethnicity, and race. (W)

5825 Readings in History of Modern China. (ASN 3285) (ASN 5825)(HIS 3825) Cr. 4

From early 1600s to the present; political, economic, and social changes. (B)

5855 Pre-Modern Japan. (ASN 5855) Cr. 4

Japanese history from its mythical origins to early nineteenth century; political, economic, social, cultural developments. (B)

5865 Modern Japan. (ASN 5865) Cr. 4

Japanese history from the early nineteenth century to the present; emphasis on political, economic, and social developments. (Y)

5875 Gender in Modern East Asia. (GSW 5875) (ASN 5875) Cr. 4

History of gender in China, Japan, and Korea, with topics to include Confucianism, the state's role in gender construction, nationalism, imperialism, marriage, family, labor, sexuality, and feminism. (B)

- 5960 Globalization, Social History and Gender in the Arabian Gulf. (HIS 7960)(NE 5000) Cr. 3**
Social history of the Arabian Gulf (especially Bahrain, Qatar, and the UAE) in the age of globalization. Contemporary history with special emphasis on gender relations as an index of current social developments in the region. (Y)
- 5991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**
Prereq: written consent of departmental advisor. Open only to students admitted to Salford-WSU Exchange Program. Offered for undergraduate credit only. Directed study at University of Salford, England. (F,W)
- 5995 Honors Seminar. Cr. 3**
Prereq: written consent of departmental advisor; honors standing in history. (T)
- 5996 Capstone Course for Majors. Cr. 3**
Prereq: upper division standing. Open only to majors. Offered for undergraduate credit only. (I)
- 6000 Studies in Comparative History. Cr. 2-4**
Topics to be announced in Schedule of Classes. (B)
- 6005 Survey of Jewish Civilization and History. (HIS 3010) (NE 6005)(NE 3010) Cr. 4**
Offered for graduate credit only. History of the Jewish people from their biblical origins to the contemporary period. Study of primary documents as a means of understanding how Jews have responded to the challenges of living in both the Diaspora and a Jewish State. (I)
- 6010 Studies in American History. Cr. 2-4 (Max. 9)**
Topics to be announced in Schedule of Classes. (Y)
- 6170 Studies in Ethnicity and Race in American Life. (AFS 3170) (AFS 6170)(HIS 3170) Cr. 3-4**
Exploration of complicated relationship between ethnic and racial diversity and the making of America. Using historical, literary, and cultural readings and sources to examine key themes: Who was the "Other"? What is an "American"? (B)
- 6440 (HIS 3440) Studies in American Medicine in the Twentieth Century. (SOC 3440)(HIS 3440) Cr. 3**
Offered for graduate credit only. Major historical benchmarks in the making of the medical system in the U.S., including developments in medicine and medical knowledge, as well as social and political factors that influenced their reception and implementation. (W)
- 6780 Introduction to Records and Information Management. (LIS 6780) Cr. 3**
Offered for graduate credit only. Management of information, including records creation, records inventory and appraisal, retention/disposition scheduling, filing systems, maintenance of inactive records, micrographics, vital records protection, and electronic impact on records management. (F)
- 6840 Readings in China and the World. (ASN 3840) (ASN 6840) (CHI 3840) (CHI 6840)(HIS 3840) Cr. 4**
Offered for graduate credit only. History of China as it has interacted with the world over the last two thousand years. Focus on global flow of trade goods, ideas and ideologies, religions and people. (Y)
- 7010 Readings in Colonial North America. (HIS 5010) Cr. 4** (I)
- 7020 Readings in Revolutionary America. (HIS 5020) Cr. 4** (I)
- 7030 Readings in the Early American Republic: 1789-1850. (HIS 5030) Cr. 4** (B)
- 7040 Readings in the Civil War and Reconstruction: 1850-1877. (HIS 5040) Cr. 3** (B)
- 7050 Readings in the Emergence of Modern America: 1877-1917. (HIS 5050) Cr. 4** (B)
- 7070 Readings in Contemporary American History: 1945 to the Present. (HIS 5070) Cr. 4** (Y)
- 7090 Readings in the Constitutional History of the United States from 1937 to the Present. (HIS 5090) Cr. 3** (B)
- 7120 Readings in American Foreign Relations to 1933. (HIS 5120) Cr. 4** (B)
- 7130 Readings in American Foreign Relations Since 1933. (HIS 5130) Cr. 4** (Y)
- 7160 Readings in the Constitutional History of the United States to 1860. (HIS 5160)(LEX 7123) Cr. 4** (F)
- 7170 Readings in the Constitutional History of the United States from 1860 to 1940. (HIS 5170) Cr. 4** (W)
- 7200 Readings in Women, Gender, and Sexuality in US History. (HIS 5200) Cr. 3**
An advanced graduate course that explores the history of women in the United States and the role of gender and sexuality in shaping women's and men's experience and identity and the approaches to its study. (B)
- 7210 Readings in the Peopling of Modern America, 1790-1914: A History of Immigration. (HIS 5210) Cr. 3-4** (Y)
- 7220 Readings in the Changing Shape of Ethnic America: World War I to the Present. (HIS 5220) Cr. 3-4** (Y)
- 7231 The Conquest in Latin America. (LAS 5231)(HIS 5231) Cr. 3**
Prereq: graduate standing. Varying perspectives on European conquests in Latin America. (I)
- 7234 Readings in Race in Colonial Latin America. (LAS 5234) (HIS 5234) Cr. 3**
Prereq: graduate standing. Use of race to organize colonial society in Latin America. (I)
- 7239 Readings in Latin American Migration to the United States. (LAS 5239)(HIS 5239) Cr. 3**
Causes, dynamics, and impact of Latin American migration to the United States. (I)
- 7240 English Legal History. (LEX 7224) Cr. 3**
Survey course: 1066 CE to present. Areas of private law: real property, contracts, torts, and family law; criminal law; development of the court system; labor law and rise of modern administrative state. (Y)
- 7241 Readings in American Slavery. (AFS 5241) (AFS 7241)(HIS 5241) Cr. 4**
Rise, expansion, and demise of slavery in the United States. Study of the five generations of Americans who lived with this institution; the unique imprint of slavery on American history and collective memory. (Y)

- 7251 History of Feminism. (GSW 7020)(HIS 5251) Cr. 4** (B)
- 7261 African American History and Memory. (AFS 5261)(HIS 5261) Cr. 3**
An examination of the ways different groups and institutions remember and forget African American history. Each term the course will have a specific focus that will be advertised in advance. (F)
- 7290 Readings in American Labor History. (HIS 5290)(ECO 5490) Cr. 4** (Y)
- 7300 Readings in the History of American Capitalism. (HIS 5300) Cr. 4**
Advanced graduate course in the history and development of American capitalism from the colonial period through the 2008 financial crisis. (Y)
- 7330 Readings in the History of Ancient Greece. (HIS 5330) Cr. 3** (B)
- 7335 Readings in the History of the Hellenistic Age. Cr. 3**
The History of Greece and the Eastern Mediterranean world from Alexander the Great to the Roman conquest: 323 B.C. to 30 B.C. (B)
- 7340 Readings in the History of Ancient Rome. (HIS 5340) Cr. 3** (B)
- 7345 Readings in Rome and the Barbarian. Cr. 3**
The relationship between ancient Rome and the pre-state societies that existed beyond its frontiers from about 300 B.C.E. to about 500 C.E. (B)
- 7360 Readings in the Early Middle Ages: 300-1000. (HIS 5360) Cr. 3** (B)
- 7370 Readings in the High Middle Ages: 1000-1300. (HIS 5370) Cr. 3** (B)
- 7385 Readings in the History of Christianity to the Reformation. (HIS 5385) Cr. 3**
Open only to graduate students. Survey of Christianity from Jesus to the Reformation. Balanced coverage of Christianity in Europe, Asia, and Africa. (Y)
- 7386 Readings in the History of Christianity from the Reformation to the Present. Cr. 3**
Students will read primary and secondary literature relating to the Reformation, the export of Christianity to the New World, Africa, and Asia; and the challenges posed to Christian cultural hegemony in the west by science and modernism. (I)
- 7395 Readings in the Social History of the Roman Empire. (HIS 5395) Cr. 3-4** (Y)
- 7400 Readings in Early Modern Europe. (HIS 5400) Cr. 4** (B)
- 7407 Readings in The Scientific Revolution. (HIS 5407) Cr. 3** (B)
- 7410 Readings in the French Revolution and Napoleon. (HIS 5410) Cr. 4** (Y)
- 7425 Studies in American Environmental History. (HIS 5425) Cr. 3**
Offered for graduate credit only. From the pre-Columbian period to the present day; emphasis on twentieth century urban history, using Detroit as a model for the changing human/environment relationship over the past three centuries. (F)
- 7440 Readings in Twentieth Century Europe. (HIS 5440) Cr. 4** (B)
- 7450 Readings on Europe, 1918-1939: Mass Politics and Culture in the Age of Hitler, Stalin, and Mussolini. (HIS 5450) Cr. 4** (Y)
- 7465 Readings in the History of the Holocaust. (HIS 5460) Cr. 4** (Y)
- 7470 Readings in Modern Germany. (HIS 5470) Cr. 3-4** (I)
- 7480 Readings in Nazi Germany. (HIS 5480) Cr. 3-4** (Y)
- 7495 Readings in the History of the Russian Revolution. (HIS 5495) Cr. 3-4**
Offered for graduate credit only. The Russian Revolution, including fall of tsarist Russia, reign of the Provisional Government, and establishment of power by the Communist Party. (Y)
- 7500 Readings in the Soviet Union. (HIS 5500) Cr. 4** (B)
- 7530 Readings in the History of World War I and II: A Social and Political History of Two World Wars. (HIS 5530) Cr. 4**
Provides an in-depth and truly global look at the history of both wars. Topics will include the political events leading up to the wars and their political aftermath, as well as their short- and long-term effects on societies. (B)
- 7535 Readings in the History of Terrorism. Cr. 3**
Examines terrorism from its beginnings until its most recent manifestations. It starts with a critical examination of the term terrorism itself, but the main focus of this course will not be on discussions about the concept and its various meanings, but rather on high profile instances of what is commonly referred to as terrorism. The course will take a transnational approach and engage in comparative history. (B)
- 7540 Readings in World Environmental History. Cr. 4**
This course examines the transformation of the relationship between human society and the natural environment in global context since 1900. (F)
- 7550 Readings in Britain: 1485-1714. (HIS 5550) Cr. 4** (I)
- 7555 Readings in Britain in the Age of Empire. (HIS 5555) Cr. 4**
Readings in the history of Britain and the rise of the British Empire, 1700-1880, focusing on political, economic, intellectual, and social developments. Special emphasis on shifting notions of what it meant to be "British" during the period. (B)
- 7556 Readings in the History of Modern Britain. (HIS 5556) Cr. 4**
Readings in modern British history from 1815 to the present day: political, economic, intellectual, and social developments, in Britain itself and across the empire. (B)
- 7660 Readings in France Since 1815. (HIS 5660) Cr. 4** (Y)

7665 Readings in Cities in the World. (HIS 5665) Cr. 4

Offered for graduate credit only. History of cities, space, and society. (I)

7670 Modern American Cities. Cr. 4

History of U.S. cities since World War II. Topics include suburbanization, deindustrialization, gentrification, and globalization. (I)

7685 Practicum: Archives. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210, LIS 7040, LIS 7710, plus an additional six archival administration credits. Offered for S and U grades only. Planned on-site experience in an archives under the direction of a professional archivist/librarian and under the supervision of a member of the faculty. Theory and competencies relevant to the environment. Recommended for students without experience in archives. (T)

7715 Readings in Everyday Africa: Life Between the Historical Lines. Cr. 4

Moving beyond the conventional narrative; an alternative history based on the everyday lives of individuals and communities, challenging the way we understand Africa's past and present. (F)

7725 Readings in African Cities. Cr. 4

An exploration of the emergence of cities in sub-Saharan Africa and major themes in the history of urban Africa: work, leisure, popular culture, politics, conflict, gender, generation, ethnicity, and race. (F)

7740 Readings in the History of South Africa. (HIS 5740) Cr. 4

(B)

7745 Archives and Libraries in the Digital World. (LIS 7740) Cr. 3

Overview of electronic tools and the role of digital process in libraries and archives. (S)

7810 Introduction to Archival and Library Conservation. (LIS 7750) Cr. 3

Basic course in the fundamentals of archival and library conservation problems and methods essential for effective preservation management of paper and associated materials. (S)

7820 Description and Access for Archives. (LIS 7780) Cr. 3

Prereq: LIS 7710 or HIS 7840. Investigation of description of archival materials emphasizing the electronic technologies and standard practices. (Y)

7830 Methods and Research in History. Cr. 3

Required of all M.A. candidates. Methods and tools of research and documentation. Use of aids and guides. (F)

7835 Public History: Theory and Method. Cr. 3

Theory and practice of public history, including research and interpretation for popular audiences. (B)

7840 Archival Administration. (LIS 7710) Cr. 3

Basic training in archival methods. (F)

7855 Memory and History. Cr. 3

Introduction to the study of collective and public memory in history; interdisciplinary theories and approaches; case studies. (B)

7860 Oral History: A Methodology for Research. (ANT 6360) (LIS 7770) Cr. 3

Techniques of gathering data from individuals for use in research, classroom teaching, in historical, cultural or other contexts. (S)

7870 Comparative Legal History. (LEX 7521) Cr. 3

Comparative study of the history of ancient and modern legal systems, with particular regard to possible relationships between law and the social and intellectual contexts in which it has developed. (Y)

7880 Administration of Historical Agencies. (LIS 7885) Cr. 3

The operation of public and private historical agencies, archives and museums. Determination of agency priorities, problems of staffing and finance, governmental regulations, community relations, and professional ethics. (F)

7890 Administration and Preservation of Visual Collections. (LIS 7730) Cr. 3

Prereq: HIS 7840. Basic course in the fundamentals of administering a visual collection: evaluation, organization, and control of visual collections in archives, librarians, historical agencies, and museums. (W)

7960 Readings in Globalization, Social History and Gender in the Arabian Gulf. (NE 5000) Cr. 3

Open only to graduate students. Social history of the Arabian Gulf (especially Bahrain, Qatar, and the UAE) in the age of globalization. Contemporary history with special emphasis on gender relations as an index of current social developments in the region. (Y)

7990 Directed Study. Cr. 1-4 (Max. 12)

Prereq: written consent of advisor and graduate officer. (T)

7998 Internship in Public History. Cr. 1-3 (Max. 6)

Prereq: written consent of graduate director. Offered for S and U grades only. Professional experience in public history under the supervision of a public history practitioner and departmental advisor. (T)

7999 Master's Essay Direction. Cr. 1-3

(T)

8005 Seminar in American Historiography. Cr. 3

Open only to graduate students. Past and present practices of American historians: their methods and arguments, their choice of chronology, approach and subject. (B)

8010 Seminar in Early American History. Cr. 3 (Max. 12)

Prereq: HIS 7830. From first contact between Europeans and Native Americans through the American Revolution. (B)

8020 Seminar in Nineteenth Century American History. Cr. 3 (Max. 12)

Prereq: HIS 7830. (I)

8030 Seminar in Modern American History. Cr. 3 (Max. 12)

Prereq: HIS 7830. (I)

8050 Seminar in the Constitutional and Legal History of the United States. (LEX 8386) Cr. 3 (Max. 12)

Prereq: HIS 7830. (I)

8060 Seminar in North American Labor History. Cr. 3 (Max. 12)

Prereq: HIS 7830. (B)

8110 Seminar in the History of Education. (EPS 8530) Cr. 4

Growth and development of American higher education K-16, including events, circumstances, and influential ideas. Emphasis on the relationship between social, political, and economic change and the evolution of education. (Y)

8150 Seminar in the History of Gender, Women and Sexuality. (GSW 8150) Cr. 3 (Max. 6)

Prereq: HIS 7830. Research seminar in the History of Gender, Women, and Sexuality. Topics vary by Term. (Y)

8180 Seminar in Immigration History. Cr. 3 (Max. 12)

Prereq: HIS 7830. (I)

8235 Seminar in Early Modern European History. Cr. 3 (Max. 12)

Prereq: HIS 7830. Historiographical, methodological and epistemological issues in doing research in early modern European history. Readings, discussions, focused research. (B)

8240 Seminar in Modern European History. Cr. 3 (Max. 12)

Prereq: HIS 7830. (B)

8310 Seminar in World History. Cr. 3 (Max. 12)

Open only to graduate students. Concepts, methodologies and theories of world history; readings, discussions, and written critiques of various schools in the field. (B)

8320 Information Issues and the Digital Environment. (LIS 8320) Cr. 3

Prereq: LIS 6010 and LIS 6080 plus twelve LIS credits. Fundamentals of production, dissemination, storage, preservation and use of digital records; policy issues. (W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (Max. 8)

(T)

9900 Teaching History at the College Level. Cr. 1

Open only to Ph.D. students. Students meet with graduate director to consider teaching philosophies and strategies; preparation and delivery of a lecture. (Y)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: HIS 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following HIS 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: HIS 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following HIS 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: HIS 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following HIS 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in HIS 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Linguistics

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Participating Faculty

Catherine Barrette, Associate Professor,
Classical and Modern Languages, Literatures, and Cultures

Ellen Barton, Professor, English

Eugenia Casielles-Suarez, Associate Professor,
Classical and Modern Languages, Literatures, and Cultures

Stephen Chrisomalis, Ass Professor, Anthropology

Walter Edwards, Professor, English

Mohamad El-Sharkawi, Assistant Professor,
Classical and Modern Languages, Literatures, and Cultures

Lara Jones, Associate Professor, Psychology

Haiyong Liu, Associate Professor,
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T. Michael McKinsey, Professor, Philosophy

Goffrey S. Nathan, Professor, English

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Ljiljana Progovac, Professor, English

Natalia Rakhlin, Associate Professor,
Communication Sciences and Disorders

Martha Ratliff, Professor, English

Aleya Rouchdy, Professor, Emerita,
Classical and Modern Languages, Literatures, and Cultures

Patricia Siple, Associate Professor, Psychology

Margaret E. Winters, Professor,
Classical and Modern Languages, Literatures, and Cultures

Lee Wurm, Associate Professor, Psychology

Abderrahmane Zouhir, Assistant Professor,
Classical and Modern Languages, Literatures, and Cultures

Graduate Degree

MASTER OF ARTS in Linguistics

Linguistics is devoted to the scientific study of language structure and use. The Linguistics Program at Wayne State offers an interdisciplinary approach to this field, permitting students to explore a wide range of topics and issues in language research. The core courses are offered on a regular basis. The Program offers electives in the following areas: (a) linguistics and a language; (b) language structure; (c) language variation and change; (d) language acquisition and processing; and (e) sociolinguistics and discourse/pragmatics.

Training in linguistics prepares students for advanced work in linguistic research, as well as for employment in teaching English and foreign languages; computer systems (especially natural language processing); broadcasting, mass media and journalism; publishing and editing; translation; international business; intercultural communication and negotiation; law; and generally any profession requiring the precise use or analysis of speech or writing.

The Linguistics Program is administered by a director and an advisory committee of participating faculty who regularly teach courses for the Program.

Linguistics (M.A. Program)

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to the linguistics program must have taken at least one year of a foreign language.

Candidacy must be established by the time twelve credits have been earned.

DEGREE REQUIREMENTS

The master's degree is offered by the College of Liberal Arts and Sciences as a Plan B master's option requiring a minimum of thirty credits in course work plus a three-credit essay. All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

The Master of Arts program has at its core five general linguistics requirements (see below). In addition to the requirements, students can select courses from the lists of elective courses: (a) linguistics and a language; (b) language structure; (c) language variation and change; (d) language acquisition and processing; or (e) sociolinguistics and discourse/pragmatics.

Programs are planned in consultation with the linguistics program advisor. To be admitted to candidacy, a coherent Plan of Work, listing both completed and proposed courses, must be submitted to the College by the time twelve credits have been earned.

Required Courses

- LIN 5290 – Phonology: Cr. 3
- LIN 5300 – Syntax: Cr. 3
- LIN 5700 – Introduction to Linguistic Theory: Cr. 3

In addition, all students must take (i) one language-use course and (ii) one seminar. These two requirements may not be satisfied by the same course.

(i) The language use course involves either the analysis of speech data acquired in fieldwork or theories that address language use. Appropriate courses include:

- LIN 5210 – Arabic Sociolinguistics: Cr. 3
- LIN 5320 – Language and Societies: Cr. 3
- LIN 5760 – American Dialects: Cr. 3
- LIN 5770 – Sociolinguistics: Cr. 3
- LIN 5900 – Culture, Language, and Cognition: Cr. 3
- LIN 6710 – Psycholinguistics: Cr. 3
- LIN 6720 – Topics in Language: Field Methods: Cr. 3
- LIN 6720 – Topics in Language: Pidgins and Creoles: Cr. 3
- LIN 6720 – Topics in Language: Pragmatics: Cr. 3
- LIN 6720 – Topics in Language: Language Variation: Cr. 3
- LIN 7720 – Advanced Studies in Language Use: Cr. 3
- LIN 7770 – Discourse Analysis: Cr. 3

(ii) The seminar requirement may be fulfilled by one of the following courses:

- LIN 7320 – Seminar in Hispanic Linguistics: Cr. 3
- LIN 7710 – Advanced Studies in Linguistic Structure: Cr. 3
- LIN 7720 – Advanced Studies in Language Use: Cr. 3
- LIN 7770 – Discourse Analysis: Cr. 3

Elective Courses

The remaining courses are electives chosen in consultation with an advisor. Courses may be chosen from any one or more of the following areas (A maximum of twelve credits may be earned in LIN 6720):

(a) LINGUISTICS AND A LANGUAGE

Students may complete up to nine credits in advanced language skills or in the linguistics of the chosen language as part of their electives. These credits are to be selected in consultation with an advisor.

(b) LANGUAGE STRUCTURE

- LIN 5050 – Advanced Symbolic Logic: Cr. 4
- LIN 5200 – Modal Logic: Cr. 4
- LIN 5220 – Introduction to Chinese Linguistics: Cr. 3
- LIN 5230 – Structure of Arabic: Cr. 3
- LIN 5240 – Grammar of Chinese: Cr. 3
- LIN 5570 – Philosophy of Language: Cr. 4
- LIN 5715 – Morphology: Cr. 3
- LIN 5745 – Semantics: Cr. 3
- LIN 5730 – English Grammar: Cr. 3
- LIN 5900 – Culture, Language, and Cognition: Cr. 3
- LIN 6710 – Psycholinguistics: Cr. 3
- LIN 6720 – Topics in Language: Field Methods: Cr. 3
- LIN 6720 – Topics in Language: Typology: Cr. 3
- LIN 7310 – Seminar in French Linguistics: Cr. 3
- LIN 7320 – Seminar in Hispanic Linguistics: Cr. 3
- LIN 7710 – Advanced Studies in Linguistic Structure: Cr. 3
- FRE 6400 – Introduction to French Linguistics: Cr. 3
- SPA 6400 – Introduction to Hispanic Linguistics: Cr. 3

(c) LANGUAGE VARIATION AND CHANGE

- LIN 5100 – Languages of Asia: Cr. 3
- LIN 5320 – Language and Societies: Cr. 3
- LIN 5715 – Morphology: Cr. 3
- LIN 5760 – American Dialects: Cr. 3
- LIN 5770 – Sociolinguistics: Cr. 3
- LIN 6720 – Topics in Language: Historical Linguistics: Cr. 3
- LIN 6720 – Topics in Language: History of English: Cr. 3
- LIN 6720 – Topics in Language: Language Variation: Cr. 3
- LIN 6720 – Topics in Language: Typology: Cr. 3
- LIN 6720 – Topics in Language: Field Methods: Cr. 3
- LIN 6720 – Topics in Language: Language Evolution: Cr. 3
- LIN 7300 – Comparative Romance Linguistics: Cr. 3
- LIN 7320 – Seminar in Hispanic Linguistics: Cr. 3
- LIN 7720 – Advanced Studies in Language Use: Cr. 4
- FRE 5500 – History of the French Language (FRE 7500): Cr. 3
- ITA 6400 – History of the Italian Language: Cr. 3
- SPA 7510 – History of the Spanish Language: Cr. 3

(d) LANGUAGE ACQUISITION AND PROCESSING

- LIN 5080 – Phonetics: Cr. 3
- LIN 5360 – Normal Language Acquisition and Usage: Cr. 3
- LIN 5750 – Theories of Second Language Acquisition: Cr. 3
- LIN 5760 – American Dialects: Cr. 3
- LIN 5900 – Culture, Language, and Cognition: Cr. 3
- LIN 6710 – Psycholinguistics: Cr. 3
- LIN 7010 – Acoustics of Speech: Cr. 3
- LIN 7310 – (FRE 8420) Seminar in French Linguistics: Cr. 3
- LIN 7320 – (SPA 8420) Seminar in Hispanic Linguistics: Cr. 3
- FRE 5200 – French Phonetics and Pronunciation: Cr. 3
- PSY 7080 – Human Cognition: Cr. 3
- PSY 7440 – Cognitive Development: Cr. 3
- PSY 8720 – Seminar in Cognitive Processes: Cr. 3
- SLP 5300 – Introduction to Speech-Language Pathology: Cr. 3
- SPA 5200 – Spanish Phonetics: Cr. 3

(e) SOCIOLINGUISTICS AND DISCOURSE/PRAGMATICS

- LIN 5210 – Arabic Sociolinguistics: Cr. 3
- LIN 5320 – Language and Societies: Cr. 3
- LIN 5760 – American Dialects: Cr. 3
- LIN 5770 – Sociolinguistics: Cr. 3

LIN 6720 – Topics in Language: Pragmatics: Cr. 3
 LIN 6720 – Topics in Language: Language Variation: Cr. 3
 LIN 6720 – Topics in Language: Language and Gender: Cr. 3
 LIN 6720 – Topics in Language: Historical Linguistics: Cr. 3
 LIN 7320 – Seminar in Hispanic Linguistics: Cr. 3
 LIN 7720 – Advanced Studies in Language Use: Cr. 3
 LIN 7770 – Discourse Analysis: Cr. 3

Linguistics Courses (LIN)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system and signs, see Signs and Abbreviations, p. 696.

5050 (PHI 5050) Advanced Symbolic Logic. Cr. 4

Prereq: junior, senior, or graduate standing. Formal, extensive treatment of first-order predicate logic with emphasis on the notions of a formal logical language and truth in a model; the logic of identity; definite descriptions; brief introductions to set theory and the meta-theory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. (Y)

5080 (SLP 5080) Phonetics. Cr. 3

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesio-logic approaches. Material Fee As Indicated In The Schedule of Classes (F,W)

5100 (CHI 5220) Languages of Asia. (JPN 5220) Cr. 3

Introduction to major language families in Asia; grammar, sounds, language contact. (B)

5200 (PHI 5200) Modal Logic. Cr. 4

Prereq: PHI 1850 or PHI 1860. The logic of necessity, possibility, and other modal notions as they occur in epistemic and deontic contexts. (B)

5210 (ARB 5210) Arabic Sociolinguistics. (NE 5210) Cr. 3

No knowledge of Arabic required. Arabic dialectology; Arabic as a minority language in contact. Theories and techniques developed outside Arabic, and their applicability to Arabic situations. (B)

5220 (CHI 5210) Introduction to Chinese Linguistics. Cr. 3

No knowledge of Chinese required. Basic elements of Chinese linguistics: sounds, grammar, dialects, language change. (B)

5230 (ARB 5230) Structure of Arabic. (NE 5230) Cr. 3

No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

5240 (CHI 5230) Grammar of Chinese. Cr. 3

No knowledge of Chinese required. Basic elements of Chinese grammar; includes question formation, negation, time reference, etc. (B)

5290 (ENG 5710) Phonology. Cr. 3

Prereq: undergrad: LIN 2720 or LIN 5700; grad: LIN 5700. The sound systems of a variety of human languages compared and contrasted in an introduction to the diversity and similarities in human sound systems. Theories of the nature of sound systems and methods of analysis in phonology and morphophonology will be presented. (Y)

5300 (ENG 5740) Syntax. Cr. 3

Prereq: undergrad: LIN 2720 or LIN 5700; grad: LIN 5700. The theory of grammatical systems examined through analysis of sentence and word formation in a variety of human languages. Diversity and universals in grammar and theories of syntax. (Y)

5320 (ANT 5320) Language and Societies. Cr. 3

Prereq: ANT/LIN 3310 or graduate standing. For graduate students and advanced undergraduates with a background in linguistic anthropology. Students read classic and contemporary works of linguistic anthropology to expand knowledge of human language and sociality; conduct a major original research project. (W)

5360 (SLP 5320) Normal Language Acquisition and Usage. Cr. 3

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (F,S)

5570 (PHI 5570) Philosophy of Language. Cr. 4

Prereq: PHI 1850 or PHI 1860 or any philosophy course from the Philosophical Problems group or graduate student in linguistics. Intensive investigation and discussion of philosophical problems concerning meaning, truth, and the nature of language. (B)

5700 (ENG 5700) Introduction to Linguistic Theory. Cr. 3

Introduction to the scientific study of language and methodologies of linguistic analysis: phonetics and phonology, morphology, syntax and semantics. (Y)

5715 (ENG 5715) Morphology. (LIN 5715) Cr. 3

Undergrad Pre-req: ENG/LIN 2720 or ENG/LIN 5700; Graduate pre-req: ENG/LIN 5700. Morphology is a core area of Linguistics. The course will introduce the basic issues in the study of the internal structure of words, as well as the analytical techniques applied to morphological analysis. Students will learn how to analyze words of various (Indo-European and non-Indo-European) languages into morphemes, as well as to recognize morphological patterns and to utilize theoretical concepts in order to describe and analyze such patterns. In particular, the course will develop a theory of morphology in generative grammar, paying special attention to the question of whether particular morphological phenomena are primarily syntactic or primarily phonological in nature. (I)

5720 (ENG 5720) Linguistics and Education. Cr. 3

Introduction to linguistics with emphasis on applications to education. (Y)

5730 (ENG 5730) English Grammar. Cr. 3

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (Y)

5745 (ENG 5745) Semantics. Cr. 3

Undergraduate pre-req: ENG/LIN 2720 or ENG/LIN 5700; graduate pre-req: ENG/LIN 5700. Semantics is a core area of Linguistics. This course investigates meaning in natural language. It examines two foundational assumptions of natural language semantics: (i) that the meaning of a declarative sentence is its truth conditions and (ii) that the truth conditions of an expression are determined compositionally (that is, they are determined as a function of its parts and how they are put together). Students will then learn to distinguish between the entailments, implicatures, and presuppositions of an expression, where only the first are part of the expressions truth conditions.' (I)

5750 (ENG 5750) Theories of Second Language Acquisition. (LGL 5750) Cr. 3

The complex processes involved in learning a foreign/second language, including the nature of inter language and the individual and collective factors influencing learner success and the effectiveness of instruction. (Y)

5760 (ENG 5760) American Dialects. Cr. 3

Survey of chief social and geographic dialects of American English and introduction to theory of language variation. (I)

5770 (ENG 5770) Sociolinguistics. Cr. 3

Identification of sociolinguistic principles used by English speakers and writers in choosing among the different English codes, styles, registers and social dialects in American and other communities. (B)

5900 (ANT 5900) Culture, Language and Cognition. (LIN 5900) (PSY 5900) Cr. 3

Undergrad. prereq: ANT/LIN 3310 or ANT/LIN 5320; grad. prereq: graduate standing in linguistics, anthropology, or psychology. Using concepts and methods at the interdisciplinary nexus of anthropology, linguistics, and psychology, the course examines the ways in which concepts are similar and different cross-culturally. (B:W)

5993 (WI) Writing Intensive Course in Linguistics. Cr. 0

Prereq: junior standing and satisfactory completion of the General Education IC requirement; coreq: student should register for this course in conjunction with one of: LIN 5210, 5320, 5750, 5760, 5770, 6720, or any linguistics course at the 5000-level or above that requires a term paper. Offered for S and U grades only. No degree credit. Required for all majors. Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a corequisite course; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Intensive training in literature search, linguistic analysis, and the preparation of scholarly written work. (T)

6700 (ARB 6700) History of Arabic. (LIN 6700) Cr. 3

History of the evolution of Arabic. Data from phonetics/phonology and morpho-syntax will form the basis of study. (F)

6710 (PSY 6710) Psycholinguistics. Cr. 3

Prereq: graduate standing or undergraduates with a strong psychology or linguistics background. Theory and research in various topics in psycholinguistics, including language development, speech perception and production, and language comprehension. (Y)

6720 (ENG 6720) Topics in Language. Cr. 3 (Max. 12)

Topics such as: pragmatics, historical linguistics, history of English, language and gender, language and variation, language and evolution; to be announced in Schedule of Classes. (Y)

7010 (SLP 7010) Acoustics of Speech. Cr. 3

Prereq: SLP 5080, 5090. Acoustic consequences of phonetically-relevant articulatory movements. (I)

7300 (FRE 7300) Comparative Romance Linguistics. (ITA 7300) (SPA 7300) Cr. 3

Prereq: graduate major in French, Italian, or Spanish; Historical development and earliest texts in the Romance languages: Latin substrata, historical diffusion, Vulgar Latin, linguistic borrowings, classification, and characteristics of the various Romance languages. (B)

7320 (SPA 8420) Seminar in Hispanic Linguistics. Cr. 3 (Max. 12)

Seminar topics will vary according to the principal divisions of Spanish linguistics: phonology, morphology, lexicography, syntax, and dialectology. Topics to be announced in Schedule of Classes. (I)

7665 (ANT 7665) Seminar in Linguistic Anthropology. Cr. 3

Prereq: ANT/LIN 5320. Central concepts and theories. Current developments, problems and contemporary research orientations. Topics to be announced in Schedule of Classes. (I)

7710 (ENG 7710) Advanced Studies in Linguistic Structure. Cr. 3 (Max. 9)

Current issues in linguistic theory, including but not limited to topics in problems in phonology, morphology, syntax, semantics. Topics to be announced in Schedule of Classes. (I)

7720 (ENG 7720) Advanced Studies in Language Use. Cr. 3 (Max. 9)

Current problems in language use, including issues in language variation, pidgins and creoles, first language acquisition, perception and production, and linguistic stylistics. Topics to be announced in Schedule of Classes. (I)

7770 (ENG 7770) Discourse Analysis. Cr. 3 (Max. 9)

Analysis of inter-sentential relationships and of larger patterns. Implied and actual exchanges. Information ordering. Multi-level and intersectional analysis of expository prose. Topics to be announced in Schedule of Classes. (B)

7991 (ANT 7991) Directed Study in Linguistics. Cr. 1-9 (Max. 9)

Prereq: Open only to M.A. candidates or Ph.D. applicants. A research problem which requires field work or intensive and systematic reading of original technical literature. (T)

7999 Master's Essay Direction. Cr. 1-3

(T)

Mathematics

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Assistant Professors

Andre Furtado, Rohini Kumar, Kyungyong Lee, Hengguang Li, Tao Mei, Andrew Salch, Kazuhiko Shinki

Assistant Professors (Research)

Jarod Hart, Rebecca Stockbridge

Senior Lecturers

Leonard Boehm, Patricia Bonesteel, Christopher Nazelli, Donald Sherry
Lecturers

Matthew Buckman, Bruce Corrigan-Salter, Jyotsna Diwadkar, Carolyn Hochstadt, Christopher Leirstein, Richard Pineau, Sandra Robinson, Shereen Schultz

Adjunct Associate Professor

Lance K. Heilbrun

Research Adjunct Professor

Vladimir Chernyak

Graduate Degrees

MASTER OF ARTS with a major in Mathematics, Mathematical Statistics, or Applied Mathematics

MASTER OF SCIENCE with a major in Mathematics

DOCTOR OF PHILOSOPHY with a major in Mathematics and specializations in pure mathematics, applied mathematics and mathematical statistics

The courses offered by the Department of Mathematics serve several purposes: they supply the mathematical preparation necessary for students specializing in the physical, biological or social sciences, in business administration, in engineering, and in education; they provide a route by which students may arrive at the level of research competency in any of several special mathematical areas; they allow

students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

Scholarship, Graduate

All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299. Degree applicants are expected to inform themselves concerning these regulations and to take the responsibility of conforming to them. Additional requirements for specific graduate degrees in mathematics are explained below.

Mathematics (M.A. / M.S. Program Admission)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

Except for the program leading to the degree of Master of Arts in Applied Mathematics, the entrance requirements for the master's programs in mathematics and statistics include successful completion of twelve semester credits in mathematics beyond sophomore calculus (equivalent to MAT 2010, 2020, 2030, 2250, and 2350); this course work should include advanced calculus and linear or modern algebra. Credit accrued in courses such as the history of mathematics or the teaching of mathematics, in which the study of mathematics itself is not the primary purpose will not be counted toward this requirement. As preparation for graduate study, the Department of Mathematics strongly recommends undergraduate course work along the line of option A, described under Bachelor's Degrees in the undergraduate bulletin.

Mathematics (M.S. Program)

The M.S. in Mathematics is the most rigorous program at the Master's level and is designed for students who intend to study at the Ph.D. level in mathematical sciences, as well as for other students who are looking for a challenge.

Admission: see above.

DEGREE REQUIREMENTS: The Master of Science in Mathematics is offered under the following options:

Plan A: *Twenty-six credits in course work plus an eight credit thesis.*

Plan B: *Twenty-nine credits in course work plus a three credit essay.*

Plan C: *Thirty-two credits in course work.*

Specific requirements for the degree are the following:

1. At least twenty-four credits in course work from the Department of Mathematics, including credits earned toward a thesis or essay under Plan A or Plan B options.
2. MAT 5420, 5430, and 6420; or MAT 6420 and 7400; if not previously completed.
3. MAT 5600, 5610, and 6600; or MAT 6600 and 7600; if not previously completed.
4. MAT 6500 or 7500, if not previously completed.
5. At least two additional courses from the following list: MAT 5030, 5100, 5110, 5210, 5220, 5230, 5280, 5400, 5410, 5520, 5530, 5700, 5710, 5770, 5800, 5870, 6400, 6410, 6840, 7200, 7210, 7220, 7230, 7240, 7400, 7410, 7500, 7510, 7520, 7600, 7610, 7630, 7700, 7710, 7810, 7820. Other courses may be approved by the Departmental Graduate Committee on an individual basis.

6. A final oral examination. All students in Plan C are required to take this examination. Students in Plan A or B may, upon recommendation of the thesis or essay adviser, be excused from the final oral examination by the Departmental Graduate Committee.

7. A public lecture on the thesis or essay for each student in Plan A or Plan B.

8. By the time twelve credits have been earned, each student must submit a Plan of Work, approved by a departmental adviser, to the director of the program. In the Plan of Work, the student must choose Plan A, Plan B, or Plan C. The Plan of Work must be approved by the Departmental Graduate Committee, at which time the student will be advanced to candidacy. Students are not allowed to take more than twelve credits in the program unless candidacy has been established.

NOTE: Candidates for the Master of Science in Mathematics are exempt from the requirement of the Graduate School that six credits in the major field must be in courses numbered 7000 and above.

NOTE: The following courses cannot be applied towards this degree: MAT 5000, 5005, 5070, 6130, 6140, 6150, 6170, 6180, 6200, 6210.

Mathematics (M.A. Program)

(An admissions moratorium is currently in effect for this program.)

DEGREE REQUIREMENTS: The Master of Arts with a Major in Mathematics is offered under the following options:

Plan A: *Twenty-four credits in course work plus an eight credit thesis.*

Plan B: *Twenty-seven credits in course work plus a three credit essay.*

Plan C: *Thirty credits in course work.*

Completion of these plans must satisfy the following criteria:

1. At least twenty-four credits must be earned in course work from the Department of Mathematics. Credits earned toward a thesis or essay in accordance with Plan A or Plan B may be included among these twenty-four credits.
2. Election of Mathematics 5420, 5430, 5600 and 5610, if not previously completed. Election of Mathematics 6500 or 6600, if not previously completed.
3. Election of at least two of the following, if not previously completed: Mathematics 5100, 5220, 5230, 5410, 5530, 5700, 5770, 5800, 5870. These courses represent several areas of applied mathematics.
4. Election of at least one additional mathematics course numbered 6000, or higher, with the exception of Mathematics 7999, 8999 and teacher preparation courses.
5. By the time twelve credits have been earned a Plan of Work, approved by a departmental advisor, should be submitted to the director of the master's program in mathematics. At this time, the Graduate Committee will act on the application for candidacy. The student will not be allowed to take more than twelve credits in the master's program unless candidacy has been established.
6. In the Plan of Work the student will state his or her choice of one of the plans A, B, or C. The choice of plan must be approved by the Graduate Committee.
7. There is a final oral examination for the master's degree. All students in Plan C are required to take this examination. Students in Plan A or B may, upon recommendation of the thesis or essay adviser, be excused from the final oral examination by the Graduate Committee.
8. It is required that the thesis or essay of each student in Plans A or B be presented in a public lecture.

NOTE: Candidates for the Master of Arts degree with a major in mathematics or in mathematical statistics are exempt from the requirement of the Graduate School that six credits in the major field must be in courses numbered 7000 and above.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Mathematical Statistics (M.A. Program)

Admission: see above

DEGREE REQUIREMENTS: The Master of Arts in Mathematical Statistics is offered under the following options:

Plan A: *Twenty-four credits in course work plus an eight credit thesis in the area of mathematical statistics.*

Plan B: *Twenty-seven credits in course work plus a three credit essay in the area of mathematical statistics.*

Plan C: *Thirty credits in course work.*

Specific requirements for the degree are the following:

1. At least twenty-four credits in course work from the Department of Mathematics, including credits earned toward a thesis or essay under Plan A or Plan B options.
2. MAT 5420 and 5430, or MAT 7400, if not previously completed.
3. MAT 5600 and 5610, or MAT 7600, if not previously completed.
4. MAT 5700 and 5710, or MAT 7700, if not previously completed.
5. MAT 5800 or MAT 7810, if not previously completed.
6. At least two additional courses from the following list: MAT 5030, 5770, 5830, 5870, 6420, 6600, 6830, 6840, 7700, 7710, 7810, 7820. MAT 7700 is recommended. Other courses may be approved by the Departmental Graduate Committee on an individual basis.
7. A final oral examination. All students in Plan C are required to take this examination. Students in Plan A or B may, upon recommendation of the thesis or essay adviser, be excused from the final oral examination by the Departmental Graduate Committee.
8. A public lecture on the thesis or essay for each student in Plan A or Plan B.
9. By the time twelve credits have been earned, each student must submit a Plan of Work, approved by a departmental adviser, to the director of the program. In the Plan of Work, the student must choose Plan A, Plan B, or Plan C. The Plan of Work must be approved by the Departmental Graduate Committee, at which time the student will be advanced to candidacy. Students are not allowed to take more than twelve credits in the program unless candidacy has been established.

NOTE: Candidates for the Master of Arts in Mathematical Statistics are exempt from the Graduate School requirement that six credits in the major field must be in courses numbered 7000 and above.

NOTE: The following courses cannot be applied towards this degree: MAT 5000, 5005, 5070, 6130, 6140, 6150, 6170, 6180, 6200, 6210.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Mathematics, Applied (M.A. Program)

This degree is designed for students who are interested in applied mathematics or are interested in applying mathematics to areas outside of mathematics (e.g., biology, chemistry, computer science, economics, engineering, geology, medical science, physics, psychology, social science). The program is flexible in that it does not represent the teaching of any fixed body of knowledge. It does require two areas of concentration, one of these being the major in mathematics (pure and applied) with emphasis on the applicable subjects. The minor area is to be either in applied mathematics or in an area outside of mathematics (such as the above) to which the student is interested in applying mathematics. Mathematical methods are emphasized.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants for the program leading to the degree of Master of Arts in Applied Mathematics must have either twelve credits beyond the calculus sequence or knowledge equivalent to Mathematics 2010-2030, 2250, 2350, 5070, 5420, Computer Science 2110 and a good background in some area in which he or she is planning to apply mathematics. A bachelor's degree in mathematics is not required.

DEGREE REQUIREMENTS

This program is usually offered as a Plan B master's degree option requiring twenty-nine credits of course work plus a three credit essay. However, Plan A (master's thesis) and Plan C (course work only) options are available with the approval of the Departmental Graduate Committee.

1. A minimum of thirty-two credits.
2. A minimum of twenty credits in mathematics courses not previously completed from the following list: MAT 5030, 5100, 5110, 5210, 5220, 5230, 5280, 5350, 5390, 5400, 5410, 5420, 5430, 5520, 5530, 5600, 5610, 5700, 5710, 5740, 5770, 5800, 5830, 5870, 6400, 6410, 6420, 6500, 6600, 6830, 6840, 7200, 7210, 7220, 7230, 7240, 7400, 7410, 7500, 7510, 7520, 7600, 7610, 7630, 7700, 7710, 7810, and 7820. Additional courses may be approved on an individual basis.
3. A minimum of eight additional credits in the student's declared minor area.
4. A final oral examination. All students in Plan C are required to take this examination. Students in Plan A or Plan B may, upon recommendation of the thesis or essay adviser, be excused from the final oral examination by the Departmental Graduate Committee.
5. A public lecture on the thesis or essay for each student in Plan A or Plan B.
6. By the time twelve credits have been earned, each student must submit a Plan of Work, approved by a departmental adviser, to the director of the program. In the Plan of Work, the student must choose Plan A, Plan B, or Plan C. The Plan of Work must be approved by the Departmental Graduate Committee, at which time the student will be advanced to candidacy. Students are not allowed to take more than twelve credits in the program unless candidacy has been established.

Each student in this program is ordinarily required to write a project-type essay for three credits under the direction of a supervisor in the Department of Mathematics and an essay adviser from some department related to the minor area, both of whom must approve the essay. (If the chosen minor area is in applied mathematics, the adviser in the major area can be the same as the adviser in the minor area.) The selection of advisers and topics must be approved by the Departmental Graduate Committee.

NOTE: The following courses cannot be applied towards this degree: MAT 5000, 5005, 5070. The following courses can only be applied towards requirement three for the minor in education: MAT 6130, 6140, 6150, 6170, 6180, 6200, 6210.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Mathematics (Ph.D. Program)

All applicants for the degree of Doctor of Philosophy with a major in mathematics are urged first to study the general University requirements for this degree and to plan their programs so that all those requirements are fulfilled in the proper order and at the proper times. Listed below are the major steps in earning this degree. Specific requirements of the Mathematics Department are included.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Doctoral applicants must have completed a master's degree in mathematics or reached an equivalent level of advancement. The Department Graduate Committee may make exceptions to this rule in cases where unusual ability has been demonstrated. Admission to the doctoral program will be granted only to those whose records indicate an ability to succeed in advanced study and research.

DEGREE REQUIREMENTS

Candidates for the doctoral degree must complete ninety credits in course work beyond the bachelor's degree, including thirty credits of dissertation direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses MAT 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Additional specific requirements for this degree in mathematics are as follows:

Preliminary Examinations: These are two-hour written examinations covering undergraduate level material from a sophisticated point of view. Students are required to pass a preliminary exam in Algebra or Analysis, as well as one additional exam from the following four choices: Algebra; Analysis; Applied Mathematics; and Probability and Statistics.

Students may choose to take exams in their first semester in the Ph.D. program, in which case they must satisfy the requirements by the end of their second semester; or they may choose to take exams in their second semester, in which case they must satisfy the requirements by the end of their third semester. Students must select exams at the beginning of each semester, to be taken later in that semester.

Under special circumstances, the Departmental Graduate Committee may approve petitions on an individual basis for exceptions to these rules.

Language Examinations: Students are expected to show proficiency, at the level of translating mathematical literature, in one modern language other than English. Examiners and exam format will be determined on an individual basis by the Graduate Committee. The language exam must be in French, German, Russian, or Chinese. The examination must be passed before completion of the written qualifying examinations.

Course Requirements: In addition to the examinations described above, before advancement to candidacy every student in the Ph.D. program must earn a grade of 'B' or better in one course in each of the three subject areas in which they do not pass a Preliminary Examination. The courses may be selected from the following choices:

1. Algebra: MAT 7400
2. Analysis: MAT 7600
3. Applied Mathematics: MAT 7200 or MAT 7210

4. Probability and Statistics: MAT 7700 or MAT 7810

5. Topology: MAT 7500 or MAT 7510

As a general rule, students are expected to take at least one required course each semester until they fulfill their course requirements. Under special circumstances, the Departmental Graduate Committee may approve petitions on an individual basis for exceptions to these rules.

QUALIFYING EXAMINATIONS consist of two sections, a written and an oral examination. A student must begin the written qualifying examination by the end of the third year in the Ph.D. program, and must pass all parts of the examination by the end of the fourth year in the Ph.D. program. All parts of the examination must be passed before a student can advance to Candidacy Status.

Written Qualifying Examinations consist of two three-hour parts, a *major* and a *minor* area exam. The examination committee will give the student a list of topics in the student's area of specialization. These topics should both reflect the student's particular research interest and be of sufficient breadth to cover the entire area. The committee will also designate a minor area on which the student will be examined. The minor area is to be supportive of the major area but sufficiently different to avoid compromising the diversity of the total two-part exam.

Oral Qualifying Examinations: By University regulations, after passing the written Qualifying Examinations, a student must take an oral Qualifying Examination; Departmental policy mandates that the exam must be taken within thirty days after certification of passing the written exam. The oral examination committee consists of the written examination committee, and a representative of the Graduate Committee. The oral examination will normally cover material similar to that of the written examinations, but may also include material outside the written examination areas which is deemed relevant to the student's research work.

Defense of Dissertation: Candidates must pass a final oral examination covering their research after the candidate's advisor has approved the completed dissertation.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Fellowships, Assistantships, Scholarships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

A number of graduate assistantships and research fellowships are available for graduate students. Requests for information should be addressed to the Chairperson of the Department of Mathematics.

Mathematics Courses (MAT)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Fundamental Concepts of Mathematics and Proof Writing. Cr. 3

Prereq: MAT 2250 or 2860. Not considered a 5000+ level course for undergrad. degree requirements in mathematics; no credit towards graduate degree in mathematics. Fundamental concepts: basic logic, basic set theory, functions, equivalence relations. Proof: methods of proof, structures of proofs, proof-writing in a variety of mathematical subjects. (F,W)

5030 Statistical Computing and Data Analysis. Cr. 3

Prereq: MAT 2210 or equiv., 2250 or equiv. Computational aspect of statistics for advanced undergraduate and beginning graduate students. Computation of various statistical quantities by use of known statistical packages such as SAS, SPSS or BMD and the interpretation of their output. (B)

5070 Elementary Analysis. Cr. 4

Prereq: MAT 2030, and 2250 or 2350. The real numbers; limits; continuity; sequences and series of functions; uniform convergence; power series; differentiation; integration. (T)

5100 Numerical Methods I. Cr. 3

Prereq: MAT 2030 and MAT 2250; CSC 1100 or familiarity with a programming language. Numerical errors; solutions of nonlinear equations; polynomial interpolation; numerical approximation; numerical integration and differentiation; numerical solutions of systems of linear equations; numerical solutions of ordinary differential equations. (Y)

5110 Numerical Methods II. Cr. 3

Prereq: MAT 2250, MAT 2350, or equiv.; and CSC 1000 or familiarity with a programming language. Numerical linear algebra topics, including eigenvalue problems, conjugate-gradient method, GMRES method; numerical solution of ordinary differential equations, Runge-Kutta methods; numerical solutions of partial differential equations, finite difference methods. (W)

5210 Advanced Calculus. Cr. 4

Prereq: MAT 2250. Functions of many variables; limits, continuity; differentiation, mean value theorems; implicit and inverse function theorems; external problems, Lagrange multipliers; fixed-point methods; Taylor series; Fourier series, uniform convergence; improper integrals. (Y)

5220 Partial Differential Equations. Cr. 4

Prereq: MAT 5070. Partial differential equations of mathematical physics; method of separation of variables; Fourier series; Sturm-Liouville eigenvalue problems; boundary-value problems; method of eigenfunction expansion; Green functions; solutions by Fourier transform; method of characteristics. (B)

5230 Complex Variables and Applications. Cr. 4

Prereq: MAT 5070. No credit after MAT 6600. Cauchy-Riemann equations; elementary functions; mappings by elementary functions; the Cauchy integral formula; Morera's theorem; Taylor series; Laurent series; residues and poles; conformal mappings; the Schwarz-Christoffel transformations; potential theory; Fourier and Laplace transforms and applications in differential and integral equations. (B)

5280 Methods of Differential Equations. Cr. 3

Prereq: MAT 2350. Linear nth order differential equations; linear systems of differential equations (constant and periodic coefficients); oscillation and comparison theorems for second order differential equations; boundary value problems; stability theory (Liapunov's direct method and frequency domain stability criteria); asymptotic solutions; autonomous non-linear systems; classification of singularities. (B)

5350 Logical Systems I. (MAT 5350) Cr. 4

Prereq: PHI 1850 or 1860 or 5050 or MAT 5600 or MAT 5420; for philosophy graduate students: satisfaction of elementary logic requirement. Metaresults concerning formal systems of sentential and first-order logics; soundness, completeness; independence of axioms; introduction to recursive functions; formalization of elementary arithmetic; discussion of Godel's incompleteness theorem and Church's Theorem. (B)

5390 Logical Systems II. (MAT 5390) Cr. 4

Prereq: PHI 5350 or MAT 5350. Detailed proofs of Godel's incompleteness results, Tarski's Theorem, and Church's Theorem; formal axiomatic treatment of set theory and selected applications. (B)

5400 Elementary Theory of Numbers. Cr. 3

Prereq: MAT 2030 and 2250. Primes and the Fundamental Theorem of Arithmetic; greatest common divisor, least common multiple, Euclidean Algorithm; congruences, theorems of Fermat, Wilson and Euler; arithmetic functions; linear Diophantine equations; quadratic congruences and the Law of Quadratic Reciprocity. Optional topics include: applications to cryptography, perfect numbers, primitive roots and indices, Fibonacci numbers, Pythagorean triples, sums of squares, continued fractions. (Y)

5410 Applied Linear Algebra. Cr. 4

Prereq: MAT 2030 and 2250. Gaussian elimination, vector spaces, the four fundamental subspaces, orthogonality, least squares approximation, determinants, eigenvalues and eigenvectors, positive definite matrices, singular value decomposition, linear transformations, complex matrices. Applications such as differential and difference equations, Markov processes, graphs and networks, Fourier series, computer graphics, numerical linear algebra. (B)

5420 Algebra I. Cr. 4

Prereq: MAT 2030 and 2250. Only two credits apply after either MAT 6170 or 6180; no credit after both MAT 6170 and 6180. Abstract concepts: sets, mappings, equivalence relations, induction, general methods of proof. Group theory: groups, subgroups, cyclic groups, direct products, cosets, Lagrange's Theorem, quotient groups, homomorphisms, permutation groups. Rings and fields (basic definitions). (T)

5430 Algebra II. Cr. 4

Prereq: MAT 5420. Group theory continued: Sylow Theorems, finite abelian groups. Ring theory: rings, integral domains, fields of quotients, homomorphisms, ideals, quotient rings, P.I.D.s, U.F.D.s, polynomial rings. Advanced topics in linear algebra: canonical forms. Field theory: extensions, splitting fields, finite fields, geometric constructions. (T)

5520 Introduction to Topology. Cr. 3

Prereq: MAT 2030 and MAT 5000 (or former 4010). No credit toward graduate degree in mathematics or statistics. An introduction to topology, mostly through an intuitive approach. Topics chosen from among: topological equivalence and topological properties, com-

plexes, Euler characteristic, connectedness, compactness, continuity, Brouwer's Fixed Point Theorem, vector fields, Hairy Ball Theorem, n-dimensional spaces, classification of surfaces, cut and paste techniques, the Moebius band, orientability, the fundamental group. (Y)

5530 Elementary Differential Geometry and its Applications. Cr. 3

Prereq: MAT 2030 and 2250. Introduction to the differential geometry of curves and surfaces in three-dimensional space. Curvature, torsion, Frenetic formulas, fundamental theorem of space curves. Gauss and mean curvature, asymptotic and principal curves, geodesics, Gauss-Bonnet theorem. Applications such as pursuit curves, roulettes, brackishnesses, precession of Foucault's pendulum, design of packaging machines, shapes and soap films. (I)

5600 Introduction to Analysis I. Cr. 4

Prereq: MAT 5070. Completeness, convergence, compactness, connectedness and continuity in the context of metric spaces; applications to differential calculus. (T)

5610 Introduction to Analysis II. Cr. 3

Prereq: MAT 5600. Integration, point-wise and uniform convergence of sequences and series of functions; power series; introduction to analytic functions; Fourier series; possible additional topics. (T)

5700 Introduction to Probability Theory. Cr. 4

Prereq: MAT 2030, 2250 or 2350. Only two credits after MAT 2210 or MAT 6150. Probability spaces; combinatorial analysis; independence and conditional probability; discrete and continuous random variables including binomial, Poisson, exponential and normal distributions; expectations; joint, marginal and conditional distribution functions; law of large numbers; central limit theorems. (T)

5710 Introduction to Stochastic Processes. Cr. 3

Prereq: MAT 5700. Non-measure-theoretic introduction to the theory of stochastic processes and its applications, with emphasis on Markov processes in both discrete and continuous time, the Poisson process, and Brownian motion. (B)

5740 The Theory of Interest. Cr. 3

Prereq: MAT 2020 and 2250. Concrete problems used to explore concepts in the theory of interest, including measurement of interest, annuities, yield rates, amortization, bonds, and stochastic approaches. Students prepare for certain professional actuarial examinations. (Y)

5770 Mathematical Models in Operations Research. Cr. 3

Prereq: MAT 2030, 2250, and 5700. Deterministic and probabilistic mathematical modeling of real-world problems. Linear and nonlinear programming; Markov chains; queuing theory; inventory models; Markov decision processes. (B)

5800 Introduction to Mathematical Statistics. Cr. 4

Prereq: MAT 5700. A one-semester course for senior undergraduate and master's degree students. Introduction to basic mathematical theory of statistics. Topics include sample distributions, estimation theory, data analysis and sample statistics, testing hypothesis, two sample cases, analysis of variance, regression analysis, Bayesian inference. (Y)

5830 Applied Time Series. Cr. 3

Prereq: probability and statistics equivalent to MAT 5700 and MAT 5800. Time series models, moving average models, autoregressive models, non-stationary models, and more general models; point estimators, confidence intervals, and forecast in the time domain. Statistical analysis in the frequency domain; spectral density and periodontal. (B)

5870 Methods of Optimization. Cr. 3

Prereq: MAT 2350. Introduction to basic mathematical theory and computational methods of optimization; unconstrained and con-

strained optimization problems; optimality conditions in various optimization problems; numerical methods of optimization. (Y)

5890 Special Topics in Mathematics. Cr. 3-4 (Max. 12)

Prereq: MAT 2030, and 2250 or 2350. Material currently of interest to students and faculty. Topics to be announced in Schedule of Classes. (I)

5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: written consent of advisor and chairperson (and of graduate officer for graduate students). Undergraduates who elect this course must be mathematics majors of honors caliber. Content will vary to satisfy needs of individual student. (T)

5992 Teaching Mathematics in College. Cr. 1

Required of all graduate teaching assistants in Mathematics Department. Prereq: mathematics graduate student or major with senior standing. Offered for S and U grades only. Preparation for first semester of teaching in developmental-level mathematics course. Content presentation, test-writing, grading, classroom management, use of technology. Students are videotaped and critiqued. (F)

5993 (WI) Writing Intensive Course in Mathematics. Cr. 0

Prereq: junior standing, satisfactory completion of the IC requirement, written consent of instructor, MAT 2030 and 2250; coreq: MAT 5420 or 6170. Offered for S and U grades only. No degree credit. Required for all majors. Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite. See section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing-Intensive Course in the Major requirement. (T)

6130 Discrete Mathematics. (MAT 2860) Cr. 3

Prereq: MAT 2010. No credit after former MAT 1860 or 1870. Foundations of mathematics: logic, sets, functions, sequences. The integers. Matrices. Mathematical reasoning: induction, recursive definitions and recurrence relations. Combinatorics. Graph theory. Boolean algebra. (Y)

6140 Geometry: An Axiomatic Approach. Cr. 3

Prereq: MAT 5000. Foundations: logic, axiom systems, models; Hilbert's axioms; the parallel postulate; Euclidean geometry; non-Euclidean geometries; hyperbolic geometry; philosophical questions. (Y)

6150 Probability and Statistics for Teachers. (MAT 2210) Cr. 4

Prereq: grade of C or better in MAT 1800; 2010 recommended. No credit after MAT 5700. Counting techniques, discrete sample spaces and probability, random variables, mean and variance, joint distributions, the binomial and normal distributions, central limit theorem, estimation and hypothesis testing. (T)

6170 Algebra: Ring Theory Through Exploration, Conjecture, and Proof. Cr. 4

Only two credits after MAT 5420; no credit after MAT 5430. Prereq: MAT 5000 (or former 4010). Rings: basic definitions; properties; examples including the integers, rationals, reals, and complex numbers; ideals; homomorphisms; and divisibility. Connections to high school algebra. Students will be involved in the mathematical processes of exploration, conjecture, and proof. (I)

6180 Algebra: Group Theory Through Exploration, Conjecture, and Proof. Cr. 3

Only one credit after MAT 5420. Prereq: MAT 5000 (or former 4010). Groups: basic definitions, properties, examples, subgroups, cyclic groups, permutation groups, homomorphisms, quotient groups. Connections to high school algebra. Students will be involved in the mathematical processes of exploration, conjecture, and proof. (Y)

6200 Teaching Arithmetic, Algebra and Functions from an Advanced Perspective. (MAE 6200) Cr. 3

Prereq: MAT 5120, 6170, or 6180. Students gain profound understanding of K-12 mathematics. Concepts underlying K-12 topics and procedures; connections to higher mathematics. Teaching with Simplicity; applying mathematical understanding to teaching practices. (Y)

6210 Teaching Geometry, Probability and Statistics, and Discrete Mathematics from an Advanced Perspective. (MAE 6210) Cr. 3

Prereq: completion of a major in mathematics or secondary mathematics education. Historical perspectives, common conceptions and misconceptions, applications, technology, and mathematical connections relative to teaching geometry (including trigonometry), probability and statistics, and discrete mathematics in secondary school. (Y)

6420 Advanced Linear Algebra. Cr. 3

Prereq: MAT 5430. Vector spaces and linear maps from a basis free perspective. Vector spaces, linear transformations, dual spaces, quotient spaces, inner product spaces, quadratic forms, adjoint operators, normal operators, spectral theorem, Jordan canonical form, trace and determinant. (Y)

6500 Topology I. Cr. 3

Prereq: MAT 5610. Topological spaces and continuous functions; connectedness; compactness; product and quotient spaces; metric spaces; Urysohn's lemma; Tietze extension theorem; homotopy; covering spaces and path lifting; the fundamental group and examples; Brouwer fixed point theorem and applications. (Y)

6600 Complex Analysis. Cr. 2-4

Prereq: MAT 5610. Offered for two credits only, if student has taken MAT 5230. Complex differentiation; elementary functions; Cauchy's integral theorem; power series; Laurent expansions; singularities; residue theorem; entire and meromorphic functions; Riemann mapping theorem. (Y)

6830 Design of Experiments. Cr. 3

Prereq: MAT 5800. Randomized blocks; Latin and Graeco-Latin squares; factorial designs; confounding; split plot; fractional replication; balanced incomplete blocks. (I)

6840 Linear Statistical Models. Cr. 3

Prereq: college courses in probability and statistics equivalent to MAT 5700 and MAT 5800. Multivariate linear regression models, examples; least square estimates and system of normal equations; the Gauss-Markov theorem; hypothesis testing about regression coefficients; confidence intervals and regions; prediction; model selection, stepwise regression. Analysis of variances (ANOVA). (B)

7200 Ordinary Differential Equations. Cr. 3

Prereq: MAT 5420 and 5610. Existence and uniqueness of solutions; linear solutions and linearization; linear differential equations in the complex domain; solutions near regular and irregular singular points; autonomous systems; stability theory; limit cycles; perturbation theory; boundary value problems; Green's function; spectral theory. (B)

7210 Partial Differential Equations. Cr. 3

Prereq: MAT 5420 and 5610. Linear partial differential equations; fundamental solutions; distributions and their Fourier transforms; hyperbolic equations; Cauchy-Kovalevsky theorem; energy inequalities; weak solutions; propagation of singularities; elliptic equations; maximum principles; Sobolev spaces and inequalities; Garding's inequality; existence and regularity of solutions of Dirichlet problems; fundamental solutions of parabolic equations; strongly continuous semigroups. (B)

7220 Advanced Numerical Analysis. Cr. 3

Prereq: MAT 5100 and MAT 5110; or equiv. Modern iterative methods for solving systems of linear and nonlinear equations, such as: conjugate gradient method, generalized minimum residue (GMRES)

method, inexact Newton's Method; Newton-GMRES, multigrid and domain decomposition methods. (B)

7230 Finite Element Methods. Cr. 3

Prereq: MAT 5100, MAT 5070. Topics chosen at discretion of instructor from topics similar to: regularity theory for second order elliptic partial differential equations; Hamilton-Jacobi equations; conservation laws; evolution equations; semigroup theory; calculation of variations; nonvariational methods. (B)

7240 Advanced Partial Differential Equations. Cr. 3

Prereq: MAT 7210. Continuation of MAT 7210. Variety of topics chosen by the instructor. (B)

7270 Topics in Applied Mathematics. Cr. 3-4 (Max. 12)

Prereq: written consent of instructor. Topics of special interest such as differential equations; calculus of variations; elliptic functions; orthogonal functions; numerical methods; systems and control theory. Topics to be announced in Schedule of Classes. (B)

7400 Advanced Algebra I. Cr. 4

Prereq: MAT 5430. Permutation groups; Sylow Theorems; Jordan-Holder theorem; solvable and nilpotent groups; free groups; unique factorization domains; principal ideal domains; modules over principal ideal domains; linear transformations; Cayley-Hamilton theorem; free modules; noetherian rings; localization. (B)

7410 Advanced Algebra II. Cr. 3

Prereq: MAT 7400. Field extensions; finite fields; Galois theory; classical applications of Galois theory; algebraic closure; tensor and exterior algebras; determinants; alternating, quadratic and hermitian forms. (B)

7470 Topics in Algebra. Cr. 3-4 (Max. 12)

Prereq: MAT 7410. Selected topics from linear algebra; homological algebra; group theory; field theory. Topics to be announced in Schedule of Classes. (I)

7500 Topology II. Cr. 3

Prereq: MAT 6500. Smooth manifolds and maps; examples from projective spaces, from Lie groups, and from low dimensions; local coordinates; partitions of unity; tangent vectors and tangent bundles; differentials of smooth maps; vector fields; local one-parameter groups of diffeomorphisms; differential forms; integration and Stokes theorem; definition of deRham cohomology. (B)

7510 Algebraic Topology I. Cr. 3

Prereq: MAT 5430 and 6500. Homology and its applications including fixed-point theorems; Jordan-Brouwer separation theorem; invariance of domain; CW-complexes; Kunnet theorem. (B)

7520 Algebraic Topology II. Cr. 3

Prereq: MAT 7510. Cohomology ring; orientation and duality on manifolds; homotopy theory, Hurewicz theorem. (B)

7570 Topics in Geometry and Topology. Cr. 3-4 (Max. 12)

Prereq: MAT 7510. Selected topics from geometry and topology; Lie groups, Riemannian and differential geometry. (F,W)

7600 Real Analysis I. Cr. 3

Prereq: MAT 5610. Lebesgue measure; general measures; measurable functions; integration (monotone and dominated convergence theorems); function spaces; Lebesgue spaces; modes of convergence; product measures; Fubini theorem. (B)

7610 Real Analysis II. Cr. 3

Prereq: MAT 7600. Differentiation; relationship between differentiation and integration; Radon-Nikodym theorem; Fourier transforms; Hilbert and Banach spaces; selected topics. (B)

7630 Introduction to Real Harmonic Analysis. Cr. 3

Prereq: MAT 7600. Singular integrals, fractional integrals, interpolation theorems, Sobolev functions, BMO functions, Hardy space theory, Poincare and Sobolev inequalities, LP and Schauder estimates for elliptic PDEs analysis on the Heisenberg groups and Lie groups. (B)

7670 Topics in Analysis. Cr. 3 (Max. 12)

Prereq: MAT 7610. Topics include: advanced harmonic analysis theory, applications to PDEs, geometric analysis, Fourier analysis, advanced theory of complex variables, analysis on manifolds, advanced PDEs. (Y)

7700 Advanced Probability Theory I. Cr. 3

Prereq: MAT 5700 and 7600. Probability spaces; random variables; expectations and moments; convergence concepts; product spaces and Kolmogorov extension theorem; separability of random processes; continuity of random processes; conditional expectation; independence. (B)

7710 Advanced Probability Theory II. Cr. 3

Prereq: MAT 7700. Law of large numbers; characteristic functions; limit theorems; random walks; Markov processes; stationary processes; ergodic theory; martingales; stopping times. (B)

7770 Special Topics in Probability. Cr. 3-4 (Max. 12)

Prereq: MAT 7710. Topics of special interest such as Markov processes; time series; ergodic theory; random equations; probability measures on algebraic structures; probability measures in Banach spaces; martingales; Brownian motion; stochastic integrals. Topics to be announced in Schedule of Classes. (I)

7810 Advanced Statistics Theory I. Cr. 3

Prereq: MAT 5610, 5700. First of two basic courses for Ph.D. students in the Mathematics Department who are interested in statistics. Topics include sample distribution theory, point and interval estimations, optimal estimates, theory of hypothesis testing, and most powerful tests. (B)

7820 Advanced Statistics Theory II. Cr. 3

Prereq: MAT 7810. Continuation of MAT 7810. Topics include regression analysis, linear models, analysis of categorical data, nonparametric statistics, decision theory, and Bayesian inference. (B)

7870 Topics in Statistics. Cr. 3-4 (Max. 12)

Prereq: MAT 7810. Selected topics such as statistical estimation theory; theory of statistical hypothesis testing; non-parametric methods in statistics; statistical sequential analysis; statistical multivariate analysis. Topics to be announced in Schedule of Classes. (B)

7990 Directed Study. Cr. 1-4 (Max. 12)

Prereq: written consent of advisor and graduate officer. (T)

7999 Master's Essay Direction. Cr. 1-3

Prereq: written consent of advisor. (T)

8000 Advanced Topics in Mathematics. Cr. 2-4 (Max. 24)

Prereq: written consent of instructor. Topics to be announced in Schedule of Classes. (Y)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester

following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: MAT 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following MAT 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: MAT 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following MAT 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: MAT 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following MAT 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in MAT 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Nutrition and Food Science

Office: 3009 Science Hall; 313-577-2500
Chairperson: Ahmad R. Heydari
Graduate Officer: Pramod Khosla
Web: <http://www.clas.wayne.edu/NFS/>

Professors

Ahmad R. Heydari, K.-L. Catherine Jen, Leora A. Shelef (Emerita)

Associate Professors

Diane Cabelof, Smiti V. Gupta, Pramod Khosla, Yifan Zhang, Kequan Zhou

Assistant Professors

Paul R. Burghardt, MariaPontes Ferrierra

Senior Lecturers

Tonia Reinhard, Mary E. Width

Associates

Environmental Health Sciences: R.F. Novak; *Internal Medicine:* S. Naar-King, A. Prasad; *Obstetrics and Gynecology:* M. Church; *Pathology:* T. Leff; *Pediatrics:* W.K. Koo, J.W. Taub; *Pharmacology/KCI:* Larry Matherly; *Physiology:* J. Dunbar; *Psychiatry:* J. Granneman, R. Mackenzie

Graduate Degrees

POST-BACHELOR CERTIFICATE in dietetics

MASTER OF ARTS with a major in Nutrition and Food Science
(also offered as a joint degree with a Master of Public Health)

MASTER OF SCIENCE with a major in Nutrition and Food Science

DOCTOR OF PHILOSOPHY with a major in Nutrition and Food Science and specialization in nutrition or food science

Nutrition and Food Science (M.A. and M.S. Programs)

Admission to these programs is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Successful applicants shall have a minimum grade point average of 3.0. Undergraduate preparation should include basic courses in nutrition and food science. One year of introductory chemistry, and at least one semester each of organic chemistry, anatomy and physiology are required for the M.S. degree; biochemistry and statistics are recommended. Persons lacking a limited number of prerequisites may be admitted conditionally, contingent upon completion of certain courses specified by the graduate committee.

The Graduate Record Examination must be taken prior to admission. Two letters of recommendation are required at the time of application

Upon admission, each student should consult with a graduate advisor, obtain the departmental Graduate Handbook, and prepare a preliminary Plan of Work based on the degree requirements. Academic standards and procedures, including guidelines for essay and thesis preparation and standards for academic performance, are described in the Department's Graduate Handbook.

DEGREE REQUIREMENTS

Master of Science with a Major in Nutrition and Food Science: This degree is offered only as a Plan A master's program requiring thirty-two credits, including an eight-credit thesis based on completion of research study, and eight credits of laboratory course work.

Master of Arts with a Major in Nutrition and Food Science: This degree is offered only as a Plan B master's program requiring thirty-two credits, including a three-credit essay. The concentration in food service management includes courses in the School of Business Administration. Contact the Department for information on applicable courses.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

General Requirements for NFS Master's Programs

NFS 6000 – Nutritional Biochemistry: Cr. 3

And at least three of the following four courses

NFS 6020 – Nutrient and Gene Interaction: Cr. 3

NFS 6030 – Microbiological Safety of Foods: Cr. 3

NFS 6230 – Nutrition and Physical Performance: Cr. 3

NFS 7000 – Nutritional Metabolomics and Bioinformatics: Cr. 3

NFS 7240 – Nutritional Epidemiology: Cr. 3

Additional courses depend on whether an M.A. or M.S. is pursued. In addition the M.A. requires completion of a three-credit essay, while the M.S. requires completion of an eight-credit thesis.

Elective Courses:

Electives are chosen to total a minimum of thirty-two credits

Master of Science Laboratory Requirement (Eight Credits)

Students should visit the website, <http://www.clas.wayne.edu/NFS/>, for current information.

Nutrition and Food Science and Public Health (M.A./M.P.H. Joint Degree Program)

The M.A. in Nutrition and Food Science/M.P.H. is a joint degree program offered by the Department of Nutrition and Food Science, College of Liberal Arts and Sciences, and Department of Family Medicine and Public Health Sciences, School of Medicine.

Students must meet the admission and graduation requirements of both programs and enroll concurrently in the two programs during most of the period in which they are earning the degrees. If they complete requirements for only one degree, one degree will be awarded.

Admission criteria for the MA-MPH Joint Degree will meet the requirements of both MA and MPH Degrees by requiring:

1. A minimum undergraduate Grade Point Average of 3.0 and all requirements for admission to the WSU Graduate School that include satisfying the English proficiency requirements. If applicants have not completed a baccalaureate degree from an accredited institution in the US or in a country where English is the native language, satisfactory attainment of scores in the Michigan English Language Assessment Battery (MELAB) (85), the Test of English as a Foreign Language (TOEFL) (79 internet-/550 paper-based), or the International English Language Testing System (IELTS) (6.5) will be required. Tests should not be more than 2 years old.

- The completion of the Graduate Record Examination (GRE) with the expectation that scores will be at or above the 60th percentile for verbal reasoning (510/154: new/old), at or above the 55th percentile for quantitative reasoning (675/153: new/old), and a score of at least 4.0 in analytical writing.
- Completion of college-based courses in mathematics and the social sciences, and completion of the following undergraduate courses or equivalent:
 - NFS 2130/2140 – Intro Food Science and Lab: Cr. 4
 - NFS 2220 – Nutritional Laboratory: Cr. 1
 - NFS 3230 – Human Nutrition: Cr. 3.
 - BIO 2200 – Intro Microbiology: Cr. 4
 - BIO 2870 – Anatomy and Physiology: Cr. 5
 - One semester of Organic Chemistry
 - Courses in biochemistry and statistics are recommended
- The submission of a professional curriculum vitae together with a satisfactory personal statement indicating the applicant's background, research and/or work experience, interests, and career goals as they relate to attainment of the MA-MPH degree. Three letters of recommendation will also be required. An interview will also be conducted (when possible).

DEGREE REQUIREMENTS

A minimum of 59 graduate credits beyond the baccalaureate is required for completion of the MA-MPH program, distributed as follows:

Students enrolled in the MA-MPH Joint Program will be required to take specific NFS and FPH listed public health-related courses (see double-counted course list). The culminating master's essay (NFS 7999) requirement of the MA degree will be substituted by completion of the 3 credit hour MPH project course (FPH 8990) (see double-counted course list).

Graduation requirements for the MA-MPH Joint Degree are consistent with the MA and MPH Degrees and will:

- Require completion of all required courses for both the MA and MPH degree segments, the public-health related courses specific to the MA-MPH Program, the culminating MPH project course, and elective courses for a minimum total of 59 credit hours within a 6 year period.
- Require students to maintain a minimum grade point average of 3.0 in the entire program. A minimum of a B grade in all required courses in both the MA and MPH segments will also be required. Students obtaining less than a B grade in any core or required course will be allowed to retake it only once. Departmental policies will allow for only one C grade over the course of the entire program (and only in an elective course).

M.A. in Nutrition and Food Science

CORE COURSES (13 credits)

NFS 7850 – Seminar/Journal Club: Cr. 1
 NFS 6000 – Nutritional Biochemistry: Cr. 3
 NFS 6030* – Microbiological Safety of Foods: Cr. 3

AND 2 of the following 3 course offerings:

NFS 6020 – Nutrition Gene Interactions: Cr. 3
 NFS 7000 – Nutritional Metabolomics & Bioinformatics: Cr. 3
 NFS 7230 – Nutrition and Physical Performance: Cr. 3

MAJOR M.A.-M.P.H. SPECIFIC COURSES (11 credits)

NFS 5220 – Community Nutrition: Cr. 2
 NFS 6210* – Nutrition Through the Life Cycle: Cr. 3
 FPH 7240* – Epidemiology (MPH core course): Cr. 3
 NFS 7240* – Nutritional Epidemiology: Cr. 3

REQUIRED CULMINATING COURSE (3 credits)

FPH 8990* – MPH Research Project: Cr. 3
 (in lieu of NFS 7999)

** MA-MPH Joint Degree double-counted courses*

MINOR ELECTIVE COURSES (minimum 5 credits)

NFS 5250 – Nutrition and Disease: Cr. 3
 NFS 6270 – Eating Behavior and Body Weight Regulation: Cr. 3
 NFS 6850 – Controversial Issues: Cr. 2
 NFS 7990 – Directed Study: Cr. 1-4
 FPH 7020 – Biostatistics II: Cr. 3
 FPH 7370 – Health, Disease, and Aging: Cr. 3
 FPH 7350 – Programming for Public Health Practice (SAS): Cr. 2
 FPH 7990 – Directed Study: Cr. 1-4
 HE 6350 – Health Education and the Nation's Health: Cr. 3
 CB 7430 – Cancer Epidemiology: Cr. 2
 EER 7650 – Computer Use in Research (SPSS): Cr. 3

Master of Public Health

COURSE COURES (27 credits)

FPH 7010 – Seminar in Public Health: Cr. 1
 FPH 7015 – Biostatistics I: Cr. 4
 FPH 7240* – Epidemiology: Cr. 4
 FPH 7320 – Social Basis of Health Care: Cr. 3
 FPH 7420 – Principles of Environmental Health: Cr. 3
 FPH 7100 – Health Care Organization and Administration: Cr. 3
 FPH 7250 – Applied Epidemiology: Cr. 3
 FPH 7230 – Health Program Evaluation: Cr. 3
 FPH 7210 – Research Methods for Health Professionals: Cr. 4

MAJOR M.A.-M.P.H. SPECIFIC COURSES (9 credits)

NFS 6030* – Microbiological Safety of Foods: Cr. 3
 NFS 6210* – Nutrition Through the Life Cycle: Cr. 3
 NFS 7240* – Nutritional Epidemiology: Cr. 3

REQUIRED CULMINATING COURSE (3 credits)

FPH 7440 – Practicum in Public Health: Cr. 3
 FPH 8990* – MPH Research Project: Cr. 3

** MA-MPH Joint Degree double-counted courses*

Dietetic Interns

Students accepted into an approved dietetic internship at another institution may pursue either of the above described Plans of Work. Applicants may earn up to four credits in supervised field experience (NFS 5992) in association with the dietetic internship experience; grades for this course will be deferred until satisfactory completion of eight credits of the required component of courses in the Department. In addition, upon approval of the academic advisor and the internship director, qualified students may pursue a directed study (NFS 7990) during an eight week residency program with emphasis on either clinical nutrition, management, or community dietetics.

Dietetics (Post Bachelor Certificate Program)

This program is available to students admitted to the Coordinated Program in Dietetics (CPD) who already have an undergraduate degree. Completion of the CPD makes graduates of the program eligible to take the National Registration Examination for Dietitians, which, when successfully completed, confers the legal designation of Registered Dietitian.

Admission Requirements: Students who have received an undergraduate degree from Wayne State University should contact the department for application procedures. Students who have received an undergraduate degree from another institution must complete the Application for Undergraduate Admission and have transcripts of previous work sent directly to the Office of Admissions. Application to the CPD is separate from that to the University (CPD applications should be obtained from the department office), and applications are

accepted only once yearly; deadline is April 1 for program entry the following fall semester.

CERTIFICATE REQUIREMENTS

Students with a dietetics degree generally will have fulfilled all prerequisite course requirements for the Dietetics B.S.; see Undergraduate Bulletin for Dietetic B.S. prerequisite courses. In addition, students must provide an Accreditation Council for Education in Nutrition and Dietetics (ACEND) Verification Statement. Any prerequisite courses in which the student had received a grade of "D" or below must be repeated; any dietetics courses in which the student has received a grade of "C-" or below must be repeated. Dietetics courses include Food Service Management, Medical Nutrition Therapy (also called Clinical Nutrition or Diet Therapy or Nutrition and Disease), and Community Nutrition. Following successful completion of all CPD prerequisites, the student will elect the Core Courses for the Post Bachelor Certificate in Dietetics (see Core Courses marked with * below in Dietetic Program Course Sequence).

Students who possess an undergraduate degree that is not in dietetics do not need to obtain a second undergraduate degree in dietetics, but they must complete all CPD prerequisite courses (see Undergraduate Bulletin), or their equivalents at other universities. In addition, these students must complete the entire Dietetic Course Sequence. Students in this category should consult with a dietetics advisor at their earliest opportunity. Following successful completion of all CPD prerequisites, the student will elect the all Dietetic Program Sequence Courses below.

DIETETIC PROGRAM COURSE SEQUENCE

(Core Courses are marked by *):

- NFS 4100* – Nutrition Care Process I: Cr. 2
- NFS 4120* – Nutrition Care Process II: Cr. 2
- NFS 4150 – Advanced Food Science: Cr. 3
- NFS 4200* – Dietetic Practice I: Cr. 4
- NFS 4210* – Dietetic Practice II: Cr. 10
- NFS 4220* – Dietetic Practice III: Cr. 10
- NFS 4230 – Macronutrient Metabolism: Cr. 3
- NFS 4231 – Human Nutrition: Micronutrients: Cr. 3
- NFS 5200* – Advanced Dietetics: Cr. 3
- NFS 5220 – Community Nutrition: Cr. 2
- NFS 5250 – Nutrition and Disease: Cr. 4
- NFS 5350 – Organization and Management of Food Service Systems: Cr. 4
- NFS 5360* – Management of Nutritional Care and Services: Cr. 3
- NFS 6860* – (WI) Controversial Issues in Clinical Nutrition: Dietetics: Cr. 0-4

Nutrition and Food Science (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants to the program must have a master's degree in nutrition and/or food science or in a cognate science. A minimum grade point average of 3.5 and the Graduate Record Examination are required. Three letters of reference must be submitted, along with a statement of the applicant's goals and career objectives, and an interview will be conducted with applicants, whenever feasible. Students with a master's degree in nutrition, food science, or related disciplines will have their transcripts evaluated to determine which courses meet the Ph.D. course requirements.

Candidacy: In order to become a candidate for the Ph.D. degree, an applicant must successfully complete both a written and an oral qualifying examination.

DEGREE REQUIREMENTS

A minimum of ninety graduate credits beyond the baccalaureate is required for completion of the Ph.D. program, distributed as follows:

1. At least thirty credits in Nutrition and Food Science. Twenty-two of these credits are required for all students, and eight credits are selected to fill student needs and interests.

2. Additional courses from other basic science departments including at least one 7000 level course in biochemistry and one graduate course in statistics. Eight credits must be completed outside the Department to form a minor. A list of required and elective courses for doctoral studies is available from the Department Office.

3. Thirty credits in dissertation research, involving independent research under the direction of a faculty member in the Department. The thirty credit dissertation registration requirement is fulfilled by registering for the courses NFS 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

4. Submission of a satisfactory research dissertation.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Graduate teaching assistantships are available for well-qualified students working toward the Ph.D. degree. Requests for information should be addressed to the Graduate Director of the Department.

Departmental scholarships are also available. The Parent Endowed Scholarship Fund makes one award per academic year. Other scholarships are contingent upon annual donations.

Nutrition and Food Science Courses (NFS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

NFS 5130 Food Chemistry. Cr. 3

Prereq: NFS 2130 or equiv., CHM 2220. Study of the chemical constituents of foods, their relationship to the biological and physical properties, and overall food quality. (F,W)

NFS 5140 Laboratory Techniques in Nutrition and Food Science. Cr. 3

Prereq: NFS 2130 and NFS 3230 or equiv.; CHM 2220 or equiv. Basic modern and classical analytical techniques and instruments in nutrition and food science. Background theory to principles of instrumental assays. Procedures for evaluation of macro and micro food components analysis. Physiological functions relevant to nutrition. Material Fee As Indicated In The Schedule of Classes (F,S)

NFS 5200 Advanced Dietetics. Cr. 3

Prereq: NFS 4230, NFS 5250, with grades of C-minus or above. Open only to students in coordinated dietetics program. Development and refinement of dietetic practitioner skills through applications in critical care and specialty practice areas and in community agencies; theoretical basis for individual counseling and group process. Material Fee As Indicated In The Schedule of Classes (F)

NFS 5220 Community Nutrition. Cr. 2

Prereq: NFS 2130, NFS 2140, and NFS 3230 with grades of C-minus or above. Introduction to management of nutritional care in healthy and at-risk persons throughout the lifespan. Identifying problems and planning interventions to meet population nutritional problems and to reduce nutrition-related health risks in community settings. Community assessment; organization and function of community agencies; interventions appropriate to small and large groups, including nutrition education. (F,W)

NFS 5230 Nutrition and Metabolism. Cr. 3

Prereq: NFS 3230 with grade of C-plus or above. The physio-biochemical properties of nutrients and their bionutritional interrelationships at the cellular and sub-cellular level. Carbohydrate, protein, and lipid metabolism and the role of vitamins and minerals in these metabolic processes. (F,W)

NFS 5250 Nutrition and Disease. Cr. 4

Prereq: NFS 4230. Application of the principles of biochemistry and physiology in the study of nutrient metabolism as altered by disease. The physio-biochemical basis for diet in the treatment of disease. May include some field experiences or clinical assignments. Units on team approach to patient care also included. (W)

NFS 5350 Organization and Management of Food Service Systems. Cr. 4

Prereq: NFS 2130, NFS 2140, NFS 3230. Survey of food service systems; factors affecting their successful operation. Components of quality assurance supporting well-being of target markets. Identification of operative management skills. (F)

NFS 5360 Management of Nutritional Care and Services. Cr. 3

Prereq: NFS 5200; coreq: NFS 4220. Recommended for students in coordinated dietetics program. Application of management theory and principles in the three areas of dietetic practice; career planning and professional role development. (W)

NNFS 5992 Supervised Field Experience. Cr. 2-4

Prereq: written consent of instructor. Supervised field experience designed to correlate classroom theory with practical work. (T)

NFS 6000 Nutritional Biochemistry. Cr. 3

Open only to graduate students. Prereq: one upper-level undergraduate biochemistry/metabolism course (e.g., NFS 4230). Offered for graduate credit only. Biochemical effects of nutrients at cellular and organ levels. (F)

NFS 6020 Nutrient and Gene Interaction. Cr. 3

Prereq: NFS 4230, NFS 5130, NFS 5140, or equiv. Open only to graduate students. Offered for graduate credit only. Introduction to molecular genetics concepts, terminology and molecular methodologies, with emphasis on nutrition and food science. Overview of nutrition and gene interaction in onset and progression of disease, cancer, and aging. (B)

NFS 6030 Microbiological Safety of Foods. Cr. 3

Prereq: NFS 4150 and NFS 5130. Food-borne microorganisms as causes of human illnesses, including bacteria, mold, viruses and parasites. Microbial toxins and their mode of action. Antimicrobial agents in food. Means of prevention and protection. (F)

NFS 6150 Functional Foods for Health. Cr. 3

Open only to graduate students. Prereq: NFS 2030, NFS 2130, NFS 3230. Introduction to functional foods (those with specific health benefits) and nutraceuticals, as well as a variety of functional food ingredients and extracts, their chemical and potential health promoting properties, processing, production, safety and regulation. (W)

NFS 6210 Nutrition through the Life Cycle. Cr. 3

Prereq: graduate standing; NFS 4230. Offered for graduate credit only. Biological growth and nutritional requirements from fetal stages of development through aging. Nutritional standards in light of current epidemiological data and scientific research. (I)

NFS 6230 Nutrition and Physical Performance. (NFS 7230) Cr. 3

Prereq: NFS 3230 or equiv. How nutrients affect physical fitness and physical performance; how physical performance can be improved by adopting optimal dietary practice and how exercise and optimal nutrition can prevent human diseases. (F)

NFS 6270 (NFS 3270) Eating Behavior and Body Weight Regulation. (PSY 6270) Cr. 3

Prereq: BIO 2870. Central and peripheral regulation of food intake, normal and abnormal eating behavior, physiological and psychological regulation of body weight, different models of obesity, etiology of treatment of obesity. (W)

NFS 6850 (WI) Controversial Issues. Cr. 2

Prereq: NFS 4230; written consent of instructor; senior standing. Open only to Nutrition and Food Science majors. Topics to be announced in Schedule of Classes. (F)

NFS 6860 Controversial Issues in Clinical Nutrition: Dietetics. Cr. 2

Prereq: NFS 4230. Open only to dietetics post bachelor certificate and dietetics B.S. students. Current controversial topics; differing points of view will be debated; discussion of modes of communication of nutrition information. (W)

NFS 7000 Nutritional Metabolomics and Bioinformatics. Cr. 3

Prereq: NFS 6000, STA 1020. Introduction to and application of the "omics" technologies to nutrition: genomics, proteomics, and metabolomics. Examples and exercises using bioinformatic software for

multivariate data analyses. Material Fee as indicated in the Schedule of Classes. (W)

NFS 7060 Research Problems in Nutrition and Food Science. Cr. 2

Prereq: written consent of instructor. Research orientation: acquaintance with published data, principles of design, methods of collecting data, and basic statistical analysis. (B)

NFS 7140 Advanced Laboratory Techniques in Nutrition and Food Science. Cr. 0-4

Prereq: graduate standing; BMB 5010 or CHM 5600 or equiv.; NFS 5140. Laboratory techniques in nutrition and food science research, including: animal experimentation, isotope use and quantitation, radioimmunoassay and receptor assays, atomic absorption; chromatography; microbial assays. Material Fee as indicated in the Schedule of Classes. (Y)

NFS 7230 (NFS 6230) Nutrition and Physical Performance. Cr. 3

Prereq: NFS 4230 or equiv. How nutrients affect physical fitness and physical performance; how physical performance can be improved by adopting optimal dietary practice and how exercise and optimal nutrition can prevent human diseases. (F)

NFS 7240 Nutritional Epidemiology. Cr. 3

Prereq: graduate standing and NFS 3230 or former NFS 2210 or equiv. Introduction to epidemiology concepts and terminology. Emphasis on examining the associations between nutrition and chronic disease. (I)

NFS 7250 Nutrition and Aging. Cr. 3

Prereq: NFS 4230 or equiv. Topics include: conserved pathways determining longevity and the role of nutrition in these pathways; role of metabolic/nutritional factors on longevity and successful aging; premature aging disorders; interventional strategies impacting longevity and health span. (F)

NFS 7850 Graduate Seminar. Cr. 1 (Master's students, 2 req.; Ph.D. students, 4 req.)

Offered for S and U grades only. Prereq: written consent of instructor. Presentations by graduate students, graduate faculty, and visiting scientists. (F,W)

NFS 7890 Advanced Workshop. Cr. 2-4 (Max. 8)

Application of theoretical principles to selected areas of nutrition and food science. Topics and prerequisites to be announced in Schedule of Classes. (I)

NFS 7990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: written consent of advisor and instructor. Offered for each area of specialization. (T)

NFS 7991 Lab Rotation. Cr. 1

Offered for S and U grades only. For new graduate students; students spend at least two weeks in all research labs. (T)

NFS 7996 Research. Cr. 1-8 (M.S.: Max. 6; Ph.D.: Max. 20)

Prereq: written consent of advisor. Offered for S and U grades only. (T)

NFS 7999 Master's Essay Direction. Cr. 1-3 (Max. 3)

Prereq: written consent of advisor. Offered for S and U grades only. (T)

NFS 8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. Offered for S and U grades only. (T)

NFS 9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

NFS 9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

NFS 9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: NFS 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following NFS 9991. Offered for S and U grades only. (T)

NFS 9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: NFS 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following NFS 9992. Offered for S and U grades only. (T)

NFS 9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: NFS 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following NFS 9993. Offered for S and U grades only. (T)

NFS 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in NFS 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Peace and Conflict Studies

Office: 2320 Faculty/Administration Building; 313-577-3453;
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Director: Frederic S. Pearson
Web: <http://www.clas.wayne.edu/pcs/>

Faculty Advisory Committee

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Brad Smith, Criminal Justice
James Statham, Peace and Conflict Studies
Guy Stern (Emeritus), German and Slavic Studies
Susumu Suzuki
William Warters, MADR
Marvin Zalman, Criminal Justice
Marilyn Zimmerman, Fine Arts

Peace and Security Studies (Graduate Certificate)

The surge of violent disputes, civil disruption, military campaigns, human rights controversies and security concerns worldwide has led to new emphasis on constructive intervention and positive solutions to violent human confrontations. Concern about ethnic tensions, terrorism, border conflict, immigration, weapons flows, alternate security perspectives and violence at home and abroad create a great need for understanding the circumstances and means by which peace is threatened, reinforced, and preserved. On the inter-personal level, issues of abuse, violence and incivility also must be addressed.

Many of these topics now characterize job and career opportunities in a variety of fields. The Graduate Certificate in Peace and Security Studies (GCPSS), offered by the WSU Center for Peace and Conflict Studies, represents a unique added credential, with emphasis on prevention of violence, peaceful borders and social boundaries, for students undertaking Master's level study or who have completed an accredited graduate degree and are looking forward to work in such

areas as social service, diplomacy, education, public service, theology, security management and law enforcement.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. The GCPSS program is open to students who have been admitted to or completed an accredited Master's degree program in an appropriate discipline at Wayne State University or at another university in this region or Canada. Applicants who have completed a Master's at a non-North American university will be required to submit two letters of academic recommendation, a writing sample, a personal statement indicating the reasons for pursuing the GCPSS, along with evidence, as appropriate, of English proficiency (e.g., TOEFL score). The Director of the Center for Peace and Conflict Studies is the program advisor.

CERTIFICATE REQUIREMENTS

The GCPSS requires a minimum completion of fifteen credits in peace and security related courses. Up to nine Certificate credits may be applied toward the requirements of a graduate degree.

Two core courses in Peace and Security Studies are required, along with completion for credit of a community based practicum (applied research) or internship (professional training) experience. An additional six elective credits are to be selected from existing courses in a variety of disciplines; one of these courses may come from the student's home Master's major. Students in the program will be required to maintain at least a 3.0 g.p.a. in Peace and Security studies core and elective courses. Graduate School time limitations on completion of degree or certificate requirements and regulations on the transfer of credits from other programs will apply. The GCPSS is awarded upon completion of the student's M.A./M.S./M.S.W./M.B.A. (or equivalent degree) requirements along with certificate requirements.

CORE REQUIREMENTS

PCS 6100 – Intro. to Graduate Peace and Security Studies (PS 6100): Cr. 3
PCS 7100 – Peacemaking: Regional, Technological, and Transnational Perspectives (PS 7100):Cr. 3
PCS 7800-Practicum/Internship: Cr. 3

Students in PCS 7800 may undertake fieldwork either in the form of an original applied research project or internship placement in a relevant international or community agency in the Windsor-Detroit areas or abroad, dealing with issues of political or group violence or reconciliation, immigration or with border management. Internship placement may not be paid or be in the student's own place of employment and may not coincide directly with any other internship or practicum in the student's graduate program. The experience must result in a supervisor evaluation and substantial written analysis by the student. PCS 7800 is offered each semester (supervised by members of the PCS Faculty Committee) and should be taken after completing PCS 6100 and 7100.

ELECTIVES

Additional graduate courses related specifically to peace and/or security areas that could satisfy the elective sequence requirement are listed below. Students may petition for acceptance of alternate relevant electives.

CULTURE, DIVERSITY AND IDENTITY

ANT 6290 – Culture Area Studies: Cr. 3
COM 6350 – Communication, Culture, and Conflict: Cr. 3
DR 6120 – Human Diversity and Human Conflict: Cr. 3
ECO 5410 – Economics of Race and Gender (ECO 6415): Cr. 4
HIS 5220 – The Changing Shape of Ethnic America:
World War I to the Present (HIS 7220): Cr. 3-4
NE 7100 – Islam and the West: Cr. 3
PS 5740 – Ethnicity: The Politics of Conflict and Cooperation (AFS 5740) (PCS 5500): Cr. 4
PS 6050 – Class, Race, and Politics in America: Cr. 3

VIOLENCE AND ENFORCEMENT

HIS 5530 – History of World War I and II (HIS 7530): Cr. 4
HIS 5460 – History of the Holocaust (HIS 7465): Cr. 4
PCS 6050 – Topics in Peace, Security, and Non-Violence: Cr. 3

PS 5830 – International Conflict Management: Cr. 4
PS 6830 – Civil War and Conflict Processes: Cr. 3
PS 7810 – Seminar in World Politics: Cr. 3

EQUITY AND JUSTICE

CRJ 7200 – Public Policy and Criminal Justice: Cr. 3
ECO 5490 – Readings in American Labor History (HIS 5290): Cr. 4
PHI 5270 – Philosophy of Law: Cr. 4
PHI 5280 – History of Ethics: Cr. 4
PS 5820 – International Law: Cr. 4
PS 5850 – Human Rights: Cr. 4
SOC 5700 – Seminar in Social Inequality: Cr. 4
SW 8445 – Developing Responsive Human Service Organizations: Cr. 2

Students may also petition to have other courses that conform to these elective categories accepted for elective credit.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Assessment: Upon completion of their certificate requirements each student is required to submit a small portfolio of what they consider to be their best work in the program, which will be reviewed as a way of evaluating the program itself. Core course instructors in the program also report on the extent to which assessment goals were reached and will survey the students to determine ways in which course material was or was not utilized in career and everyday life experiences.

Peace and Security Studies Courses (PCS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 (PCS 5000) Dispute Resolution. (CRJ 5994) (PS 5890) (PSY 5710) Cr. 3

Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation practices and theory. (T)

5999 Special Readings/Research. Cr. 1-4

Prereq: written consent of instructor. Intensive study with faculty member on peace-related topic; may include study abroad projects. For co-majors and non-majors. (T)

6050 Topics in Peace, Security and Non-Violence. Cr. 3

Prereq: graduate standing. Offered for graduate credit only. Various graduate-level topics in Peace and Security Studies. (T)

6100 (PCS 6100) Introduction to Graduate Peace and Security Studies. (PS 6100) Cr. 3

Offered for graduate credit only. Survey of the peace and security studies fields at the graduate level. (F,W)

7100 (PCS 7100) Peace Making: Regional, Technological, Transnational Perspectives. (PS 7100) Cr. 3

Prereq: graduate standing. The prerequisites for peaceful and secure borders and peace settlements. (T)

7800 Graduate Practicum in Peace and Security Studies. Cr. 3-4

Prereq: PCS 6100. Open only to graduate peace and security studies students. Field work or applied research in Peace and Security Studies. (T)

Philosophy

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Professors

John Corvino, Herbert Granger (Emeritus), Lawrence B. Lombard, T. Michael McKinsey, Bruce Russell, Robert J. Yanal (Emeritus)

Associate Professors

Eric Hiddleston, Susan Vineberg

Assistant Professors

Jonathan Cottrell, Katherine Kim, Joshua Wilburn

Senior Lecturer

Sean Stidd

Lecturer

Ryan Fanselow

Graduate Degrees

MASTER OF ARTS with a major in Philosophy

DOCTOR OF PHILOSOPHY with a major in Philosophy

Philosophy (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Admission requires approval by the admissions officer of the Department. Prerequisites should include courses in logic, value theory, and the history of philosophy. The Graduate Record Examination is required if the student's undergraduate grade point average is below 2.75 for a degree awarded by an accredited institution, or below 3.0 for a degree awarded by a non-accredited institution.

DEGREE REQUIREMENTS: The master's degree is offered by this department under the following options:

Plan A: Twenty-four credits in course work, including at least two graduate seminars at the 7000-level in philosophy, plus an eight-credit master's thesis.

Plan B: Twenty-eight credits in course work, including at least two graduate seminars at the 7000-level in philosophy, plus a four-credit master's essay.

Plan C: (open only to prospective doctoral candidates registered in the Ph.D. program) Thirty-two credits of course work, including at least two graduate seminars at the 7000-level in philosophy, plus satisfaction of all Ph.D. logic and preliminary essay requirements.

Candidacy must be established by the time twelve credits have been earned. All students in the master's program must pass the Departmental examinations in elementary logic before the second year of study.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Philosophy (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

DEGREE REQUIREMENTS: Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate degree, including thirty credits of dissertation directed study. The thirty credit dissertation registration requirement is fulfilled by registering for PHI 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. All In order to continue in the program and gain admission to candidacy, a student must satisfy the following:

1. Pass PHI 5050 or the Departmental Examination in elementary logic before the second year in the doctoral program;
2. Complete the Departmental Advanced Logic Requirements by the end of the fourth year;
3. Satisfy the course requirements in metaphysics/epistemology, value theory, and history of philosophy by the end of the fourth year;
4. Complete the two preliminary essays by the beginning of the fourth year; and
5. Pass an oral examination on the dissertation prospectus, by the fifth year;

The candidate's doctoral committee must approve the doctoral dissertation prior to an oral presentation open to all interested faculty and students.

Before receiving a Ph.D., the student must give some classroom lectures under the supervision of the faculty of the Philosophy Department.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

A detailed statement of departmental degree requirements is available at <http://www.clas.wayne.edu/Philosophy/> (click "Graduate Programs").

Assistantships and Fellowships

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

A limited number of assistantships and fellowships are available to qualified students. Information may be obtained from the Director of Graduate Admissions in the Philosophy Department.

Philosophy Courses (PHI)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

History of Philosophy, p. 397

Logic, p. 398

Philosophical Problems, p. 397

Special Courses, p. 398

Theory of Value, p. 397

History of Philosophy

5400 Presocratic Philosophy. Cr. 3

Prereq: any philosophy course at the 2000-level or above; or Classics major. Selected readings on topics in philosophers who preceded or were contemporaneous with Socrates (7th - 5th centuries B.C.E), such as Heraclitus, Parmenides, Zeno, Democritus. (I)

5410 Plato. Cr. 4

Prereq: any philosophy course at the 2000 level or above, or classics major. Selected readings on topics in Plato. (B)

5420 Aristotle. Cr. 4

Prereq: any philosophy course at the 2000 level or above, or classics major. Selected readings on topics in Aristotle. (B)

5440 Continental Rationalism. Cr. 4

Prereq: any philosophy course at the 2000 level or above. Topics concerning Descartes, Spinoza or Leibniz. (I)

5450 British Empiricism. Cr. 4

Prereq: any philosophy course at the 2000 level or above. Topics concerning Locke, Berkeley or Hume. (I)

5460 Kant. Cr. 4

Prereq: any philosophy course at the 2000 level or above. Selected topics or readings in Kant's philosophy. (B)

7810 Seminar in History of Philosophy. Cr. 4 (Max. 8)

Study of a philosopher or period. (I)

Theory of Value

5240 Special Topics in Social and Political Philosophy. Cr. 4 (Max. 8)

Prereq: any philosophy course at the 2000 level or above or major in political science. Selected topics and readings from major social and political philosophers. (I)

5270 Philosophy of Law. Cr. 4

Prereq: upper division standing. Intensive investigation and discussion of special topics or particular authors in the philosophy of law. (B)

5280 History of Ethics. Cr. 4

Prereq: one philosophy course at the 2000 level or above. A survey and discussion of historically important moral philosophers from Plato to Mill. (B)

5300 Foundations of Ethics. Cr. 4

Prereq: any philosophy course at the 2000 level or above. Twentieth century moral philosophers in the analytic tradition, with focus on debates in moral realism, moral epistemology, and the "Why be moral?" question; includes such philosophers as Moore, Stevenson, Foot, Mackie, Blackburn, Gibbard, Parfit, Korsgaard, and Railton. (B)

7830 Seminar in Aesthetics. Cr. 4 (Max. 8)

Prereq: PHI 3700. (I)

7840 Seminar in Ethics. Cr. 4 (Max. 8)

Prereq: any 5000-level course in philosophy. (I)

Philosophical Problems

5230 Philosophy of Science. (SOC 6080) Cr. 4

Prereq: PHI 1850 or 1860 or any course from the Philosophical Problems group. Intensive investigation and discussion of special topics or particular authors in the philosophy of science. (Y)

5500 Topics in Metaphysics. Cr. 4

Prereq: any course from the Philosophical Problems group. Intensive investigation and discussion of special topics or particular authors in metaphysics. (Y)

5530 Topics in Epistemology. Cr. 4

Prereq: any course from the Philosophical Problems group. Intensive investigation and discussion of special topics or particular authors in the theory of knowledge. (I)

5550 Philosophy of Mind. Cr. 4

Prereq: any course from the Philosophical Problems group. Intensive investigation and discussion of special topics or particular authors concerned with the nature and status of the mental and theories about the mental. (B)

5570 Philosophy of Language. (LIN 5570) Cr. 4

Prereq: PHI 1850 or 1860 or any philosophy course from the Philosophical Problems Group or graduate student in linguistics. Intensive investigation and discussion of philosophical problems concerning meaning, truth, and the nature of language. (B)

5630 Twentieth Century Analytic Philosophy I. Cr. 4

Prereq: PHI 1850 or 1860 and any philosophy course from the Philosophical Problems Group. Major works, movements, and writers in the analytic tradition in the twentieth century up to the 1940s, such as Frege, Russell, Moore, the early Wittgenstein, Carnap, Ayer. (I)

5640 Twentieth Century Analytic Philosophy II. Cr. 4

Prereq: PHI 1850 or 1860 and any philosophy course from the Philosophical Problems Group. Major works, movements, and writers in the analytic tradition from the 1940s to the present, such as Quine, Austin, Ryle, the later Wittgenstein, Grice, Kripke, Putnam. (I)

7790 Seminar in Philosophy of Language. Cr. 4 (Max. 8)

Prereq: one 500-level course in philosophy. (I)

7800 Seminar in Philosophy: Special Topics. Cr. 4 (Max. 8)

Prereq: one 5000-level course in philosophy. (I)

7850 Seminar in Epistemology. Cr. 4 (Max. 8)

Prereq: one 5000-level philosophy course. (I)

7860 Seminar in Metaphysics. Cr. 4 (Max. 8)

Prereq: one 5000-level philosophy course. (I)

7890 Seminar in Philosophy of Science. Cr. 4 (Max. 8)

Prereq: one 5000-level philosophy course. (I)

Logic

5050 Advanced Symbolic Logic. (LIN 5050) Cr. 4

Prereq: junior, senior, or graduate standing. Formal, extensive treatment of first-order predicate logic with emphasis on the notions of a formal logical language and truth in a model; the logic of identity; definite descriptions; brief introductions to set theory and the meta-theory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. (Y)

5200 Modal Logic. (LIN 5200) Cr. 4

Prereq: PHI 1850 or 1860. The logic of necessity, possibility, and other modal notions as they occur in epistemic and deontic contexts. Propositional and quantified modal logic. (B)

5350 Logical Systems I. (MAT 5350) Cr. 4

Prereq: PHI 1850 or 1860 or 5050 or MAT 5600 or MAT 5420 or consent of instructor; for philosophy graduate students: satisfaction of elementary logic requirement. Metaresults concerning formal systems of first-order logics; soundness, completeness, and compactness; introduction to model theory; introduction to recursive functions and Church's theorem; formalization of elementary arithmetic; discussion of Godel's first and second incompleteness theorems; and Tarski's theorem. (I)

5390 Logical Systems II. (MAT 5390) Cr. 4

Prereq: PHI 5350 or MAT 5350. Advanced topics in logic. (I)

Special Courses

5800 Special Topics in Philosophy. Cr. 3-4 (Max. 9)

Topics and prerequisites to be announced in Schedule of Classes. (I)

5990 Directed Reading. Cr. 1-6 (Max. 12)

Prereq: undergrad., consent of chairperson and instructor; grad., consent of chairperson, graduate officer and instructor. Intensive investigation by student on topic chosen by student in consultation with instructor. (T)

7999 Master's Essay Direction. Cr. 1-4 (4 req.)

Prereq: written consent of advisor. (T)

8999 Master's Thesis Direction and Research. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PHI 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PHI 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and

Direction. Cr. 7.5

Prereq: PHI 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PHI 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PHI 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PHI 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PHI 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Physics and Astronomy

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Edward Cackett, Xiang-Qiang Chu, Christopher V. Kelly, Gil Paz, Nausheen Shah

Adjunct Professors

Ivan Avrutsky, Elizabeth Buc, Neb Duric, Mark Haacke, Xiaoyan Han, Caroline Milstene, Vaman Naik

Graduate Degrees

MASTER OF ARTS with a major in Physics

MASTER OF SCIENCE with a major in Physics

DOCTOR OF PHILOSOPHY with a major in Physics

Physics is the science that describes the behavior of the physical world. It is the most basic of all sciences and as such is responsible for the interpretation of fundamental physical processes which support many other scientific disciplines.

The degree programs of this department are designed to provide students with the broad-based knowledge and problem-solving skills that are needed in order to be productive physicists in an academic, government, or industrial environment. The programs can accommodate students with varying undergraduate backgrounds and are designed to provide maximum flexibility for individual students. At the doctoral level, specializations are offered in the areas of: elementary particle physics, nuclear physics, condensed matter physics, atomic physics, materials science, optics, biophysics, and quantum field theory.

Faculty members are committed to excellence in research and teaching, and work in an open and informal atmosphere which allows effective communication between students and advisors. The faculty hold national and international reputations in their areas of specialization. They organize and participate in conferences, publish extensively, and receive numerous outside grants, contracts and fellowships. In addition, they engage in many collaborations with scientists in both foreign and American universities and national laboratories. The department is housed in a modern physics building containing well-equipped research laboratories.

Physics (M.A. and M.S. Programs)

For some students, the master's degree will be used as part of a continuing Ph.D. program; for others, it will be a terminal degree leading to employment in government laboratories, industrial programs, hospitals, teaching positions, and other occupations. The Master of Science with a Major in Physics is offered under Plan A or Plan C, and the Master of Arts with a Major in Physics is offered under Plan B, as described below.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants must satisfy the following criteria.

Prerequisite preparation should include a minimum of general college physics with laboratory (equivalent to Physics 2170, 2180, and 3300), fifteen credits in the intermediate physics courses (for example, those equivalent to Physics 5100, 5200, 5210, 5340, 5500, 6400, 6410, 6500, 6600, 6610, 6850); mathematics equivalent to mathematics prerequisites required in these physics courses; and Chemistry 1220/1230 or equivalent courses.

The Graduate Record Examination, both the General section and the Physics subject test, is strongly recommended as a counseling aid in preparing the student's plan of study.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

MASTER OF SCIENCE REQUIREMENTS

The Master of Science degree is offered by this Department only under the following two options:

Plan A: *Twenty-four credits in course work plus an eight-credit thesis.*

Specific requirements include the following:

1. At either the graduate or undergraduate level, Physics 5100, 5210, 6400, 6410, 6500, 6600, 6610, or equivalent courses, and mathematics equivalent to mathematics prerequisites required in these physics courses.
2. At least nine credits of coursework in physics at the 7000 level or above (exclusive of Physics 7990, 7996, 7999, 8995, 8999).
3. A departmental final oral examination is required of all candidates.

Plan C: Graduate students who have successfully presented their Ph.D. prospectus can obtain a Master of Science degree under Plan C by virtue of having earned the required 32 credits in course work. (The M.S. in physics may be earned as a Plan C option ONLY as conjoint to the Ph.D program.) Interested students should contact the Graduate advisor in the Department for more information.

MASTER OF ARTS REQUIREMENTS

The Master of Arts degree is offered by this Department only under the following option:

Plan B: *Twenty-nine credits in course work plus a three-credit essay.*

Course requirements are the same as requirements (1) through (3) in the Master of Science program above.

Physics (Ph.D. Program)

Admission Requirements: see above, under 'Master's Degrees.'

DEGREE REQUIREMENTS: Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate, including thirty credits of dissertation research. The thirty credit dissertation registration requirement is fulfilled by registering for the courses

9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Students must demonstrate proficiency in the fields of:

- a) Mechanics
- b) Electromagnetic Theory
- c) Quantum Physics
- d) Thermodynamics and Statistical Mechanics

The following courses or their equivalent will be required of all candidates: Physics 7110, 7400, 7500 and one of either 7050 or 7060 or 7070. In addition, any two out of the following four courses are required: Physics 7200, 7410, 7600, 7610.

In general, it is recommended that students take all the advanced courses in their specialty. Students specializing in any branch of theoretical physics are encouraged to take the quantum theory of fields, or a related directed study. Finally, the student must submit an approved dissertation.

On petition of the student and his/her dissertation advisor, the Departmental Graduate Committee may waive any of the above course requirements.

Ph.D. Qualifying Examination: This will normally be taken after the student has completed approximately one year of graduate course work. Its purpose is to investigate the student's knowledge of physics and capacity for creative thought. This is a written examination. The student must submit a Plan of Work prior to taking this examination.

Physics Colloquium (PHY 8995): It is required that all full-time graduate students register for and attend the Departmental Physics Colloquium each semester they are in residence.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Graduate teaching assistant appointments are available to qualified entering and continuing graduate students. A graduate course load of approximately ten credits per semester is usual with such an appointment. Normally about eight to ten contact hours of instruction sessions of laboratory or discussion sections per week are arranged. Graduate teaching assistants also spend time at the Physics Resource Center assisting undergraduate students.

Graduate research assistant appointments, involving no teaching duties, are also available to qualified students. Stipends for these appointments are comparable to the teaching appointment stipends. Research undertaken while holding such an appointment may form the basis of the master's thesis or doctoral dissertation.

In addition, various government fellowships, University fellowships, and Knoller Physics Fellowships are available within the Department. Students applying for either teaching or research appointments are automatically considered for these fellowships. Application blanks and specific information concerning the above appointments may be obtained by writing the Chairperson.

Astronomy Courses (AST)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are also offered for undergraduate credit may be found in the undergraduate bulletin, along with all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

All courses with a laboratory have a non-refundable materials fee and are so indicated in the Schedule of Classes.

5010 Astrophysics and Stellar Astronomy. (PHY 5010) Cr. 3

Prereq: PHY 3300. Electromagnetic radiation and matter; solar characteristics; stellar distances; magnitudes; spectral classification; celestial mechanics; binary stars; stellar motions, structure and evolution; compact and variable stars; Milky Way Galaxy and interstellar medium; galaxies and clusters of galaxies; quasars; Hubble's Law; cosmology. (F)

5100 Galaxies and the Universe. Cr. 3

Prereq: PHY 3300. Exploration of the world of galaxies, starting with the Milky Way and moving outward to larger scales. Basic properties of galaxies: galaxy classification, structure, evolution, observations of Active Galactic Nuclei (AGN), Quasar, and Seyfert galaxies. Discovery of dark matter and black holes. Cosmology: origins of the universe in a hot big bang; its expansion history including recent evidence that the cosmic expansion is accelerating; the cosmic microwave background, and the ultimate fate of the universe. Capstone course for astronomy majors. (W)

Physics Courses (PHY)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are also offered for undergraduate credit may be found in the undergraduate bulletin, along with all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

All courses with a laboratory have a non-refundable materials fee and are so indicated in the Schedule of Classes.

5010 (AST 5010) Astrophysics and Stellar Astronomy. Cr. 3

Prereq: PHY 3300. Electromagnetic radiation and matter; solar characteristics; stellar distances; magnitudes; spectral classification; celestial mechanics; binary stars; stellar motions, structure and evolution; compact and variable stars; Milky Way Galaxy and interstellar medium; galaxies and clusters of galaxies; quasars; Hubble's Law; cosmology. (F)

5015 Non-classical Physics for Educators. (PHY 7010) Cr. 3

Open only to education majors and school teachers. Offered for undergraduate credit only. Prereq: PHY 2130, PHY 2140. Development of relativity and quantum mechanics. Emphasis on nuclear physics and elementary particles. Required math: algebra and trigonometry. (S)

5100 Methods of Theoretical Physics I. Cr. 3

Prereq: PHY 2180, MAT 2030. Introduction to mathematical tools used in advanced courses in physics. (F)

5200 Classical Mechanics I. Cr. 3

Prereq: PHY 2180; coreq: PHY 5100. Introduction to fundamental ideas: Newton's laws, notions of momentum, angular momentum, kinetic and potential energy, mechanical energy, conservation laws, motion in 1- and 3-D, friction and retardation forces, oscillations, resonances, and gravitation. (F)

5210 Classical Mechanics II. Cr. 3

Prereq: PHY 5200 and MAT 2150. Accelerated reference frames, centrifugal and Coriolis forces, rigid body dynamics, motion of tops and gyroscopes, Lagrange's equations, constraints, Lagrange multipliers, general central force problem, stability of orbits, relativistic mechanics. (W)

5340 Optics. Cr. 3

Prereq: PHY 2140 or PHY 2180, MAT 2030 or PHY 3700; coreq. for PHY majors: PHY 5341. Electromagnetic radiation; geometrical, physical, and modern optics. (W)

5341 Optics Laboratory. Cr. 2

Prereq. or coreq: PHY 5340 or ECE 5760. Experiments involving geometrical, physical, and quantum optics. Material Fee As Indicated In The Schedule of Classes (W)

5620 Electronics and Electrical Measurements. Cr. 3

Prereq: PHY 2140 or PHY 2180; Coreq: PHY 5621. Theory of amplifier circuits, operational amplifiers, oscillators, digital electronics, analog and digital measurements. Material Fee As Indicated In The Schedule of Classes (F)

5621 Electronics and Electrical Measurements Laboratory. Cr. 2

Prereq: PHY 2140 or PHY 2180; Coreq: PHY 5620. Laboratory measurements related to amplifier circuits, operational amplifiers, oscillators, and digital electronics. The lab will also cover analog and digital

measurements and will require a final project. Material Fee As Indicated In The Schedule of Classes. (F)

5750 Biological Physics. Cr. 4

Prereq: PHY 3700, PHY 4700. Introduction to applications of physics to molecular biology. (F)

5990 Directed Study. Cr. 1-3

Prereq: junior standing and written consent of advisor and instructor. Primarily for students who wish to continue in a field beyond material covered in regular courses, or who wish to study material not covered in regular courses, including certain research participation. (T)

6400 Quantum Physics I. Cr. 3

Prereq: PHY 3300, PHY 5100, MAT 2150. Operators and their eigenfunctions, quantization rules, solution of Schroedinger equation in 1- and 3-D, the hydrogen atom, angular momentum, spin, boson, fermions, Time-independent perturbation theory. (W)

6410 Quantum Physics II. Cr. 3

Prereq: PHY 6400. Applications of quantum mechanics: atoms in electric and magnetic fields, multielectron atoms, molecules, quantum statistics, solids (band structure, magnetic properties), nuclei, fundamental forces and standard model. (F)

6450 Introduction to Material and Device Characterizations. Cr. 4

Coreq: PHY 7050 or ECE 5500 or ECE 5550 or equiv. Offered for graduate credit only. Lecture/laboratory; introduction to analytic and measurement techniques for characterizing and evaluating materials, especially for potential applicability in sensor and integrated devices. Techniques include diffraction and microscopy methods, electron spectroscopies, and electrical, optical and magnetic measurements. (W)

6500 Thermodynamics and Statistical Physics. Cr. 4

Prereq: PHY 3300, MAT 2030. Laws of thermodynamics, thermodynamic equilibrium, applications of kinetic theory of gases, basic introduction to classical and quantum statistical description of physical systems with large numbers of particles. (F)

6570 (ECE 6570) Smart Sensor Technology I: Design. (BME 6470) Cr. 4

Prereq: B.S. degree in engineering or science. Offered for graduate credit only. Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. (F)

6600 Electromagnetic Fields I. Cr. 3

Prereq: PHY 5100, PHY 5200, MAT 2150. Topics include electrostatics, solution of Laplace equation, dielectric media, electric current, magnetic field of steady currents, magnetic properties of matter, electromagnetic induction. (F)

6610 Electromagnetic Fields II. Cr. 3

Prereq: PHY 6600. Continuation of PHY 6600: Maxwell equations, electromagnetism and relativity, optics, wave guides and transmission lines, radiation of EM waves. (W)

6710 Physics in Medicine. (ROC 6710) Cr. 3

Required for B.S. in Biomedical Physics. Applications of physics in medicine including radioactivity; interaction of radiation in matter; x-ray, CT, MRI, ultrasound, and PET imaging; nuclear medicine; radiation oncology; nerve electrophysiology, electrocardiogram, pacemakers, and defibrillators. (W)

6750 Applied Computational Methods. Cr. 2

Prereq: PHY 3750 or PHY 3310. Development of concepts learned in PHY 3750 or PHY 3310 for computer applications in physics research, including applications in theoretical physics, data fitting, image analysis, and integration with experimental equipment. There will be opportunities for independent as well as group projects. (F)

6780 (WI) Research Methods in Biomedical Physics. Cr. 3

Prereq: PHY 3700, PHY 4700. Introduction to laboratory experience in biomedical physics research. Material fee as given in Schedule of Classes. (W)

6850 (WI) Modern Physics Laboratory. Cr. 2

Prereq: PHY 3300. Techniques and experiments in physics of atoms, atomic nuclei, molecules, the solid state and other areas that have advanced our modern understanding of physics. Material Fee As Indicated In The Schedule of Classes (W)

6860 Computational Physics. Cr. 3

Prereq: PHY 3700 or PHY 5100. Introduction to use of computers to model physical systems; description of techniques in numerical analysis including linear algebra, integration, algebraic and differential equations, data analysis and symbolic algebra. (W)

6991 Special Topics. Cr. 1-4 (Max. 4)

Prereq: written consent of instructor. Offered for S and U grades only. Offered for graduate credit only. Topics and prerequisites for each section to be announced in Schedule of Classes. More than one section may be elected in a semester. (Y)

6992 Physics Graduate Teaching Assistant Training. Cr. 1

Prereq: graduate standing. Offered for S and U grades only. Offered for graduate credit only. Students solve and discuss problems from calculus-based general physics courses in front of their peers and instructor, enhancing their ability to analyze, interpret and present the material in a clear, informative way. (F,W)

6993 Analytical Problem Solving in Physics. Cr. 1

Offered for graduate credit only. Discussion of physics problems in mechanics, thermodynamics, electromagnetism and quantum mechanics for graduate students. (F,W)

7010 (PHY 5015) Modern Physics for Secondary School Educators. Cr. 3-4

Open only to middle- or high school teachers. Prereq: PHY 2130, 2140. Material fee applies when elected for four credits (optional laboratory). Development of relativity and quantum mechanics. Emphasis on nuclear physics and elementary particles. Required math: algebra and trigonometry. (F)

7050 Survey of Condensed Matter Physics. Cr. 3

Prereq: PHY 6400 or equiv. Contemporary solid state physics dealing primarily with experiments in this area and with modern descriptive models of solids. (W)

7060 Survey of Elementary Particle Physics. Cr. 3

Prereq: PHY 6400 or equiv. Fundamental interactions and the basic particles; introduction to quantum mechanical treatment of decay, scattering, spin, internal symmetries; introduction to quantum field theory; gauge theories; the standard model and proposed modifications; experimental evidence; survey of experimental methods, detector, accelerators and colliders. (W)

7070 Survey of Nuclear Physics. Cr. 3

Prereq: PHY 6400 or equiv. Survey of nuclear decay, nuclear structures, nuclear interactions and reactions, nuclear models, conservative laws and subnuclear particles. (W)

7110 Methods of Theoretical Physics II. Cr. 3

Prereq: PHY 5100 or equiv. Complex variables and their applications. Homogeneous and inhomogeneous differential equations. Special functions such as gamma functions, Bessel functions, Legendre functions, Hermite functions and Laguerre functions. Fourier series. (F)

7200 Advanced Mechanics. Cr. 3

Prereq: PHY 5210. Variational principles, central forces, transformation theory, Hamilton-Jacobi theory. (F)

7215 (PSL 7215) Nanobioscience. (CHE 7215) (CHM 7215) Cr. 3

Prereq: first year calculus, general chemistry. Introduction to interdisciplinary research field of nanobioscience, at the interphase of biology, chemistry, and physics; specific properties of nanoscale objects. (F)

7400 Quantum Mechanics I. Cr. 3

Prereq: PHY 6410; coreq: PHY 7110 or equiv. Physical and mathematical principles of quantum mechanics. Schrodinger equation and its applications. Spin and angular momentum in quantum mechanics. The WKB approximation. Perturbation theory for time-independent and time-dependent cases. (F)

7410 Quantum Mechanics II. Cr. 3

Prereq: PHY 7400. Scattering theory. Partial wave expansion and perturbation theory. Bound states. Symmetry principles and conservation laws. The path integral formalism. Entanglement. Quantum computation. Charged particles in electromagnetic fields. Quantum theory of radiation. Relativistic one-particle equations (W)

7500 Statistical Mechanics. Cr. 4

Prereq: PHY 6500, PHY 7400. Classical and quantum statistical mechanics and applications. (F)

7550 Advanced Condensed Matter Physics: Solid State. Cr. 3

Prereq: PHY 7050, PHY 7110, and PHY 7400. Current topics in condensed matter physics, including electronic band structure, magnetism, superconductivity, nanophysics, and the optical properties of solids. (B:F)

7560 Advanced Condensed Matter Physics: Soft Matter. Cr. 3

Prereq: PHY 7050, PHY 7110 and PHY 7400. Current topics in condensed matter physics, including the building blocks, structures, physical properties, and phase transitions in a variety of complex fluid systems such as simple liquids and liquid mixtures, colloids, polymers, liquid crystals, amphiphiles, and soft matter in living organisms. (B:W)

7580 (ECE 7570) Smart Sensor Technology II: Characterization and Fabrication. (BME 7470) Cr. 4

Prereq: PHY 6570 or ECE 6570. Integration of ongoing research in integrated technology of smart sensors. Design of smart sensor devices using computer simulation. Fabrication of smart sensor. Material Fee as given in Schedule of Classes. (W)

7600 Electromagnetic Theory I. Cr. 3

Prereq: PHY 6610. Microscopic and macroscopic Maxwell's equations, special relativity, Lagrangian and Hamiltonian formulation of EM theory, energy-momentum tensor, conservation laws, radiation, scattering, applications. (W)

7610 Electromagnetic Theory II. Cr. 3

Prereq: PHY 7600. Continuation of PHY 7600. (F)

7990 Directed Study. Cr. 1-3 (Max. 6)

Prereq: written consent of advisor, instructor, and graduate officer must be obtained prior to registration. Application forms available in department office. Primarily for graduate students in physics who wish to study material not covered in regular courses. (T)

7996 Research in Physics. Cr. 1-4 (Max. 12)

Prereq: written consent of advisor and graduate officer. (T)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of advisor. (T)

8570 (ECE 8570) Smart Sensor Technology Seminar. (BME 8470) Cr. 1

Prereq: ECE 6570, 7570. Technological advances. Interaction of research experience in smart sensors and integrated devices. (W)

8800 Advanced Nuclear Physics. Cr. 3

Prereq: PHY 7070, 7110, and 7410. Research topics in nuclear physics such as: relativistic heavy ion physics, nuclear/nucleon models, and many body theory. Covers both theory and experimental methods. (B:W)

8810 Advanced Particle Physics. Cr. 3

Prereq: PHY 7060, 7110, and 7410. Advanced elementary particle physics including weak, electromagnetic, and strong interactions. Rudiments of experimental devices and techniques at level appropriate to both experimentally- and theoretically-oriented students. (B:F)

8850 Quantum Theory of Fields I. Cr. 3

Prereq: PHY 7110, 7410. Introduction to quantum field theory, classical and path integral quantization of scalar, spinor, and vector fields, gauge theories, interactions and Feynman rules, modal field theories, Hubbard model, introduction to renormalization Suitable for both students of theory and experiment in the fields of nuclear, particle, and condensed matter physics and astrophysics. (B:F)

8860 Quantum Theory of Fields II. Cr. 3

Prereq: PHY 8850. Symmetry and symmetry breaking. Goldstone theorem and Higgs effect, renormalization group, collective phenomena, superfluids and superconductivity, the Standard Model of electroweak interactions, effective field theories. Appropriate for students in fields of nuclear, particle, condensed matter physics and astrophysics. (B:W)

8991 Special Topics. Cr. 1-3 (Max. 12)

Prereq: written consent of instructor, advisor and graduate officer. Offered for S and U grades only. Topics and prerequisites for each section to be announced in Schedule of Classes. More than one topic may be elected in a semester. (F,W)

8995 Colloquium. Cr. 1

Offered for S and U grades only. Must be elected every semester by all graduate physics students. Lectures given by external visitors and graduate faculty. (F,W)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PHY 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PHY 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PHY 9992 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PHY 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PHY 9993 and approval of Ph.D. Officer of the Graduate School. Required in academic-year semester following PHY 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PHY 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Political Science

Office: 2040 Faculty/Administration Building; 313-577-2630
Chairperson: Daniel S. Geller (Email: av0844@wayne.edu)
Website: <http://www.clas.wayne.edu/politicalscience/>

Professors

Timothy Bledsoe, Susan P. Fino, Daniel S. Geller, Michael Goldfield, Ewa Golebiowska, Charles J. Parrish, Frederic S. Pearson, Brad R. Roth, Marjorie E. Sarbaugh-Thompson, T. Lyke Thompson

Associate Professors

Brady P. Baybeck, Ronald E. Brown, Kevin Deegan-Krause, Jeffrey D. Grynawski, Mary Herring, Kyi-Nahm Jun, Sharon F. Lean, Yumin Sheng, John M. Strate

Assistant Professors

Nadejda Marinova, Alisa V. Moldavanova, Kristin T. O'Donovan

Graduate Degrees

MASTER OF ARTS with a major in Political Science

MASTER OF PUBLIC ADMINISTRATION

JOINT MASTER OF ARTS — JURIS DOCTOR

DOCTOR OF PHILOSOPHY with a major in Political Science

The study of political science is aimed at understanding and illuminating the nature and problems of government and the role of politics in the modern world. This is accomplished through systematic exploration of the structure and processes of government at different levels and across nations, through the study of individual and collective political behavior, and through analyses of policy problems and the processes through which public policies are formulated and administered. The field of political science is of special importance to students whose career goals include:

1. Professions likely to involve participation in public affairs, including law, engineering, criminal justice, public health, social welfare and education.
2. Administrative or executive positions in government — local, state or federal, and in non-profit organizations dealing with the public sector.
3. Teaching of political and social science at the secondary, community college and university levels.
4. Positions in the diplomatic, foreign and overseas programs of the U.S. Government and of large private concerns doing business abroad.
5. Leadership, research and staff roles in citizen organizations, political parties, economic and social interest groups, municipal research bureaus and nonprofit organizations.
6. Positions associated with mass communications, such as radio, television and newspapers, where understanding of public affairs and governmental policies and organization is required for accurate reporting and analysis.
7. Positions in private enterprise where knowledge of governmental processes is essential, such as in industrial relations, legislative liaison and public relations.

Political Science (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. A strong undergraduate performance is a prerequisite

and substantial undergraduate preparation in the social sciences is recommended. Applicants must take the Graduate Record Examination and have the results submitted to the university.

Applicants to the program should consult the Department's Director of Graduate Studies. Further information on the program is available on the Department's webpage at <http://www.clas.wayne.edu/political-science/>.

DEGREE REQUIREMENTS

The Master of Arts with a Major in Political Science is offered under the following options:

Plan A: Thirty-three or thirty-four credits including an eight-credit thesis.

Plan B: Thirty-three or thirty-four credits including a three-credit essay.

Depending on the student's program, thirty-three or thirty-four credits, including a minimum of twenty-four credits in political science, are required. All students must satisfy a general Departmental requirement aimed at the development of basic analytic and methodological skills by successfully completing Political Science 5630 (statistics) and Political Science 7660 (research methodology). These courses should be taken early in the student's program of study. Students select a major area of study from among the following six fields: American government and politics, comparative politics, political theory, public policy, urban politics, or world politics. A written, comprehensive examination in the major field is required. If the thesis option is elected, an oral examination on the thesis is also required.

A student's program is finalized in a Plan of Work that must be filed by the time the student has earned twelve credits. The student should consult the Department's Director of Graduate Studies for guidance in the development of his/her Plan of Work and for the specific requirements of the major concentration.

No credit will be granted without authorization of the Department's Graduate Committee for courses in Political Science taken at Wayne State University prior to formal admission to the M.A. program.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Political Science and Law (M.A. / J.D. Joint Degree Program)

This Department in cooperation with the School of Law offers a joint degree program leading to a Master of Arts degree in Political Science and a Juris Doctor degree.

Admission: Students must first be admitted to the Law School before applying for this joint degree program. Having entered the Law School, students may then apply for admission to the Master of Arts program in Political Science. Applicants must satisfy all admissions requirements for the Master of Arts in Political Science (see above), except for the Graduate Record Examination which is satisfied by Law School admission. Students should have some undergraduate background in the social sciences, including course work in American politics. Students lacking such preparation may be required to take course work in addition to the minimum required for the degree.

DEGREE REQUIREMENTS

This degree is offered only as a *Plan B* master's program requiring thirty-three credits including a three credit essay. Credit distribution must consist of twenty-one credits of political science including PS 5630, 7660, and the essay credit; and twelve credits in law courses. Programs integrating course selections from the two principal areas

are developed on an individual basis. A written comprehensive examination in the M.A. major is required at the end of course work.

Upon completion of these M.A. requirements and the Law School requirements for the J.D., students are awarded both degrees. Students should begin course work in the Law School and complete the required first year curriculum before taking any Political Science courses. Subsequently, a combination of political science and law courses may be taken. For further information regarding the joint program, students should consult the Department's Director of Graduate Studies.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Public Administration (M.P.A. Program)

This program is designed to prepare students for careers in public service in government, nonprofit organizations, and private organizations. The curriculum emphasizes study of the environment of public service, management techniques, organizational dynamics, the policy process, and the analysis of public policies.

Accreditation: The program is accredited by the Network of Schools of Public Policy, Affairs, and Administration.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Undergraduate preparation in the social sciences, although recommended, is not required. Applicants must have a 3.0 grade point average in the last sixty credits of undergraduate work to be considered for regular admission. In addition, scores from the Graduate Record Examination (GRE) must be submitted, with the following exceptions:

1. Applicants with an undergraduate grade point average exceeding 3.29 need not submit GRE scores.
2. Applicants holding master's degrees in other fields and having graduate grade point averages of 3.30 or higher in their graduate degree work, need not submit GRE scores. Letters of Recommendation from previous instructors are welcome but not required.

A personal statement citing career goals and objectives is also required.

For further information, prospective applicants should consult the program's website at: <http://clas.wayne.edu/MPA/>

DEGREE REQUIREMENTS:

The Master of Public Administration is offered under the following option:

Plan C: Thirty-nine credits (minimum) in course work.

Of the thirty-nine credits required for the degree, thirty credits are earned in a required set of core courses within the Department. Students without significant administrative background must meet an additional requirement of at least three credits of supervised internship over and above the minimum of thirty-nine credits otherwise required. All students must complete thirty credits of core requirements including PS 5630, 7300, 7320, 7330, 7340, 7350, 7375, 7410, 7460 (or 7660) and 7480. As part of the thirty-nine credits, students are also required to complete an area of concentration consisting of at least nine credits, which may require course work outside of political science. Passage of a written comprehensive examination based on the core curriculum is also required to earn this degree.

A student's program is finalized in a Plan of Work that must be filed by the time the student has earned twelve credits. The student should consult the department's M.P.A. program director for guidance in preparing this Plan of Work.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

No credit will be granted for courses taken at Wayne State prior to formal admission to the M.P.A. program without prior authorization of the M.P.A. Program Committee.

Areas of Concentration: Students in the M.P.A. program are required to select an area of concentration consisting of a minimum of nine credits of interrelated course work. Students must consult with, and secure the approval of, the M.P.A. program director prior to undertaking this part of the program, but students pursuing a specific career goal may use the Elective Option to design their own specialization.

Economic Development Policy and Management
Health and Human Services Policy and Management
Human and Fiscal Resource Management
Non-Profit Policy and Management
Organizational Behavior and Management
Urban and Metropolitan Policy and Management
Elective Option (individually tailored)

Certificate in Gerontology: In conjunction with their degree work, M.P.A. students may also pursue a certificate in gerontology administered by the School of Social Work. Students interested in this program should refer to the Graduate School General Information section of this bulletin, beginning under Admission, Graduate School.

Certificate in Economic Development: In conjunction with their degree work, M.P.A. students may also pursue a certificate in economic development, administered by the Department Urban Studies and Planning; see Economic Development (Graduate Certificate), p. 425.

AGRADE' — Accelerated Graduate Enrollment

The Department of Political Science permits undergraduate majors with superior academic records to petition for accelerated graduate enrollment under the 'AGRADE' program of the College of Liberal Arts and Sciences. This program allows qualified seniors to apply credits earned in specifically approved courses to both a bachelor's and a master's degree. Acceptance in the program is governed by the rules and procedures set forth by the College (see AGRADE' — Accelerated Graduate Enrollment, p. 299). Students in the program must also satisfy the Department's normal admission requirements for the master's degree, including the Graduate Record Examination if required, in order to be admitted to the Graduate School. For further details, students should contact the Department's Director of Graduate Studies.

Political Science (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. The doctoral program is open only to highly qualified students. Prospective students should consult the program description available on the Department's webpage at: <http://www.clas.wayne.edu/politicalscience/>. Students should also review the requirements for graduate study in the Graduate School section of this bulletin (see Admission, Graduate School, p. 17 and Doctor of Philosophy Degrees (Ph.D.), p. 38).

All students are required to take the Graduate Record Examination. All applications for admission to the doctoral program in political science must have the approval of the Department's Graduate Committee. Applicants may apply for admission at any time, but all

application materials must be received at least six weeks prior to the start of the semester for which admission is sought. Applicants seeking financial aid should apply for Fall semester admission and submit all application materials by January 15.

The doctoral degree in political science indicates not merely superior knowledge of this discipline but also intellectual initiative and the ability to design and carry out independent research and evaluation. Students in their pre-candidacy stage will be judged on the basis of these attributes as well as on their grade-point performance. Possession of a master's degree does not automatically warrant admission to doctoral study.

DEGREE REQUIREMENTS

A Ph.D. student is required to complete a minimum of ninety graduate credits, thirty of which are earned through the dissertation. The thirty credit dissertation registration requirement is fulfilled by registering for the courses PS 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Doctoral students structure their course work in terms of a single major field and two minor fields of political science. Major field concentrations may be elected in American Government, Comparative Politics, Political Theory, Public Administration, Public Policy, Urban Politics, or World Politics. Minor concentrations may be in the above seven fields. Other concentrations may be allowed upon approval of the Department's Graduate Studies Committee. Students should consult the Director of Graduate Studies regarding the specific requirements of these concentrations. Satisfactory completion of written and oral final qualifying examinations are a condition for candidacy.

All Ph.D. students are required to teach at least one semester course during their course of study for the degree, unless this requirement is specifically waived by the Director of Graduate Studies.

Admission to candidacy for the doctor's degree will usually require at least two years of full-time graduate study beyond the bachelor's degree. It is granted upon fulfillment of the following requirements:

1. Completion of Department and Graduate School residence and course requirements, including Political Science 7660 and 8600.
2. Filing an approved Plan of Work with the Graduate School.
3. Completion of the general statistics requirement (Political Science 5630 and 6640, or their equivalents);
4. Completion of a preliminary oral examination after the second year of course work for the degree;
5. Completion of the final written qualifying examination.

Approval of Dissertation Prospectus: The candidate is required to prepare and defend a Dissertation prospectus to present following the qualifying examination. The prospectus must be approved by the Dissertation advisory Committee before beginning work on the Dissertation.

Submission of Dissertation: The candidate is required to submit a doctoral Dissertation on a topic satisfactory to his/her Dissertation Committee, designed to demonstrate proficiency in political science analysis, a capacity for independent and creative research, and the ability to perfect and follow through on an appropriate research or evaluation design.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Assistantships and Scholarship Awards

Students admitted to graduate study in Political Science may apply for University fellowships, scholarships, and other forms of financial aid as described beginning under Financial Assistance, Graduate, p. 26. In addition, they may be eligible for the following assistantships, and scholarship awards offered through the Department.

Assistantships: Teaching and research assistantships in the Department of Political Science are available on a competitive basis to qualified students. Inquiries and applications should be directed to the Department's Director of Graduate Studies. Applications should be received by March 1.

Awards: Although some awards are offered at various times during the year, students' chances of receiving one are increased if they submit their applications no later than March 1.

The Beatrice B. Martin Endowed Scholarship Award is given annually to one undergraduate student and one graduate student in recognition of scholastic achievement. Although candidates are nominated by the faculty, applications are also accepted by the Director of Undergraduate Studies and the Director of Graduate Studies.

The Alfred M. Pelham Scholarship Award is given annually to a promising current student in public administration. Although candidates are nominated by the faculty, applications are also accepted by the M.P.A. program director.

The Stephen B. Sarasohn Dissertation Fellowship is given annually to one or more outstanding students who are nearing completion of the doctoral degree. Recipients must pursue their study on a full-time basis during the period covered by the award. Candidates may be nominated by the faculty or apply directly. Inquiries and applications should be directed to the Department's Director of Graduate Studies.

The Jorge Tapia-Videla Award for Graduate Excellence is a monetary award presented annually to a current student who has exhibited high achievement in some aspect of graduate work. Recipients are selected by the Graduate Studies Committee and the M.P.A. Committee of the Department in alternating years.

Honorary Societies

Pi Sigma Alpha is the Wayne State chapter of the National Political Science Honorary Society for outstanding political science students.

Pi Alpha Alpha is the Wayne State chapter of the National Public Administration Honorary Society for outstanding public affairs/administration students.

Political Science Courses (PS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5030 African American Politics. (AFS 5030) Cr. 4

Nature and texture of black politics; various perspectives on politics by blacks; the impact of blacks on American politics. (Y)

5040 Religion and Politics. Cr. 4

Prereq: PS 1010 or 1030. Religion and American political culture; religious institutions and religious movements; church lobbying in national, state, and local governments; specific manifestations of religion and politics; African Americans, women and conservative Christians. (B)

5050 Mass Media and Politics. Cr. 3

Prereq: PS 1010 or 1030. Role of communications media in modern politics. Historical evolution of media; political impact of newspapers, radio and television; polling and the media; political advertising; media law; mass media and the future of American democracy. (Y)

5110 Constitutional Law. Cr. 4

Examination of the power of judicial review, barriers to court review, distribution of powers in the national government, federal-state relations, federal-state power to regulate and tax interstate commerce, and protection of property through the due process clause. (Y)

5120 Constitutional Rights and Liberties. Cr. 4

The Bill of Rights and the Fourteenth Amendment's due process and equal protection clauses, including rights of criminal defendants, freedom of speech and religion, race and sex discrimination. (Y)

5560 Biopolitics. Cr. 4

Use of the perspective of the life sciences in the study of political behavior, political evolution, political institutions, and contemporary political issues. (B)

5630 Statistics and Data Analysis in Political Science I. Cr. 4

Introduction to statistical description and inference in the study of politics, administration and public policy. Introduction to statistical analysis using microcomputers. Material Fee As Indicated In The Schedule of Classes (Y)

5710 Politics of Europe and the European Union. Cr. 3

Comparative analysis of the politics, culture and societies of major European countries; investigation of the formation and operation of the European Union. (B)

5740 Ethnicity: The Politics of Conflict and Cooperation. (AFS 5740) (PCS 5500) Cr. 4

Current ethnic (racial, linguistic, religious, and cultural) conflicts regionally, nationally and internationally. Introduction to concepts and analytic perspectives for understanding ethnicity as a factor in nation building and maintenance. (Y)

5760 (NE 5110) History and Development of Islamic Political Thought. Cr. 3

Prereq: NE 2030, NE 3040. Historical analysis of political Islam through study of the precepts and historical vicissitudes impacting the Islamic world from within and from external forces. (F,W)

5820 International Law. Cr. 4

Sources of international law (treaty and custom); institutions of the international system and relationship to domestic law and the courts; state sovereignty; role of United Nations and other international organizations. Application of legal norms to contemporary armed conflicts and human rights catastrophes. (I)

5830 International Conflict and Management. Cr. 4

Types of international conflict and such methods of resolution as negotiation, mediation and other third-party procedures. (B)

5850 Human Rights. Cr. 4

Theoretical traditions that have inspired the human rights movement; critiques from liberal and conservative perspectives; international human rights treaties and efforts to implement their terms; controversies over cultural relativism, economic and social rights, treatment of women, and the question of non-intervention. (Y)

5860 Conflict in the Nuclear Age. Cr. 3

Examination of post-World War II historical conflicts using formal mathematical models and games of strategic interaction. (Y)

5890 (PCS 5000) Dispute Resolution. (CRJ 5994) (PSY 5710) Cr. 3

Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

5999 Special Topics in Political Science. Cr. 1-4 (Max. 16)

Prereq: Open only to juniors, seniors and graduate students. Topics to be announced in Schedule of Classes. (T)

6010 Political Psychology. (PSY 6020) Cr. 3

Prereq: PS 1010 or equiv. Political attitudes and behavior of both ordinary citizens and political elites using theory and research that adopt a psychological perspective. Topics include: political socialization, ideological belief systems, role of mass media in shaping beliefs and attitudes, race and gender stereotypes and their psychological and political consequences, personality and the dynamics of political leadership. (Y)

6020 Intergovernmental Relations and American Federalism. Cr. 3

Legal, fiscal, political and administrative relationships among governments in the American federal system. Current issues and public policies which affect or are affected by intergovernmental relationships. (B)

6050 Class, Race, and Politics in America. (AFS 6100) (HIS 5110) (SOC 7330) (UP 7030) Cr. 3

Historical and analytic investigation into the role of class and race in American politics. (I)

6070 Labor and American Politics. (ELR 7420) Cr. 3

Role of organized labor in American politics. Historical background, including rise of the UAW and its role in Detroit and Michigan politics. Recent declines; future of organized labor as a force in American politics. (B)

6100 (PCS 6100) Introduction to Graduate Peace and Security Studies. Cr. 3

Offered for graduate credit only. Survey of the peace and security studies fields at the graduate level. (F,W)

6120 Administrative Law and Regulatory Politics. Cr. 3

Constitutional and statutory status of bureaucratic agencies; administrative powers and procedures; judicial review of administrative decisions; Congressional oversight of bureaucracies. (B)

6340 (ELR 7430) Public Sector Labor Relations. Cr. 3

Prereq: graduate standing. Offered for graduate credit only. History, present functionings, problems and current controversies surrounding public sector unions. (B)

6430 Social Welfare: Politics and Policy. Cr. 3

National government policy related to old-age assistance, income maintenance, food stamps, health care, and other entitlement programs. (B)

6440 (UP 6550) Regional, State, and Urban Economic Development: Policy and Administration. (ECO 6650) Cr. 3

Prereq: graduate standing. Offered for graduate credit only. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

6455 (UP 6455) Discrimination and Fair Housing. (AFS 6455) (ECO 6455) (SOC 6455) (US 6455) Cr. 3

Prereq: senior or graduate standing. Multidisciplinary investigation into the nature, motivations, consequences, and legal/public policy implications of racial/ethnic discrimination in housing and related markets (mortgage, insurance) in U.S. metropolitan areas. (B)

6640 Statistics and Data Analysis in Political Science II. Cr. 3

Prereq: PS 5630 or equiv. Modern statistical theory applied to the study of politics, administration, and public policy. Multivariate analysis: multiple regression, logistic regression, path analysis, and factor analysis. Material Fee As Indicated In The Schedule of Classes (Y)

6700 Financial Management for Nonprofit Organizations. Cr. 3

Conducting financial management in nonprofit organizations. Topics include: legal responsibilities, cash versus accrual basis accounting, financial statements, fund accounting, fixed assets and depreciation, contributions and budgeting. (F)

6710 Introduction to Nonprofit Organizations. Cr. 3

Offered for graduate credit only. Topics include: nonprofit organizations and their history, types and characteristics, goals, external environment, legal framework, governance, leadership, management, and ethics. (F)

6720 Marketing, Development, and Grant Writing for Nonprofit Organizations. Cr. 3

Offered for graduate credit only. How nonprofit organizations locate and secure resources from the private sector, individual philanthropists, foundations, and governments, through marketing, development, and the writing and submission of grants. (W)

6730 Topics in Nonprofit Organizations. Cr. 1-3

Offered for graduate credit only. Specific and varying topics relevant to nonprofit organizations and the nonprofit sector. (S)

6799 (PS 4799) Topics in Comparative Politics. Cr. 3-4 (Max. 8)

Prereq: PS 2710. Offered for graduate credit only. Compelling and emerging issues; thematic topics such as democratization and other changes in political institutions; regional topics such as central Asia and other rapidly changing areas of global concern. Students in PS 6799 will be assigned additional graduate-level assignments (I)

6830 Civil War and Conflict Processes. Cr. 3

Undergrad. prereq: written consent of instructor. Introduction to literature on civil wars: origins, variables affecting their duration, termination. Peace making and peace agreements studied comparatively. Recent Balkan and African civil wars. (W)

6850 International Organizations. Cr. 3

Undergrad. prereq: written consent of instructor. Problem of cooperation in international relations: When does cooperation take place? Can it be institutionalized? Survey of major institutional theories; security and economic organizations. Student presentations. (W)

6860 American Foreign Policy. Cr. 3

Contending paradigms of realism and liberalism as they relate to programs for American foreign policy. (Y)

6870 (LEX 7888) United States Foreign Relations Law. Cr. 4

Prereq: PS 5110 or PS 5820. U.S. constitutional law and politics relating to the branches' competencies in conduct of foreign affairs and to incorporation of international law in U.S. courts; war powers, counterterrorism, treaties, human rights litigation, immunities. (Y)

7030 American Political Processes. Cr. 3

Political socialization, public opinion, and political behavior. Role of political parties and interest groups in the political process. (B)

7040 American Governmental Institutions: Congress and the Courts. Cr. 3

Examination of the functions, structure and processes of major American governmental institutions with special emphasis on the Congress and the courts. (B)

7045 American Governmental Institutions: The Presidency. Cr. 3

Analysis of the American presidency: the presidency and American political development, relationship of the office to other major political institutions, nature and sources of presidential power. (Y)

7050 American Political Culture. Cr. 3

Analysis of the relationship between belief systems and political action in America. Focus on patterns of social change and conflict management. (Y)

7099 Topics in American Politics. Cr. 3

Topics chosen by faculty; may include: gender politics, political socialization, voting behavior, political parties, and interest groups. (I)

7100 (PCS 7100) Peace Making: Regional, Technological, Transnational. Cr. 3

Prereq: graduate standing. The prerequisites for peaceful and secure borders and peace settlements. (W)

7210 Approaches to the Study of Urban Politics. Cr. 3

Examination of aspects of the urban political process and the research methods used in studying them. Topics include forms of political participation, political structures, community power and influence, strengths and weaknesses of case studies, comparative research, aggregate and individual data. (B)

7240 (PS 7240) Urban Public Policy. (UP 7650) Cr. 3

Overview of major theoretical approaches to understanding urban/regional problems and politics. Focus on following regional issues: interdependence of populations across municipal borders, municipal fragmentation, racial and economic segregation, mobility of labor and capital within and across regions. (B)

7250 Seminar in Urban Administration. (UP 7250) Cr. 3

Administration in agencies with urban-related policy and program functions. Focus on: public services delivery; urban systems development; program-project design, implementation and evaluation; and intergovernmental relations. (B)

7260 (UP 7260) Urban Poverty and Racial Segregation. (AFS 6600) (ANT 7260) (SOC 7350) Cr. 3

Prereq: graduate standing. Review of theories of poverty from various economic/political perspectives; historical intervention policies; current literature on the interplay of racial, economic and spatial factors on growing economic inequality among urban whites and African-Americans. Political rationale and meaning of the "underclass" debate. (B)

7300 Public Administration and its Environment. (UP 7550) Cr. 3

Emergence and evolution of public administration as both a profession and a field of study. The role of public bureaucracies in the political process and efforts to ensure administrative accountability and responsiveness to the democratic system. Administrative relationships with elected executives, legislatures, the judiciary, the media and interest groups. (Y)

7310 Public Management Internship. Cr. 3

Prereq: twenty-one credits in public administration and written consent of departmental M.P.A. program director. Open only to public administration graduate students. Internship designed to integrate graduate course work with practical knowledge and experience gained from employment in a responsible capacity in a public agency or nonprofit organization. (T)

7320 Organization Theory and Behavior. Cr. 3

Study of major theoretical approaches to the structure, functioning and performance of organizations and the behavior of groups and individuals within them. (Y)

7330 Public Budgeting and Finance. Cr. 3

Processes of public budgeting in the United States; political dynamics of budgetary decision-making; assessment of efforts to change budget systems; basic concepts of fiscal analysis of expenditure patterns and revenue sources. (Y)

7340 Public Personnel Management. Cr. 3

Examination of the public personnel systems of American governmental units; analysis of current practices and techniques for recruiting, selecting, training, promoting, compensating and removing public employees. Major issues in public personnel management such as collective bargaining, equal employment opportunity, civil service reform and employee productivity and performance. (Y)

7350 Managing Public Organizations and Programs. Cr. 3

Processes and techniques for managing public organizations and providing public services. Topics include: total quality management, communication and information management, motivation and supervision of subordinates, planning and decision making. Relying on for-profit and nonprofit organizations in service delivery. (Y)

7375 Professional Development Seminar. Cr. 1-2

Analysis of managerial techniques and practices currently used by administrators in the public sector. Emphasis on managerial applications of information technology, administrative writing and presentation skills, and organizational and behavioral approaches and techniques. Content areas will vary with yearly offerings. (Y)

7410 Policy Formation and Implementation. Cr. 3

Analysis of the processes through which public policy is made and implemented. Examination of the factors that promote or impede the development and realization of rational, effective, and responsive public policy. (Y)

7460 Program Evaluation. Cr. 3

Prereq: PS 5630 or equiv. Theory and practice of program evaluation. Role of program evaluation in the policy process. A number of theories of evaluation will be presented, followed by a discussion of techniques. Topics include total quality management, bench marking; utilization of evaluation. (B)

7480 Policy Analysis for Administration. Cr. 3

Introduction to the conceptual foundations of public policy analysis as well as training in various policy analysis tools. Opportunities for students to do policy analysis. (Y)

7550 Topics in the History of Political Thought. Cr. 3-6

Survey of selected political theorists by period or theme; emphasis on interpretation of major works. (B)

7560 Contemporary Political and Social Theory. Cr. 3-6

Prereq: graduate standing. Analysis of selected major problems, topics, and themes in recent political and social theory. (B)

7580 Political Theory of Public Law. (LEX 7659) Cr. 3

Legal restraints on exercise of public power as conceived in works of early modern theorists (e.g., Machiavelli, Locke, Montesquieu, and Madison), and as applied in constitutional arrangements that have emerged in a range of historical settings. Topics include: role of law in totalitarian political systems; emergency rule; comparative approaches to judicial review. (Y)

7640 Introduction to Game Theory. Cr. 3

Standard elements of game theory including some political science applications for illustrative purposes. Emphasis on gaining facility with theoretical concepts and tools. (B)

7660 Research Methods in Policy and Politics. Cr. 3

Prereq: PS 5630 or equiv. Analytic methods in the study of politics and public policy: formulating researchable problems, use of models, research design, measurement, data collection, and computer-based data analysis. (Y)

7710 Seminar in Comparative Politics. Cr. 3

Research-oriented seminar in which students learn basic approaches to the study of domestic policy-making through the comparative method, including structural, cultural, institutional, elite, and rational choice approaches. (Y)

7711 Advanced Seminar in Comparative Politics. Cr. 3-6 (Max. 6)

Prereq: graduate standing. Analysis of selected major issues, topics, and debates in the field. (B)

7730 Seminar: Comparative Politics of Developing Countries. Cr. 3

Intellectual questions and methodological strategies political scientists are addressing in the study of politics in the developing world. (I)

7740 Political Economy. Cr. 3

Seminar course; comprehensive survey of political economy: interaction between the government and the economy; microeconomics of politics. (B)

7810 Seminar in World Politics. Cr. 3 (Max. 9)

Major theoretical approaches. Students evaluate the extent to which theses that devolve from realist, idealist, Marxist, culturalist, decision-making, and alternative approaches allow us to explicate phenomena in world politics. (B)

7811 Advanced Seminar in World Politics. Cr. 3 (Max. 6)

Examination of broad range of substantive topics; student develops ability to conduct independent research in world politics subfield; introduction to alternative theoretical approaches and different methods for conducting empirical research. Major performance objective is student development of a research design. (B)

7850 (DR 7100) Roots of Social Conflict. Cr. 3

Prereq: graduate standing. Background and immediate causes of social conflict, from interpersonal to national to international settings, from ethnic to gender conflict; review of destructive and constructive aspects of conflict. (Y)

7995 Directed Study. Cr. 1-6

Prereq: fifteen graduate credits in political science; written consent of chairperson and graduate advisor. (T)

7997 Research in Political Science. Cr. 1-9

Open only to students admitted to doctoral study. Prereq: written consent of advisor. (T)

7999 Master's Essay Direction. Cr. 1-3 (3 req.)

Prereq: written consent of advisor. (T)

8000 Readings in Political Science. Cr. 3 (Max. 6)

Prereq: written consent of advisor. (T)

8600 Philosophic Problems of Social and Political Inquiry. Cr. 3

Required of all doctoral students. Exploration of competing philosophies of science and their relevance to the study of politics. Study of selected problems in political inquiry, including objectivity, commensurability, and progress. Review of disciplinary history and assessments of contemporary approaches to the study of politics. (B)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PS 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PS 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PS 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PS 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PS 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PS 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PS 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Psychology

Office: 7th floor, 5057 Woodward; 313-577-2800

Interim Chairperson: Boris Baltes

Associate Chairperson: Emily Grekin

Website: <http://www.clas.wayne.edu/psychology/>

Professors

Antonia Abbey, Ernest Abel, Sheldon Alexander (Emeritus), David Asdourian (Emeritus), Boris Baltes, Douglas Barnett, Alan Bass (Emeritus), Annmarie Cano, Donald Coscina (Emeritus), Marcus Dickson, Donald Elliott (Emeritus), Ira Firestone (Emeritus), Joseph Fitzgerald, John Hannigan, M. Marlyne Kilbey (Emerita), Sheldon Levy, Peter Lichtenberg, Mark Lumley, Lisa Rapport, Hilary Ratner, Naftali Raz, Annette Rickel (Emerita), Paul Toro, Glenn Weisfeld, R. Douglas Whitman, John Woodard, Lee Wurm

Associate Professors

Marjorie Beeghly, George Borszcz, Scott Bowen, Rita Casey, Kenneth Davidson (Emeritus), Emily Grekin, Thomas Fischer, Sebastiano Fiscaro, Winifred Fraser (Emeritus), Lara Jones, Melissa Kaplan-Estrin (Emerita), Cary Lichtman, Robert Partridge, Sarah Raz, Michael Reece (Emeritus), Valerie Simon, Patricia Siple, Richard Slatcher, Christopher Trentacosta,

Assistant Professors

Marla Bartoi (Clinical), Timothy Bogg, Susanne Brummelte, Jessica Damoiseaux, Jonathan Hinrichs (Clinical), Catalina Kopetz, Stephanie Spielmann

Senior Lecturer

Margo Bowman

Adjunct Professors

Kenneth Adams, Naomi Breslau, Mark Greenwald, Gisela Labouvie-Vief, Brian Lakey, Timothy Roehrs

Adjunct Associate Professors

Bradley Axelrod, Mark Ketterer, Helene Lycaki

Adjunct Assistant Professors

Linda Angell, Rinat Armony-Sivan, Rebecca Baird, Jay Cohen, Allan Dehorn, Grenae Dudley, Robin Hanks, Lisa Fruchtman, Brynda Holton, Mark Kelland, Joan Lessen-Firestone, Ira Lourie, Michael Marsiske, Scott Millis, Steven Putnam, Robert Rothermel, William Schafer, Richard Smith, Barry Tanner

Graduate Degrees

MASTER OF ARTS with a major in Psychology (open only to students admitted to the doctoral program)

MASTER OF ARTS with a major in Industrial and Organizational Psychology

DOCTOR OF PHILOSOPHY with a major in Psychology and specializations in behavioral and cognitive neuroscience; clinical; industrial/organizational; and cognitive, developmental, and social psychology

Psychology, Industrial and Organizational (M.A. Program)

This program is designed for students interested in pursuing advanced training in applied workplace psychology. This includes (a) job analysis and the development and validation of personnel selection and performance appraisal systems, (b) the implementation and evaluation of employee and management training and development programs, (c) enhancing employee motivation and morale, and (d) related activities that employ psychological principles and practices to increase organizational effectiveness.

Unlike the Master of Arts with a Major in Psychology, this program is NOT a transitional program leading to doctoral degree candidacy.

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students may enter the program in either the fall or spring/summer semester. The application deadline for the fall semester is June 1 and for the spring/summer semester, March 1. To be considered for admission, an applicant's background should include a minimum undergraduate upper division cumulative grade point average of 3.00, a course in introductory psychology, and a course in statistics (grade of 'B' or better), and he or she should present their scores from the general portion of the GRE test taken within five years of application. To obtain more information about this program, contact the Department of Psychology, 7th Floor, 5057 Woodward Ave., Detroit, Michigan 48202 (313-577-2800), or access the Psychology Department website at <http://www.clas.wayne.edu/psychology/>.

DEGREE REQUIREMENTS

The Master of Arts in Industrial/Organizational Psychology is offered only as a Plan C option: thirty credits of coursework with no thesis or essay.

REQUIRED COURSES INCLUDE:

- PSY 6500 – Advanced Psychological Statistics: Cr. 3
- PSY 6510 – Organization Theory: Cr. 3
- PSY 6520 – Organizational Behavior: Cr. 3
- PSY 6535 – Psychometric Theory: Cr. 3
- PSY 6550 – Training and Employee Development: Cr. 3
- PSY 6570 – Research Methods in Indus./Org. Psychology: Cr. 3
- PSY 7745 – Job Analysis and Performance Criteria: Cr. 3
- PSY 7750 – Organizational Staffing: Cr. 3
- PSY 7770 – Testing in the Workplace: Cr. 3
- PSY 7790 – Capstone Course: Cr. 3.

Psychology (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17.

Only students who have been admitted to the doctoral program in psychology may elect to earn this master's degree; hence all candidates are considered as doctoral applicants.

Applicants holding bachelor's degrees, master's degrees, and/or other advanced degrees will be considered for admission. At the undergraduate level, applicants must have earned a 3.0 or better average in psychology courses and in total course work. A minimum of twelve semester credits in psychology is required and must include a laboratory course and a statistical methods course in psychology. Courses in college mathematics and biology and familiarity with computers are highly recommended. The general Graduate Record Examination (GRE) is required.

DEGREE REQUIREMENTS

The Master of Arts with a major in psychology is offered only as a Plan A master's program requiring thirty-two credits including an eight-credit thesis. In addition to the thesis, a minimum of twenty-four

credits in psychology is required and must include PSY 7150 and PSY 7160 and one of the following: PSY 7010, 7080, 7090, 7120, 7250, 7400, 7590, and 7620.

Emphasis is placed on factual knowledge, theory, and research methods in general psychology. The thesis involves the use of laboratory or field data and must be approved by the advisor and two other committee members approved by the Departmental Graduate Committee. A final oral examination pertaining to the thesis is required.

All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

Psychology (Ph.D. Program)

Admission: Because the doctoral degree offered by this department is viewed as a continuation of the Master of Arts degree program in psychology, students are expected to earn the M.A. degree or complete a master's-equivalent project as a preliminary stage in doctoral study. The work of students who hold advanced degrees when they enter this program will be evaluated to determine the extent to which it satisfies the requirements of the M.A. degree in psychology.

Applicants must complete a Psychology Department application form and provide general GRE test scores, at least three letters of recommendation, and a statement of purpose in addition to the transcripts and application form required by the Graduate School. Application policies and procedures are available on the Department of Psychology website, <http://clas.wayne.edu/psychology>. Students will not be considered for admission until all of the above have been received and evaluated. All forms for applicants intending to pursue doctoral work are due by December 1. Applicants will be notified of the admission committee's decision around March 1.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299. All graduate students are expected to maintain at least a 'B' average. Students receiving grades of 'B-minus' or below in more than two courses will be dropped from the doctoral program. No more than two courses at the 6000 level may be applied toward credit for the doctoral degree.

DEGREE REQUIREMENTS

The Doctor of Philosophy requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credits (see below). Additionally, in order that students may acquire a broad background in the factual and theoretical content of psychology, five substantive courses are required of all doctoral candidates: PSY 7150 and 7160, *plus* one additional quantitative analysis course and two of the following outside the student's major area: PSY 7010, 7080, 7090, 7120, 7250, 7400, 7590, 7620. Each student is expected to select a major and minor area of specialization from among the following list. (Alternate minor areas may be developed in consultation with relevant faculty, subject to the approval of the Department Graduate Committee.)

BEHAVIORAL AND COGNITIVE NEUROSCIENCE: This interdisciplinary research and training program prepares students for positions in research and teaching in many areas of neuroscience, including functional cognitive neural imaging, neural physiology, behavioral pharmacology, neurobehavioral teratology, and affective neuroscience. Academic training is provided through foundation courses, specialized seminars, and intensive participation in mentored research based on one-to-one working relationships with faculty members.

CLINICAL PSYCHOLOGY: This training program is accredited by the American Psychological Association and educates students as scientist-practitioners. Students are prepared for a wide range of careers, including research, teaching, clinical practice, and administration. In addition to the basic departmental course requirements for a doctoral degree, students also take courses in professional ethics, psychopathology, psychological assessment, psychological interventions, and other coursework consistent with APA accreditation. Requirements also include an empirical master's thesis and doctoral dissertation, as well as supervised clinical training in assessment and treatment of clients in our training clinic, external placements, and an internship. Special opportunities for training and research in neuropsychology, child psychology, health psychology, and community psychology are available in the clinical program, with faculty in other areas of the department, and in the community.

COGNITIVE, DEVELOPMENTAL, AND SOCIAL PSYCHOLOGY: This area is oriented toward the interests of students pursuing degrees in cognitive, developmental, and social psychology. Students are encouraged to take an interdisciplinary approach to research and tailor their coursework so that it corresponds to their personal field of research. Students can also integrate their disciplinary focus with health psychology.

The COGNITIVE sub-area focuses on fundamental research on human cognition and its application to educational and human factors settings. Current research interests include speech perception; attention; memory; psycholinguistics; sign language and deafness; and gerontological studies of memory.

The DEVELOPMENTAL sub-area takes a life-span perspective providing students with a strong foundation in dynamic modern developmental theories and models. Current studies focus on risk and resilience, longitudinal modeling, developmental contexts (e.g., poverty, child care, race/ethnicity, culture), ethology and marital relations, parent-child relationships, stress reactivity, emotion regulation, temperament, joint attention, school readiness, language development, autobiographical memory, and child maltreatment.

The SOCIAL-PERSONALITY sub-area focuses on theory-based basic and applied research. Students can be trained in a variety of experimental, survey research, and intervention methods and techniques, including alcohol administration, daily diaries, hormone assays, and implicit/automatic processing. These research methods are used to address basic research questions in the areas of social cognition, close relationship processes, interpersonal violence, and personality processes.

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY offers coursework in Personnel Psychology (including such topics as criterion development, performance evaluation, and personnel selection) and Organizational Psychology (including such topics as employee training and development, motivation and morale, and leadership and executive development). Opportunities exist for field experience in a variety of local and national corporations.

Residence: All new doctoral students must enroll for their *first academic year* on a full-time basis. Students must complete at least six three-credit courses, exclusive of research and thesis credits, during the first year. Any incompletes in these six courses must be removed prior to the fall semester of the second year.

Examinations: The qualifying examination, a written examination covering the student's major area, is required. It is normally taken after completion of the master's thesis.

Training, Teaching, and Research: Doctoral students are required to participate in a training assignment each academic year they are in residence. This is required of all full-time students, irrespective of whether the training assignment includes a stipend. The student's area committee is responsible for seeing that this requirement is met each year. The training assignment involves appropriate teaching, research (other than thesis or dissertation research) or professional activities.

Dissertation Research: The thirty credit dissertation registration requirement is fulfilled by registering for the courses PSY 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Infant Mental Health (Ph.D. dual-title program)

Students admitted to the Ph.D. program in either Clinical Psychology or the CDS area of Psychology can apply to earn a Ph.D. in Psychology with a Dual Title in Infant Mental Health. This dual title degree is designed to prepare psychologists to conduct research, advocate for, and intervene to improve early behavioral, cognitive, social, and emotional development in contexts in which parents or children may suffer from developmental disabilities, health problems, or mental health problems. Students enrolled in this dual title program take courses in infant development and assessment and develop specific skills related to infant mental health assessment and treatment. Students in clinical psychology also conduct a clinical practicum in infant mental health. The dual title course work follows competencies outlined by the Michigan Association for Infant Mental Health that are required for endorsement as an infant mental health specialist or an infant mental health mentor.

Admission. Applicants must meet the admissions standards of the Graduate School and the Department of Psychology and be offered admission to the Psychology doctoral program in either clinical psychology or CDS area of Psychology. Students may indicate on their application to the Psychology program their desire to earn an Infant Mental Health Dual Title, or they can request this after an offer of admission has been made. Students already enrolled in the Ph.D. Program in Psychology during their first three years may also contact the Infant Mental Health program director, Ann Stacks to enroll in the program.

Requirements. Students are required to take 12 credits of infant mental health coursework. All students must complete and earn at least a grade of B in the following courses:

- ELE 7025 – Infant Mental Health Theory to Practice: Cr. 2
- NUR 7880 – Infant/Family Mental Health Assessment: Cr. 2
- S W 7010 – Infant Mental Health Practice: Cr. 1-2
- PSY 7425 – Psychology of Infant Behavior and Development: Cr. 3
- ELE 7035 – Infant and Toddler Developmental Assessment: Cr. 3

In addition, dual title students who are in the Clinical Psychology Ph.D. training program are required to complete at least one semester of a supervised field placement / external practicum at an infant mental health agency. Students in both the Clinical Psychology and CDS Ph.D. training programs will have their knowledge of infant mental health assessed during their doctoral qualifying examination. In addition, Dual Title students must write a dissertation on a topic related to infant mental health.

Financial Support

General sources of financial aid for graduate students may be found in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Fellowships, tuition scholarships, internships, and teaching and research assistantships in the Department of Psychology, other departments of Wayne State University, and a variety of affiliated agencies and institutions are available to qualified students. Information about application procedures is available in the Psychology Graduate Office.

Psychology Courses (PSY)

The following courses, numbered 6000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6010 (ELE 6010) Family Centered Collaboration in Early Childhood Intervention and Special Education. (SW 6010) Cr. 3-4

Theories, concepts and practices of family centered intervention services for young children with special needs. Team-building and cross-disciplinary communication and collaboration with families. (F)

6020 (PS 6010) Political Psychology. Cr. 3

Prereq: PS 1010 or equiv. Political attitudes and behavior of both ordinary citizens and political elites using theory and research that adopts a psychological perspective. Topics include: political socialization, ideological belief systems, role of mass media in shaping beliefs and attitudes, race and gender stereotypes and their psychological and political consequences, personality and the dynamics of political leadership. (Y)

6200 Development of Memory. Cr. 3

Prereq: PSY 3080 and 2400 or equiv.; and written consent of instructor for undergraduates. Major theoretical models of memory development will be discussed and used to explore various aspects of the memory process from infancy to adulthood. (I)

6420 Psychology of Infant Behavior and Development. (PSY 7425) Cr. 3

Prereq: graduate standing, or PSY 2400 and written consent of instructor for undergraduates. Prenatal development and infancy through the toddler years. Major theoretical positions and research relating to motor, perceptual, cognitive, language, social, and emotional development. Implications for parenting, programming, and care. (F)

6490 Developmental Psychology of Death, Dying and Lethal Behavior. Cr. 3

Prereq: PSY 1010 or 1020. Changing relationship to death and finitude throughout the life-cycle; development and function of death cognitions, factors predisposing toward suicide and other premature deaths at various age levels, and the dying process. (I)

6500 Advanced Psychological Statistics. Cr. 3

Prereq: admission to I/O M.A. program. Not open to psychology doctoral students. Offered for graduate credit only. Review of core statistical procedures; in-depth exploration of concepts of correlation and regression. Brief review of descriptive statistics and methods of statistical inference. Statistical software will be introduced and used. (F)

6510 Organization Theory. Cr. 3

Prereq: admission to I/O M.A. program. Not open to psychology doctoral students. Work organization theories, and history of social modeling; classical, neoclassical, and open system of contingency theories. (F)

6520 Organizational Behavior. Cr. 3

Prereq: admission to I/O M.A. program. Not open to psychology doctoral students. Employee motivation, job attitudes, leadership and management development; related aspects of organizational behavior, design and development. (W)

6535 Psychometric Theory. Cr. 3

Prereq: PSY 6500 or equiv and admission to I/O M.A. program. Not open to psychology doctoral students. Development, validation, and use of psychological tests and other psychological instruments. Origins and value of psychological testing. (W)

6550 Training and Employee Development. Cr. 3

Prereq: admission to I/O M.A. program. Not open to psychology doctoral students. Theory and practice of organizational training, employee development, and management development; establishment of performance standards, performance appeal process, evaluation of training and development programs. (S)

6570 Research Methods in Industrial/Organizational Psychology. Cr. 3

Prereq: admission to I/O M.A. program. Not open to psychology doctoral students. Field and lab research methods for workplace settings. (W)

6710 Psycholinguistics. (LIN 6710) Cr. 3

Prereq: graduate standing or undergraduates with a strong psychology or linguistics background. Theory and research in various topics in psycholinguistics, including language development, speech perception and production, and language comprehension. (I)

6995 Advanced Special Topics. Cr. 0-3 (Max. 6)

Prereq: senior standing; psychology major with 3.0 g.p.a. or honors program seniors. S and U grades only when offered for zero credit. Topics to be announced in Schedule of Classes. (I)

7010 History and Systems of Psychology. Cr. 3

Prereq: admission to graduate program in psychology. History and philosophical ideas that have influenced development of the scientific field of psychology. Core issues in philosophy of science; their integration with major theories, philosophies and trends in development of modern psychology. (F,S)

7020 An Integrative Approach to Social, Cognitive and Developmental Psychology. Cr. 3

Prereq: admission to CDS graduate program in psychology. Integration of three major topics in psychology. (B:F)

7030 (PSY 5030) Evolutionary Psychology of the Emotions. Cr. 3

Undergrad. prereq: PSY 1010 or 1020; grad. prereq: admission to graduate program in psychology. No credit for PSY 7030 after PSY 5030. Functional analysis of basic human emotions: their elicitors, affects, expressions, visceral changes, overt behaviors, neural bases, development, and normal and pathological variation. (I)

7080 Human Cognition. Cr. 3

Prereq: admission to graduate program in psychology. Unified approach to human cognitive activity, including perception, attention, memory, language, concepts, and problem solving. (F)

7090 Theories of Learning. Cr. 3

Prereq: admission to graduate program in psychology. Systematic examination of learning theories. (I)

7120 Biological Basis of Behavior. Cr. 3

Prereq: admission to the graduate program in psychology. Major literature relating the anatomy of the nervous system to psychological processes. (Y)

7140 Psychophysical and Scaling Methods. Cr. 3

Prereq: admission to the graduate program in psychology. Major psychophysical methods; data analysis and written reports. (I)

7150 Quantitative Methods in Psychology I. Cr. 4

Prereq: admission to graduate program in psychology. Introduction to statistical inference for psychologists. Bivariate measures of relationship and associated statistical tests: chi square, t-test, F test and selected rank order tests. Research methods including randomized designs, repeated measures, counter-balancing and Latin square designs, and quasi-experimental designs common to applied social science research, such as matched case controls, pre- and post-designs, and interrupted time-series. (F)

7160 Quantitative Methods in Psychology II. Cr. 4

Prereq: PSY 7150 and admission to graduate program in psychology. Multiple regression and analysis of covariance. Psychometric theory and psychological measurement. (W)

7200 Psychological Assessment I. Cr. 4

Prereq: admission to graduate program in clinical psychology. Psychometric theory and application emphasizing reliability, validity, utility and interpretation of selected intelligence, achievement, and objective personality tests, including the WAIS-IV and MMPI-2. Required lab section includes individual supervision on interviewing, testing, and report writing. (F)

7210 Psychological Assessment II. Cr. 4

Prereq: PSY 7200, admission to graduate program in clinical psychology. Half of the course covers child intellectual and academic assessment, based on measures such as the WISC-IV and WIAT-II. The other half addresses adult personality assessment, based on measures such as the Rorschach and TAT. Emphasis on providing feedback and writing reports for clients. Required lab section includes individual supervision on interviewing, testing and report writing. (W)

7230 Assessment Practicum. Cr. 1 (Max. 3)

Prereq: admission to graduate program in clinical psychology. Offered for S and U grades only. Students learn to conduct psychological assessments of adults and children. Skills taught include how to: a) generate clinical hypotheses; b) interview patients; c) select, administer, score, and interpret a range of psychological measures; d) integrate findings to answer assessment questions; e) write assessment reports; f) give feedback; and g) both receive and provide supervision. Unique aspects of assessing specific clinical conditions or disorders will be covered. Students will present cases based on assessments they conduct in the departmental training clinic. (T)

7240 Ethics, Professional Issues, and Diversity. Cr. 1 (Max. 3)

Prereq: admission to graduate program in clinical psychology. Offered for S and U grades only. Three separate sections of this course focus on ethical principles as applied to practice, research and teaching, human diversity. (F,W)

7250 Theory of Personality. Cr. 3

Prereq: admission to graduate program in psychology. Major approaches to the study of personality. Current psychological research and issues in the field; implications for psychotherapy and assessment. (B)

7270 Research Methods in Clinical Psychology. Cr. 3

Prereq: admission to graduate program in clinical psychology. Survey of types of questions asked in the science of clinical psychology; methods proceeding from these questions. Descriptive and experimental methods, clinical trials, field study, application of research findings to evidenced-based practice. (W)

7300 Psychopathology. Cr. 3

Prereq: admission to graduate program in clinical psychology. Basic psychological concepts of psychopathology with a focus on adult disorders. Current theory and research and their implications for clinical practice. (F)

7310 Developmental Psychopathology. Cr. 3

Prereq: admission to graduate program in psychology. Processes of development as they relate to emergence and course of psychopathology from conception through young adulthood; theory and research on major forms of psychopathology with childhood and adolescent onset. (T)

7330 Clinical Neuropsychology. Cr. 3

Prereq: admission to graduate program in psychology. History of the development of clinical neuropsychology. Current perspectives of theory and empirical foundations of neuropsychological assessment. (Y)

7340 Neuropathology and Behavior. Cr. 3

Prereq: admission to graduate program in psychology. Discussion of the current state of neuropathology and its cognitive consequences. (B)

7370 Psychological Interventions I. Cr. 3

Prereq: PSY 7300 and admission to graduate program in clinical psychology. Survey of intervention development, theory and research; focus on empirically-supported individual psychotherapy for adults and evidenced-based therapeutic processes. (F)

7380 Psychological Interventions II. Cr. 3

Prereq: PSY 7370 and admission to graduate program in clinical psychology. Survey of intervention development, theory and research; focus on evidence-based interventions for children and adolescents as well as systems (families, groups, communities). (W)

7400 Introduction to Life-Span Developmental Psychology. Cr. 3

Prereq: admission to graduate program in psychology. Theory, methods and selected content areas; cognitive and social development as they relate to the entire life cycle. (T)

7420 Attachment Relationships Across the Lifespan. Cr. 3

Prereq: admission to graduate program in psychology. Current theory and research on human attachment relationships across the lifespan. Major research paradigms; application of attachment for parenting, childcare, intervention, and therapy. (I)

7425 Psychology of Infant Behavior and Development. Cr. 3

Prereq: admission to graduate program in psychology. Prenatal development and infancy through the toddler years. Major theoretical positions and research relating to motor, perceptual, cognitive, language, social, and emotional development. Implications for parenting, programming, and care. (F)

7430 Developmental Assessment of Infants and Toddlers. Cr. 3

Prereq: PSY 6420 or PSY 7400; admission to graduate program in psychology. No credit after PSY 6470. Overview of assessment methods; training in administration of the Bayley Scales of Infant development. (Y)

7440 Cognitive Development. Cr. 3

Prereq: PSY 7400; admission to graduate program in psychology. Current theoretical perspectives and related research on cognitive development in childhood; topics include cognition, memory, concepts, and language. (I)

7450 Social Development Across the Life-Span. Cr. 3

Prereq: admission to graduate program in psychology. Recent perspectives on the psychological and environmental factors affecting social development across the life-span. (B)

7470 Interdisciplinary Research Methods in Social, Cognitive and Developmental Psychology. Cr. 3

Prereq: admission to CDS graduate program in psychology. Required of all first-year students in cognitive, developmental, and social psychology. Advanced survey of research design methods and issues across a broad array of social and behavioral fields, including

cognitive, developmental, social, and personality psychology. Also covers Master's thesis development and ethical and professional issues. (B:W)

7490 Developmental Psychology of Later Life. Cr. 3

Prereq: PSY 7400, admission to graduate program in psychology. Later years of human life from the perspective of developmental psychology; attention to viewpoints in biology, sociology. Personality structure and phenomenological life, and the possibilities of continuous psychological development. (I)

7500 Research Methods in Industrial/Organizational Psychology. Cr. 3

Prereq: PSY 7150; admission to graduate program in psychology. Required of all first-year students in industrial/organizational doctoral program. Analysis of methodology and research design problems in the field of industrial psychology; discussion of professional and ethical problems. (Y)

7510 Criterion Development and Performance Evaluation: Theory and Research. Cr. 3

Prereq: admission to graduate program in psychology; prereq. or coreq: PSY 7160 and 7500. Nature and kinds of criteria of job performance; development and measurement of criteria; problems and issues in performance evaluation. (Y)

7520 Selection and Placement: Theory and Research. Cr. 3

Prereq: PSY 7510; admission to graduate program in psychology. Principles in development and evaluation of employee selection procedures; methods for establishing job-relatedness; problems and issues in evaluation and use of employee selection procedures. (Y)

7560 Leadership and Executive Development: Theory and Research. Cr. 3

Prereq: PSY 7500; admission to graduate program in psychology. Selected leadership research studies; theories relating to leadership; principles of training and development. (Y)

7570 Industrial Motivation and Morale: Theory and Research. Cr. 3

Prereq: PSY 7500; admission to graduate program in psychology. Meaning of motivation and incentive as used in industry; research methods for study of motivation, job satisfaction, and morale; research data and interpretations in theoretical frameworks. (Y)

7590 Industrial and Organizational Psychology. Cr. 3

Prereq: admission to graduate program in psychology. Required of all first-year students in industrial/organizational doctoral program. Lecture, discussion, analysis of articles and chapters, in-class exercises. (F)

7620 Social Psychology: Research and Theory. Cr. 3

Prereq: admission to graduate program in psychology. Graduate-level introduction to the major theoretical and research areas of social psychology; current issues and research. (F)

7645 Social Psychology of Close Relationships. Cr. 3

Prereq: PSY 7620, admission to graduate program in psychology. Social Psychological theory and research that examines the dynamics of close relationships, including relationship formation, maintenance, enhancement, and dissolution. (I)

7745 Job Analysis and Performance Criteria. Cr. 3

Prereq: admission to I/O psychology M.A. program. Not open to psychology Ph.D. students. Job analysis methods, criterion development, and performance appraisal. (F)

7750 Organizational Staffing. Cr. 3

Prereq: PSY 7745, admission to I/O psychology M.A. program. Not open to psychology Ph.D. students. Recruitment, screening, and personnel selection. (W)

7770 Testing in the Workplace. Cr. 3

Prereq: PSY 6500, admission to I/O psychology M.A. program. Test development; in-depth discussion of existing tests. (W)

7780 Industrial/Organizational Psychology. Cr. 1 (Max. 4)

Prereq: admission to Industrial/Organizational Psychology M.A. program; written consent of program director. Approved internship field placement for a period of one semester to two years. (T)

7790 Capstone Course. Cr. 3

Prereq: admission to I/O psychology M.A. program. Not open to students in I/O psychology Ph.D. program. Special topics in I/O psychology. Students write a major paper or conduct an individual project. (S)

7990 Directed Study. Cr. 1-9 (Max. 9)

Prereq: admission to graduate program in psychology. For students who wish further study of technical literature of a problem systematically reviewed in a preceding course. Intensive and systematic reading of original literature (particularly journals) dealing with topic or problem. (T)

7991 Current Topics in Behavioral Neuroscience. Cr. 1 (2 req.)

Prereq: admission to graduate program in behavioral and cognitive neuroscience. Discussion of current papers in the field. (F,W)

7997 Research Problems. Cr. 1-8 (Max. 32)

Offered for S and U grades only. Prereq: admission to the graduate program in psychology. Original research under direction of departmental staff. (T)

7998 Field Practicum in Psychology. Cr. 1-6 (Max. 12)

Prereq: admission to the graduate program in clinical psychology. Only four credits count toward Ph.D. degree. Practicum experience in an approved training facility. Supervision by faculty members. (T)

7999 Master's Essay Direction. Cr. 1-3

Prereq: written consent of advisor. Not open to doctoral students. (T)

8000 Clinical Internship. Cr. 1 (Max 3)

Prereq: admission to graduate program in clinical psychology; written consent of Director of Clinical Training. Approved placement in an APA accredited internship for a one- to two-year period. (Y)

8040 Social Neuroscience. Cr. 3

Prereq: admission to graduate program in psychology. Neurobiology of social cognition. Topics include: social communication, decision making, group dynamics, face/race processing, action and gesture cognition, emotional processing, development. (I)

8050 Cognitive Neuroscience. Cr. 3

Prereq: admission to graduate program in psychology. Concepts and methods used to study neurobiological basis of cognition, covering brain systems involved in perception, attention, memory, language, and decision making, as well as life-span development of brain, cognition and psychopathology. (B)

8060 Functional Neuroanatomy. Cr. 4

Prereq: admission to graduate program in psychology. Anatomical features of the human nervous system; emphasis on relationship between neural structure and behavior. Material Fee As Indicated In The Schedule of Classes (Y)

8065 Neurophysiology and Neural Plasticity. Cr. 3

Prereq: PSY 8060, and admission to graduate program in psychology. Physiological and molecular properties of neurons and the relationship of neural plasticity to behavior and development. (F)

8070 Psychopharmacology. Cr. 3

Prereq: admission to graduate program in psychology. Psychological and biological bases of psychopharmacology; emphasis on preclinical models and development of treatments for psychological disorders. (B)

8140 Meta-Analysis. Cr. 3

Prereq: PSY 7160, admission to graduate program in psychology. Use of quantitative techniques for summarizing research results in psychology. (S)

8150 Multivariate Analysis in Psychology. Cr. 3

Prereq: PSY 7160, admission to graduate program in psychology. Extension of the general linear model to multivariate statistical techniques, including: exploratory factor analysis and principal components analysis, confirmatory factor analysis, discriminant function analysis, canonical correlation analysis, and multivariate analysis of variance. (F)

8170 Structural Equation Modeling. Cr. 3

Prereq: PSY 8150, admission to graduate program in psychology. Practical introduction to structural equation modeling. (W)

8300 Health Psychology I. Cr. 3

Prereq: admission to graduate program in psychology. Theoretical and empirical review of major topics in behavioral approaches to health and illness, including: 1) theories of health behavior and behavior change; 2) psychological impact of acute and chronic physical illness; and 3) health care utilization including health disparities, patient-provider communication, and psychosocial factors that affect adherence. (B)

8310 Health Psychology II. Cr. 3

Prereq: admission to graduate program in psychology. Applied issues in health psychology and behavioral medicine. Focus on research and practice related to assessment and intervention with medical populations and changing health behavior. (B)

8340 Clinical Neuropsychological Assessment. Cr. 3

Prereq: admission to graduate program in clinical psychology. Review of principles and literature on neuropsychological assessment, common neuropsychological tests and test batteries, in context of actual clinical cases. (B)

8350 Community Psychology. Cr. 3

Prereq: admission to graduate program in psychology. Current findings, theory, and research in the field of community psychology. Emphasis on current urban problems. (I)

8390 Therapeutic Intervention Practicum. Cr. 1 (Max. 3)

Prereq: PSY 7380; admission to graduate program in clinical psychology. Offered for S and U grades only. Students learn to conduct evidence-based psychological interventions with adults, children, couples, and families. Skills taught include how to: a) develop case conceptualizations based on different theoretical models; b) apply techniques from motivational, cognitive-behavioral, relational, psychodynamic, and other therapies; c) develop and maintain the therapeutic alliance; d) track outcomes and modify approach as needed; e) terminate cases; and f) both receive and provide supervision. Unique aspects of intervening for specific clinical conditions or disorders will be covered. Students will present cases based on interventions they conduct in the departmental training clinic. (T)

8400 Current Issues in Developmental Psychology. Cr. 3 (Max. 9)

Prereq: admission to graduate program in psychology. Integrative seminar in current theoretical and empirical issues. (I)

8440 Developmental Neuropsychology. Cr. 3

Prereq: admission to graduate program in psychology. Neurobiology of development. Topics include: neuroplasticity throughout the life span, maturation of the brain and neural connectivity, neurodevelopment of behavioral, emotional, social and cognitive functions. This course will bridge human behavioral and animal models to illustrate the dexterity and limitations of available scientific methods to study developmental neuropsychology. (I)

8500 Seminar in Industrial/Organizational Psychology. Cr. 1-3 (Max. 15)

Prereq: admission to graduate program in psychology. For industrial/organizational psychology students. Current topics in industrial psychology; content varies. (I)

8560 Models and Methods in Psychopharmacology. (PYC 7560) Cr. 3

Prereq: admission to graduate program in psychology. Psychological and biological bases of psychopharmacology; emphasis on methods, models and theories in basic preclinical research. (B)

8600 Seminar in Experimental Social Psychology. Cr. 3 (Max. 9)

Prereq: admission to graduate program in psychology. Review and evaluation of the literature on some current topic of research or theoretical concern. (I)

8620 Social Cognition. Cr. 3

Prereq: admission to graduate program in psychology. How mental representations underlie the processes of social thought and behavior. Students survey, evaluate, and discuss social cognition processes and research; group work to design and conduct tests of social-cognitive processes. (B:W)

8680 Seminar in Physiological Psychology. Cr. 3 (Max. 9)

Prereq: admission to graduate program in psychology. Critical examination of contemporary research on selected topics concerned with relationships between physiological mechanisms and behavior. (Y)

8720 Seminar in Cognitive Processes. Cr. 3 (Max. 15)

Prereq: admission to graduate program in psychology. Literature on special topics in human cognition including reading, speech perception, attention and memory. (I)

8740 Seminar in Psychological Measurement and Statistics. Cr. 2-3 (Max. 9)

Prereq: PSY 7160; admission to graduate program in psychology. Topics in measurement and statistical analysis; exploratory data analysis and related problems; multidimensional scaling and clustering techniques; time series analysis; analysis of longitudinal data; item response theory and tailored testing; statistical power. Current topics such as structural equation modeling. (I)

8760 Seminar in Clinical Psychology. Cr. 1-3 (Max. 12 for psychology majors)

Prereq: admission to graduate program in psychology. New clinical methods and scientific developments in the field of clinical psychology. Meets with continuing education seminars in clinical psychology. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: admission to graduate program in psychology. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PSY 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PSY 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PSY 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PSY 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PSY 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PSY 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PSY 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Sociology

Office: 2228 Faculty/Administration Building; 313-577-2930
Chairperson: Jeffrey D. Kentor;
email: jeffrey.kentor@wayne.edu
Website: <http://www.clas.wayne.edu/Sociology/>

Professors

Janet R. Hankin, Jeffrey Kentor

Associate Professors

R. Khari Brown, Krista M. Brumley, Heather E. Dillaway, David Fasenfest, Heidi Gottfried,

Assistant Professors

Zachary W. Brewster, David M. Merolla, Shirin Montazer, Sarah C. Swider

Affiliated Faculty

Nicole Trujillo-Pagan

Graduate Degrees

MASTER OF ARTS with a major in Sociology

DOCTOR OF PHILOSOPHY with a major in Sociology

The graduate programs offered by the Department of Sociology are designed to prepare students for professional careers in a variety of settings. These programs require substantial course work in the general areas of sociological theory and sociological research methods. In addition to this core required of all students, individual students have considerable flexibility in pursuing course work designed to concentrate on specific areas of substantive specialization in sociology which reflect the current interests and work of the departmental faculty.

Academic Procedures: All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Admission Requirements, Graduate Programs, p. 299, respectively.

Sociology (M.A. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, new applicants to the sociology program must satisfy the criteria below. Applications are considered for admission to fall term only; all stages and materials in the application process must be completed by January 15. Materials required for admission include:

1. Graduate Application (demographic and educational profile).
2. Official transcripts from past universities attended.
3. Three (3) letters of recommendation (at least two should be from university or college faculty members).
4. Statement of Interest (this should describe applicants' reasons for graduate study in Sociology, proposed areas of study, and career goals).
5. Writing sample.
6. G.R.E. scores.*
7. TOEFL scores.**

*G.R.E. scores will be considered, but will not be a binding criterion for admission. The Department realizes that scores on standardized tests are greatly influenced by social and cultural factors, and may not be accurate

indicators of performance ability. A combined assessment of students' GPA, G.R.E. scores, transcripts, letters of recommendation, writing sample, and statements of interest will be used to make admissions decisions.

**We are currently asking for paper-based TOEFL scores of 600 or above (or internet-based TOEFL scores of 100 or above) for entry into our Ph.D. program. Nonetheless, we will consider students who have a score of 550 or better on the paper version of the TOEFL (or 80 or better on the internet-based version of the TOEFL). The Department realizes that scores on standardized tests are greatly influenced by social and cultural factors, and may not be accurate indicators of performance ability.

The application deadline for our Master's program is January 15th of each year. To start the application process, visit <http://www.gradadmissions.wayne.edu/> (and then click on "How to Apply").

A grade point average of at least 3.3 in upper division courses, and in sociology courses, is required for admission consideration to the Master's program. All entering students must have sociology 4050 (sociological theory), 4200 (research methods), and 4220 (statistics), or their equivalents. SOC 4220 may be waived by permission of the instructor of SOC 6280. Students required to take prerequisites should have the courses completed by the end of the first year of graduate studies, and prior to taking graduate-level theory and methods courses. Prerequisite courses do not apply to graduate credit, and must be successfully completed with a grade of 'B' or better.

DEGREE REQUIREMENTS

All students are required to complete Sociology 6050 or 6060, 6280, 7030, 7200, and to demonstrate computer literacy.

The Master of Arts degree with a major in Sociology offers two tracks: Plan A (the Master's thesis track) and Plan B (the Master's Essay track). Students seeking the Ph.D. degree should select Plan A.

Plan A for students enrolled prior to Fall 2014 requires thirty-two credits in course work including:

SOC 6050, 6060, 6280, 7200, 7030, 8999 (thesis, eight credits), and four credits in sociology electives. Plan A is recommended for students who plan to go on to the Ph.D. A final oral examination and public defense of the Master's thesis is required.

Plan A for students enrolled in Fall 2014 or thereafter requires thirty-two credits in course work including:

SOC 6050, 6280, 7200, 7030, 8999 (thesis, eight credits), and eight credits in sociology electives

Plan B requires thirty-two credits in course work including:

Either SOC 6050, 6280, 7200, 7030, 7999 (essay, three credits); and thirteen credits in electives, at least ten of which must be in sociology courses. A final oral examination and public defense of the Master's essay is required.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Sociological Research Methodology, Applied (M.A. Concentration)

The goal of this program is to provide training for students to enter careers as research analysts. Students receive instruction in advanced quantitative and qualitative methodology, and first-hand experience in applied research and policy-related internships. Following their internship, students write an M.A. essay supervised by their faculty advisor that applies methodological and/or statistical expertise to a problem identified by their internship supervisor.

Admission: See above under Master of Arts with a Major in Sociology.

DEGREE REQUIREMENTS

DEGREE REQUIREMENTS: This concentration is offered only as a Plan B master's program for which thirty-two credits are required. Required courses include SOC 6280, 6290, 7000, 7200, 7260, 7260, 7280, 7500, 7999.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Sociology (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School. In addition, applicants must satisfy the criteria listed below. Applications are considered for new admissions to the fall term only; all stages and materials in the application process must be completed by January 15.

Applicants should have a 3.5 grade point average (G.P.A.) in their Master's degree work and/or previous graduate work. In particular, we will be looking at applicants' grades in any previous methods and theory courses. **If students do not have a background in sociology, SOC 4050 (sociological theory), SOC 4200 (research methods), and SOC 4220 (statistics) must be taken at the undergraduate level before applying to the Ph.D. program.**

Students must complete SOC 6050 (theory before 1920), SOC 6060 (theory after 1920), SOC 7030 (proseminar), SOC 6280 (statistics), SOC 7200 (research methods) (or their equivalents, for a total of 20 credits), prior to taking any other Ph.D.-level courses. They must receive a minimum of a B or better (but preferably a grade of A) in all of these Master's-level courses before enrolling in Ph.D.-level courses. If students are missing this Master's-level coursework when they apply to the Ph.D. program, they may be placed in the M.A. program until they complete SOC 6050, SOC 7200, and SOC 6280, at the very least. It is very important that students successfully complete this Master's-level coursework before beginning their Ph.D. programs.

PLEASE NOTE: Students who lack a Master's degree in Sociology, or have not yet completed the Master's requirements in sociology at the time of application, will not be admitted directly into the Ph.D. program. They may be granted admission to the Master's program, possibly on a "qualified" basis, in order to take courses in preparation for the Ph.D. program. If students are placed in the Master's program to complete preliminary coursework, they will need to apply for a "Change of Status" into the Ph.D. program once they have completed this coursework. This change of status is not automatic, and the Graduate Admissions committee will be evaluating students' grades in Master's-level courses when considering change of status applications. Any questions about this policy should be directed to the Graduate Director.

Materials required for Ph.D. admission include:

1. Graduate Application (demographic and educational profile).
2. Official transcripts from past universities attended.
3. Three (3) letters of recommendation (at least two should be from university or college faculty members). Preferably, one recommendation letter should come from the student's Master's-level advisor. Students filing "Change of Status" forms are also required to submit three letters of recommendation.
4. Statement of Interest (describing applicants' reasons for graduate study in sociology, proposed areas of study, and career goals).
5. Writing sample (e.g. a term paper or report).

6. G.R.E.scores.*

7. TOEFL scores.**

*G.R.E. scores will be considered, but will not be a binding criterion for admission. The Department realizes that scores on standardized tests are greatly influenced by social and cultural factors, and may not be accurate indicators of performance ability. A combined assessment of students' GPA, G.R.E. scores, transcripts, letters of recommendation, writing sample, and statements of interest will be used to make admissions decisions.

**We are currently asking for paper-based TOEFL scores of 600 or above (or internet-based TOEFL scores of 100 or above) for entry into our Ph.D. program. Nonetheless, we will consider students who have a score of 550 or better on the paper version of the TOEFL (or 80 or better on the internet-based version of the TOEFL). The Department realizes that scores on standardized tests are greatly influenced by social and cultural factors, and may not be accurate indicators of performance ability.

Students are accepted for admission for the fall semester only. There are no exceptions. The application deadline for our Ph.D. program is January 15th of each year. All students must apply via the online graduate application. To start the application process, visit <http://www.gradadmissions.wayne.edu/> (and then click on "How to Apply").

DEGREE REQUIREMENTS

For Students Enrolled Prior to Fall 2013

The Doctor of Philosophy degree requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses SOC 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Prior to electing Ph.D.-level courses, all doctoral students in sociology must complete the following prerequisite courses: Sociology 6050 or 6060, 6280, 7030, 7200; and demonstrate computer literacy. Only two of these prerequisites (Sociology 6060, 7030) count toward the thirty credits required in Ph.D.-level courses. Required courses at the Ph.D. level include: SOC 7050 or 8060 (theory) SOC 7260 (qualitative sociology), six to nine credits in a cognate field, and eight to twelve credits in a specialization within sociology; and an additional course in methods, either qualitative (SOC 7500) or quantitative (SOC 6290). Ph.D. students are expected to complete all the M.A. and most of the Ph.D. level core courses in theory, methods, and statistics prior to taking at least two courses in their specialization. A written qualifying examination in the student's specialization area and an oral qualifying examination are required. In order to be allowed to take the written qualifying examination in the specialization area, Ph.D. students must have the endorsement of both their faculty adviser and the specialization area chairperson indicating they have completed all required coursework as well as the two specialization area courses. After Ph.D. students have successfully passed their written qualifying examinations, the students' oral defense of the dissertation prospectus will serve as the oral qualifying examination. Doctoral applicants are required to have two successive semesters in residence as full-time students as defined by the Graduate School.

Doctoral students are encouraged to engage in teaching and research as a condition for qualifying for a degree.

Satisfactory Academic Progress Guidelines have been developed by the graduate committee in sociology in order to guide students towards successful completion of their Master's and Ph.D. degrees. The Department has a Policy on Student Dismissal from the Program Due to Poor Performance. Students should consult the Sociology Department website and/or the Graduate Director to access a copy of these guidelines and policies. A detailed description of the doctoral program, including specific requirements and the list of specialization areas, is available on the Sociology Department website: <http://www.clas.wayne.edu/Sociology/>

DEGREE REQUIREMENTS

For Students Enrolled Fall 2013 or Thereafter

1. Students must earn at least 90 credits beyond the B.A. degree, which includes 30 credits in an M.A. degree (which can be transferred from another university in many cases), at least 30 Ph.D. credits in our doctoral program, and 30 dissertation credits. After finishing their required coursework, students working on dissertations must complete four consecutive semesters of Doctoral Dissertation Research (SOC9991-9994). If a student has completed all 30 dissertation credits, but still needs to work on the dissertation, then he or she may register for SOC 9995 (doctoral maintenance credits in sociology). SOC 9995 is zero credits and students pay a set fee to be registered; the student will be considered full-time if registered in this course number. A total of 6-9 credits of the 30 Ph.D. credits may be earned outside the Department of Sociology (see item 5 below). Students with an M.A. degree from another university must file a transfer of credit form with their plan of work (see note about plan of work below), in order to get credit for up to 30 credits from another Master's degree program outside of Wayne State.

2. The following courses will NOT count toward the 30 credits of graduate course work needed for the Ph.D.: SOC 6050 (theory before 1920), SOC 6280 (statistics), and SOC 7200 (research methods). Students who enter the Ph.D. program with an M.A. degree in a field other than sociology are required to take these courses as prerequisites (and some students entering the program with a non-sociology degree may be asked to take some undergraduate theory and methods courses as well, if the Graduate Committee rules this). All of these courses are prerequisites to the Ph.D. coursework and will not count towards the 30 credits needed in the Ph.D. program (see Ph.D. entrance requirements above). All students admitted to the Ph.D. program must also take SOC 6060 (theory after 1920) and SOC 7030 (proseminar), if they have not taken these courses as part of our Master's program. SOC 6060 and SOC 7030 can count towards the 30 credits needed in our Ph.D. program.

3. Advanced Methods Coursework: Other required courses for the Ph.D. program in sociology include SOC 7260 (qualitative methods, 4 credits). Students will then choose either a qualitative track or quantitative track and take one additional methods course in their track. If students choose a qualitative track, they will take SOC 7500 (advanced qualitative methods). If students choose a quantitative track, they will take SOC 6290 (advanced statistics).

4. Specialization Coursework: The Department of Sociology offer Ph.D. specializations in 3 areas: Medical Sociology/Health, Race/Gender Inequality, and Urban/Labor Studies. Students will take at least 12 credits in one of these areas within our Ph.D. program. Students will also complete Ph.D. preliminary examinations in their chosen specialization (see description of the preliminary exam process below).

Race and Gender Inequality: The Sociology of Inequality encompasses a broad range of research topics and methods that revolve around the social causes, manifestations, and consequences of the unequal distribution of resources, opportunities, privileges, power, status, prestige, and various other favorable outcomes/attributes in society. The sociology of inequality is particularly, but not exclusively, concerned with disparities between categories of race/ethnicity, sex, gender, age, sexual orientation, ability (or disability), religious beliefs, and socioeconomic or social class background. The sociology of inequality often considers questions about systems of stratification, as well as mobility (or lack thereof) within such systems, including the intergenerational reproduction of social location.

Students who choose the Race and Gender Inequality specializations must take SOC 8700 (Seminar in Social Inequality) as their mandatory specialization course. Students are also required to take at least eight other credits in this specialization. The following courses can count towards the Race and Gender Inequality specialization:

- SOC 6750 – Urban Health: Cr. 4
- SOC 7100 – Women and Health: Cr. 4
(More relevant for those taking the gender prelim)
- SOC 7330 – Class, Race, and Politics in America: Cr. 3
(More relevant for those taking the race prelim)
- SOC 7350 – Urban Poverty and Racial Segregation: Cr. 3
(More relevant for those taking the race prelim)
- SOC 8400 – Seminar in Sociology of Families: Cr. 3
(More relevant for those taking the gender prelim)
- SOC 8700 – Seminar in Social Inequality: Cr. 4
(Required)
- SOC 8710 – Advanced Seminar in Race/Ethnicity: Cr. 4
(Strongly recommended for those taking the race prelim.)
- SOC 8720 – Advanced Seminar in Sex/Gender: Cr. 4
(Strongly recommended for those taking the gender prelim.)
- SOC 8801 – Topics in the Sociology of Labor: Cr. 4
- SOC 8802 – Topics in Urban Sociology: Cr. 4

Other courses as approved by the Graduate Director.

Medical Sociology applies the perspectives, conceptualizations, theories, and methodologies of sociology to phenomena having to do with human health, illness, and disease. As a specialization, medical sociology encompasses a body of knowledge which places health, illness, and disease in a social, cultural, and behavioral context. Medical Sociology/Sociology of Health studies include: people's attitudes and beliefs about health, disease, disability and medical care providers and organizations; medical occupations or professions and the organization, financing, and delivery of medical care services; medicine as a social institution and its relationship to other social institutions; cultural values and societal responses with respect to health, illness, and disability; the role of social factors in the etiology of disease, especially functional and emotion-related disorders and what are now called stress-related disease.

Students who choose the Medical Sociology specialization must take SOC 7770 (Seminar in Medical Sociology). Students are also required to take at least eight other credits in this specialization

- SOC 5760 – Society and Aging: Cr. 3
- SOC 6750 – Urban Health: Cr. 4
- SOC 7020 – (SOC 5020) End-of-Life Issues: Cr. 3-4
- SOC 7100 – Women and Health: Cr. 4
- SOC 7770 – Seminar in Medical Sociology: Cr. 4
(Required)

Other courses as approved by the Graduate Director.

Urban/Labor Studies focuses on a range of topics related to both our urbanized society and the organization of and experience in the workplace. A sociologist of work is concerned with (but not limited to) questions of: gender and race in the workplace, the transformation of work processes, national and international labor movements including unions as social movements, work and family, labor markets and immigration, workplace organizations like unions, politics, and organizational/workers' culture. An urban sociologist focuses on urban experiences locally, nationally, or internationally, including but not limited to an examination of economic, social, and political transformation of cities throughout the world, with respect to race/ethnicity/gender, immigration, urban social movements, poverty, residential patterns, and urbanization and gentrification. Urban/labor research utilizes all methodologies including statistical analysis, qualitative interviews, participant observation, comparative and historical, and content analysis.

Students who choose the Urban/Labor Studies specialization must take SOC 8805 (Seminar in the Sociology of Urban/Labor Studies). Students are also required to take at least eight other credits in this specialization. The following courses count towards the Urban/Labor Studies specialization:

- SOC 6750 – Sociology of Urban Health: Cr. 4
- SOC 7330 – Class, Race, and Politics in America: Cr. 3
- SOC 7350 – Urban Poverty and Racial Segregation: Cr. 3

- SOC 8710 – Advanced Seminar in Race/Ethnicity: Cr. 4
- SOC 8801 – Topics in the Sociology of Labor: Cr. 4
(Strongly recommended for those taking the labor studies prelim.)
- SOC 8802 – Topics in Urban Sociology: Cr. 4
(Strongly recommended for those taking the urban studies prelim.)
- SOC 8805 – Seminar in the Sociology of Urban and Labor Studies: Cr. 4
(Required)

Other courses as approved by the Graduate Director.

5. **Cognate Coursework:** Students also will take 6-9 credits in a minor or cognate area (either in a department outside of sociology at Wayne State or in a second specialization area within our department), as part of their Ph.D. program. These cognate credits also can be transferred in from an M.A. degree that is not in sociology, pending approval of advisor and Graduate Director.

6. **Plan of Work:** All Ph.D. students must submit a Ph.D. Plan of Work to the Graduate School before 40 credits of coursework have been completed (typically at the end of the student's first full year in the Ph.D. program). This Plan of Work reviews all courses/credits that students will use towards their Ph.D. degrees. Students transferring in Master's credits from another university will need to attach a Transfer of Credit form to their Plan of Work. Students should work with their advisors to complete this plan of work. The plan of work form and the transfer credit form can be downloaded from <http://wayne.edu/gradschool>.

7. **Ph.D. Preliminary Exams:** The written Ph.D. preliminary examination ("prelim") is taken after students complete their Ph.D. coursework, and before they begin the dissertation process. The Ph.D. prelim is given in January and August of each year, typically the week or two before classes resume (students should pay special attention to announcements about prelim dates for each semester). The Ph.D. prelim corresponds to students' areas of specialization; thus, students will elect to take one of the following prelims: medical/health, race/ethnicity, gender, labor, or urban. All Ph.D. prelims consist of 3 parts, taken over a 2 day period. The format is as follows:

- a. **Day One, Morning:** Examination on sociological theory as applied to the student's area of specialization.
- b. **Day One, Afternoon:** Examination on research methods, as applied to the student's area of specialization.
- c. **Day Two, Morning:** Examination on the content of the individual student's research interest as related to the dissertation.

Students should take their prelim soon after they have completed their required Ph.D. coursework in sociological theory, research methods, and their area of specialization. To apply to take the prelim students should fill out the Prelim Application Form found on our website at <http://www.clas.wayne.edu/Sociology/> (and then click on "Forms and Documents"). Students should consult the chair of their specialization area for specific information about the specialization (i.e., courses that satisfy the Ph.D. specialization requirement, reading lists for the prelims, upcoming dates for the prelim, grading committee members, etc.)

Students must pass prelims in full before they can file for Ph.D. candidacy and begin their dissertations. Students receive two chances to pass Ph.D. prelims, but they should attempt to pass prelims on the first try (see guidelines for satisfactory academic progress below). If student fail their prelims a second time, they are dismissed from the Ph.D. program. Only in extremely rare circumstances are students granted a third chance at the prelim. Students should consult their advisors, the chair of their specialization area, and the Graduate Director before taking the prelim to ensure that they are ready to take the prelim. Students can also contact the Graduate Director to find out more about prelim policies.

If students are done with their required Ph.D. coursework but have not passed their prelims, they can enroll in SOC 9990 (pre-dissertation credits) in order to maintain active student status. Students are

sometimes allowed to enroll early in SOC 9991 (the first set of dissertation credits) if they are taking those credits during the semester that they are taking prelims. Students can contact the Graduate Director to talk further about this possibility.

8. Ph.D. Candidacy Status: following successful completion of their Ph.D. coursework and Ph.D. prelims, the student should select a 4-person dissertation committee and fill out a "Recommendation for Ph.D. Candidacy" form (available on the Graduate School's website). A dissertation committee includes three members of the sociology faculty (of which one is the student's advisor) and one outside member (typically a faculty member from another department at Wayne State who has expertise in the student's dissertation topic, but sometimes a student can find a faculty member from outside Wayne State who is willing to serve). All four committee members must sign onto a student's dissertation committee and sign the candidacy form before students are allowed to become a Ph.D. candidate and begin their dissertation credits

9. Dissertation Proposal: The dissertation proposal represents the oral qualifying exam for the purposes of the Graduate School. Examiners will be the student's dissertation committee (as outlined above). The student will submit a dissertation proposal to his/her dissertation committee, after that proposal has been approved in full by the student's advisor. Dissertation proposals include a short introductory chapter, a chapter of literature review, a chapter detailing students' theoretical or conceptual framework (although sometimes this is combined with the literature review), and a methods chapter that proposes how they will engage in their dissertation research. The student will work with their dissertation advisor to finalize the proposal. Once the advisor approves the draft, the student will submit the proposal draft to the entire dissertation committee for review. Committee members will receive at least 3 weeks (preferably one month) to review the proposal draft and decide whether it is defensible. If all committee members agree that the proposal is defensible, an oral defense of the dissertation proposal will be scheduled. Students should consult with their advisors to prepare for this oral defense. If students pass the oral defense of their proposal, their committee members will sign the "Prospectus and Record of Approval" form (available on the Graduate School's website). Once the student defends the dissertation proposal successfully, the student will work with their advisor to gain IRB approval (if necessary) for the dissertation research project and begin data collection. Dissertation proposals range in length, depending on the project. On average, students work on their dissertation proposals for two semesters before they defend them successfully.

Doctoral applicants are required to have two successive semesters in residence as full-time students as defined by the Graduate School.

Doctoral students are encouraged to engage in teaching and research as a condition for qualifying for a degree.

Satisfactory Academic Progress Guidelines have been developed by the graduate committee in sociology in order to guide students towards successful completion of their Master's and Ph.D. degrees. Students should consult the Sociology Department website: <http://www.clas.wayne.edu/Sociology/> and/or the Graduate Director to access a copy of these guidelines.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

Assistantships

Sources of financial aid for graduate students are enumerated in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

A limited number of assistantships are available each year. Awards of assistantships are normally made on or about March 1 for the forthcoming academic year commencing in September. Application for assistantships must be submitted no later than February 1st. Consult the Graduate Director for further details.

Sociology Courses (SOC)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696

5010 Selected Sociological Topics. Cr. 1-4

Topics to be announced in Schedule of Classes. (Y)

5020 (NUR 7515) End-of-Life Issues. (ANT 5430) (ANT 7430) (SOC 7020) Cr. 3-4

Physical, spiritual, legal, economic, political, cultural, and ethical issues at the end of life, examined as stories about individuals, families, and communities. (Y)

5360 Introduction to Medical Sociology. Cr. 4

Topics include the definition of illness, the distribution of death and disease in society, health promotion, help-seeking behavior, socialization of health care providers, the delivery of health care, and health care reform. (Y)

5400 The Family. Cr. 3

An introduction to the sociology of the family: forms of organization, interaction patterns throughout the life cycle, ethnic and cultural differences, conflict and change. Especially useful for students in social work, counseling, family and consumer resources, nursing and education, as well as the other social sciences. (T)

5410 Marriage and Family Problems. Cr. 3

Social and historical context of marriage and family problems. Power, conflict, communication and crisis as they relate to the nature and dynamics of the family. Problem solving techniques; specific family problems: divorce or child abuse. (T)

5540 (ANT 5060) Urban Anthropology. Cr. 3

Prereq: ANT 2100. Socio-cultural effects of urbanization in the developing areas of the world, particularly Africa, Latin America, Southeast Asia and India. The process of urbanization. The anthropological approach in the area of urban studies. (I)

5570 Race Relations in Urban Society. (AFS 5570) Cr. 3

Theoretical orientations applied analytically to enhance an understanding of the patterned structures of privilege in society which are based on race. Inequality, segregation-desegregation, pluralism; social structural frameworks; some attention to social-psychological aspects of topics such as prejudice and racism. (Y)

5700 Seminar in Social Inequality. (SOC 8700) Cr. 4

Sociological framework for analyzing several inequalities in contemporary U.S. society. Race, class, and gender as individual topics and as they intersect in society; inequalities in personal life experience. (Y)

5760 Society and Aging. Cr. 3

Personal, interpersonal and institutional significance of aging and age categories. Sociological dimensions of aging based on physical, social-psychological, and demographic backgrounds. (Y)

5810 Law in Human Society. (CRJ 5810) Cr. 3

Law and the legal structure in its social context. The development, enforcement and interpretation of law; emphasis on the American system of government. Reciprocal effects of law and the society in which it develops; comparative analysis. Designed for pre-law, criminal justice, and political science students, as well as for sociology majors. (Y)

5830 Juvenile Delinquency. Cr. 3

Nature, incidence, causes, treatment, prevention and control of juvenile delinquency. The juvenile justice system as distinguished from the criminal justice system. (Y)

5870 Violence in the Family. Cr. 3

Analysis of the nature of violence in family and family-like relationships; prevalence and types of family violence; social and social psychological correlates of violence in families. (Y)

6050 Sociological Theory Before 1920. Cr. 4

Prereq: SOC 2000. Sociological theorists before 1920, their thought and the historical context in which such thought developed. (Y)

6060 Sociological Theory Since 1920. Cr. 4

Prereq: SOC 6050. Historical and theoretical analysis of sociological thought in the present century. Current trends in sociological theory. (Y)

6080 (PHI 5230) Philosophy of Science. Cr. 4

Prereq: PHI 1850 or PHI 1860 or any course from the Philosophical Problems group. Intensive investigation and discussion of special topics or particular authors in the philosophy of science. Topics and authors to be announced in Schedule of Classes. (Y)

6280 Social Statistics. Cr. 4

Prereq: SOC 4220 or equiv. Basic techniques for organizing and describing social data, measures of central tendency and dispersion, probability theory and hypothesis testing, tests of significance and confidence intervals, measures of association for two variables, analysis of variance. (Y)

6290 Advanced Social Statistics. Cr. 4

Open only to doctoral students. Prereq: SOC 6280. Offered for graduate credit only. Multiple and partial correlation and multiple regression, dummy variable analysis, analysis of covariance, causal models for multi-dimensional contingency tables, path analysis techniques, introductory factor analysis, Markov chains, selected additional topics. (Y)

6455 (UP 6455) Discrimination and Fair Housing. (AFS 6455) (ECO 6455) (PS 6455) (US 6455) Cr. 3

Prereq: senior or graduate standing. Multidisciplinary investigation into the nature, motivations, consequences, and legal/public policy implications of racial/ethnic discrimination in housing and related markets in U.S. metropolitan areas. (B)

6580 Applied Sociology I: Research and Theory in Applied and Clinical Settings. Cr. 4

Prereq: graduate students or advanced social science undergraduates. Topics include the analysis of applied sociological theory and research design and ethical issues in applied and clinical social science projects, with emphasis on writing skills in applied and clinical research and theory. (Y)

6590 Applied Sociology II: Strategies for Changing Social Behavior. Cr. 4

Prereq: written consent of director of applied sociology. Analysis of practical sociological strategies for promoting the change of social behavior. Focus on behavior of the individual, small group, and the community structural levels. Means of evaluating effectiveness of change strategies. Materials drawn from theory and practice in sociology and related social sciences. (Y)

6750 Sociology of Urban Health. Cr. 4

Prereq: graduate standing; undergraduates by written consent of instructor. Review of theories and research on health status and health care delivery issues in urban communities. (I)

7000 Internship in Applied Sociology. Cr. 3

Prereq: SOC 6580 and 7200. Guided internship with Detroit metropolitan private and public organizations arranged and supervised through the Program in Applied Sociology and Urban Studies. (Y)

7010 Special Topics. Cr. 2-16

Topics to be announced in Schedule of Classes (Y)

7020 (NUR 7515) End-of-Life Issues. (ANT 5430) (ANT 7430) (LIS 7635) (SOC 5020) Cr. 3-4

Physical, spiritual, legal, economic, political, cultural, and ethical issues at the end of life, examined as stories about individuals, families, and communities. (Y)

7030 Proseminar. Cr. 4

Prereq: admission to the graduate program. Introduction to the profession of sociology. Delineation of some major subfields, particularly department emphasis. Preparing professional papers, proposals, oral presentations. Development of theoretical models. (Y)

7050 Comparative Schools of Sociological Theory. Cr. 4

Analysis and comparison of diverse theories and schools from a broad perspective. (I)

7100 (SOC 4360) Women and Health. (SOC 2360) Cr. 4

Prereq: graduate standing. Analysis of sociological issues surrounding women and health, including gender differences in morbidity and mortality, the use of health services, interaction with providers, gender differences in mental disorder, alcoholism, drug abuse, gender roles and the professions of physicians and nurses. (Y)

7200 Advanced Survey of Approaches and Techniques of Social Research. Cr. 4

Advanced conceptual treatment of the primary concerns of social research: perspectives and types of social research, research designs, sampling techniques, data-gathering techniques and instrument construction, data analysis and presentation, interpretation and reporting of the results. (Y)

7260 Qualitative Sociology. Cr. 4

Introduction to qualitative theories and methods through a series of research projects. Students collect their own data, process and analyze it. Projects are presented in class; relevant literature and debates are read and discussed. (Y)

7270 Analysis of Evaluation Data. Cr. 3

Prereq: SOC 6280, SOC 6290, SOC 7200, SOC 7260. Focuses on the analysis of causal effects for program evaluation data using both experimental and observational data. Models for the estimation of causal effects from experimental design are presented, including models for individual and cluster-level randomized trials, models for factorial and fractional experimental designs, and models for implementation fidelity. Models for the estimation of causal effects from non-experimental observational data include regression discontinuity analysis, propensity score methods, inverse probability weighting, sensitivity analysis to estimate selection bias and the estimation of effect bounds. (W)

7280 Analysis of Complex Survey Data. Cr. 3

Prereq: SOC 6280, SOC 6290, SOC 7200, SOC 7260. Provides students the tools for analyzing complex, and often longitudinal, data sets with the use of statistical software packages such as SPSS and SAS. (W)

7330 (PS 6050) Class, Race, and Politics in America. (AFS 6100) (HIS 5110) (UP 7030) Cr. 3

Prereq: senior standing. Historical and analytic investigation into the role of class and race in American politics. (I)

7350 (UP 7260) Urban Poverty and Racial Segregation. (AFS 6600) (ANT 7260) (PS 7260) Cr. 3

Prereq: graduate standing. Review of theories of poverty from various economic/political perspectives; historical intervention policies; current literature on interplay of racial, economic, and spatial factors on growing economic inequality among urban whites and African-Americans. Political rationale and meaning of the "underclass" debate. (B)

7460 Seminar in the Sociology of African American Families. Cr. 4

Prereq: graduate standing. Historical, theoretical, and empirical methods of studying African American families. Practical and policy issues relevant to African American families; African Diaspora issues. (I)

7500 Advanced Qualitative Methods. Cr. 4

No credit after SOC 7170. Prereq: SOC 7260. Advanced analysis of qualitative methods, including but not limited to in-depth interviewing, focus groups, ethnography, discourse analysis, field research, narrative analysis. Stages of sampling, data collection, coding, and data analysis. (Y)

7770 Seminar in Medical Sociology. Cr. 4

Prereq: admission to graduate program. Converging issues of theory, research and practice in general hospitals, mental hospitals, and nursing homes. Structure of institutions and the adaptation of individuals within them. (Y)

7990 Directed Study. Cr. 1-6 (Max. 6)

Prereq: written consent of advisor and graduate officer. Not open to doctoral students. (T)

7995 Directed Teaching in Sociology. Cr. 1

Prereq: written consent of advisor and graduate officer. Students work under the direction of a member of the graduate faculty; planning lectures, handling class discussions, preparing exams, and grading introductory sociology students. (I)

7999 Master's Essay. Cr. 1-3 (3 req.)

Prereq: written consent of advisor. (T)

8400 Seminar in Sociology of the Family. Cr. 3

Prereq: graduate standing in sociology or prior coursework in marriage/family area. Theoretical orientations and applications to family issues. Substantive topics will vary but include changing family structures and life styles, socialization/parenting, family/gender roles, family interaction/ communication/power, crisis/stress, divorce/remarriage, and families over the life course. (I)

8700 (SOC 5700) Seminar in Social Inequality. Cr. 4

Sociological framework for analyzing several inequalities in contemporary U.S. society. Race, class, and gender as individual topics and as they intersect in society; inequalities in personal life experience. (Y)

8710 Advanced Seminar in Race/Ethnicity. Cr. 4

Topics include advanced theoretical and methodological debates in the sociology of race and ethnicity, an analysis of the social construction of race, and the structural implications of subordination, discrimination and privilege. (Y)

8720 Advanced Seminar in Sex/Gender. Cr. 4

Topics include advanced theoretical and methodological debates in the sociology of sex and gender, an analysis of the social construction of gender, and the structural implications of subordination, discrimination and privilege. (Y)

8801 Topics in the Sociology of Labor. Cr. 4

Seminar: advanced topics in sociology of work and labor. Topics will include: social nature of work, transformation of the labor process, forms of control in the workplace, resistance, gender and race in the workplace. (Y)

8802 Topics in Urban Sociology. Cr. 4

Seminar: topics in the area; may include: urban enclaves, suburbanization, world cities, gentrification, integration/segregation, urban environmentalism, health in cities. (Y)

8805 Sociology of Urban and Labor Studies. Cr. 4

Graduate seminar which provides the theoretical foundations of the area of urban and labor sociology. Topics include: the labor process, labor markets, labor movements, globalization and work, race and inequality in urban contexts, power and politics, and migration. (Y)

8990 Directed Study. Cr. 2-6 (Max. 6)

Prereq: written consent of advisor and graduate officer. Open only to doctoral students. (T)

8999 Master's Thesis. Cr. 1-8 (8 req.)

Prereq: written consent of advisor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: SOC 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following SOC 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: SOC 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following SOC 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: SOC 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following SOC 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in SOC 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Urban Studies and Planning

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Chairperson: : Kameshwari (Kami) Pothukuchi

Web: <http://www.CLAS.wayne.edu/DUSP/>

Professors

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Professors (Research)

James H. Carr

Associate Professors

Kamishwari Pothukuchi, S. Rayman Mohamed

Assistant Professors

Carolyn G. Loh

Senior Lecturers

Jeffrey Horner

Adjunct Faculty

Janet Anderson, Dennis Burin, Analie Campos, Robert Heuton, Darryl LaFlamme, Carey Beth Lasley, William James, William Quigley, Chade Saghir, Benjamin Tallerico, Peter Webster, Robin West-Smith

Graduate Degrees and Certificate Program

MASTER OF URBAN PLANNING

GRADUATE CERTIFICATE in Economic Development

The planning profession offers a systematic, creative way to influence the future of neighborhoods, cities, rural and metropolitan areas, even the country and the world. Urban and regional planners use their professional skills to serve communities facing social, economic, environmental and cultural challenges by helping residents to:

- Develop ways to preserve and enhance their quality of life
- Find methods to protect the natural and built environment
- Identify policies to promote equity and equality
- Structure programs to improve services to disadvantaged communities, and
- Determine methods to deal effectively with growth and development of all kinds.

The majority of planners work in traditional planning areas such as community development, land use, housing, transportation planning, environmental/natural resource planning, economic development, urban design, historic preservation and community activism. Other planners work in emerging fields such as healthy communities, food systems, energy development, or place-making.

The program seeks to prepare individuals to work with local and state public agencies, nonprofit organizations and for consultants and others in the private sector.

Accreditation: The Master of Urban Planning program is accredited by the Planning Accreditation Board.

Urban Planning (M.U.P. Program)

Admission to this program is contingent upon admission to the Graduate School, for requirements, see Admission, Graduate School, p. 17.

DEGREE REQUIREMENTS: The Master of Urban Planning is offered by this department under the following options:

Plan A: Forty-eight credits including an eight credit thesis.

Plan B: Forty-eight credits including a three credit essay.

The distribution of the forty-eight credits is as follows: twenty-three credits in required courses (listed below), which build the core of the program; selection of elective courses (between thirteen and seventeen credits) to form a topic concentration; and the completion of a capstone component that includes an integrative project (UP 7700, four credits), and a master's essay (UP 7999, three credits) or master's thesis (UP 8999, eight credits). Students are strongly advised to pursue Plan B, but may petition to pursue Plan A.

REQUIRED (CORE) COURSES (Twenty-three credits)

- UP 5010 – Resources and Communication in Planning: Cr. 3
- UP 5110 – Urban Planning Process: Cr. 3
- UP 6120 – Planning Studies and Methods: Cr. 4
- UP 6320 – Quantitative Techniques I: Cr. 4
- UP 6510 – Urban and Regional Systems: Cr. 3
- UP 6650 – Planning and Development Law: Cr. 3
- UP 7010 – Planning and Decision Theory: Cr. 3

Electives: Following completion of at least twelve credits in required courses, students will, in consultation with their assigned faculty advisor, devise a Plan of Work, selecting elective courses that constitute one of three concentrations: Housing and Community Development, Urban Economic Development, or Managing Metropolitan Growth. With the approval of the Director of the Urban Planning Program, a student may design his/her own topic of concentration.

Prior completion of courses equivalent to the program requirements may form a basis for reducing credits in any individual Plan of Work. Possession of a master's degree in an area of study determined to be related to urban planning by the Graduate Program Committee may allow an applicant to elect a program of thirty-two credits, inclusive of capstone requirements.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the Graduate School and the College governing graduate scholarship and degrees; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Liberal Arts and Sciences, p. 299.

Economic Development (Graduate Certificate)

The Graduate Certificate Program in Economic Development equips students with conceptual and methodological tools with which to pursue economic development activities in state, regional and local governments; non-profit and community organizations; private associations such as chambers of commerce; or private businesses and civic institutions engaged in economic development. It is administered in conjunction with the following graduate programs: Sociology, Business Administration, Economics, Employment and Labor Relations, Public Administration, and Urban Planning. The Certificate is designed for students who wish to combine a graduate degree (master's or doctoral) with a specialty in urban, regional and state economic development. It will be awarded only in conjunction with the completion of a graduate degree or to those already holding such a degree.

Admission: Applicants must meet the admission standards of the Graduate School; for requirements, see Admission, Graduate School, p. 17. Eligibility for this program is limited to persons holding

a graduate degree from an accredited educational institution or those actively pursuing a graduate degree at Wayne State University. Applicants must submit a completed application form, personal statement of interest in the program, and Plan of Work.

CERTIFICATE REQUIREMENTS

Students must complete twelve credits in designated courses, including Core Area I, and courses (at least three credits each) from two of the Core Areas II, III, and IV. At least one course at the 7000 level must be elected, and at least one course (in addition to the Area I course) must be elected from outside the student's graduate program.

Students in the certificate program must maintain a grade point average of at least 3.0. Transfer of credit from other institutions may not be applied toward the credits required for the certificate. If a student is concurrently enrolled in a graduate degree program at the University, no more than nine credits from the certificate program may be applied toward that degree.

Academic Scholarship: All course work must be completed in accordance with the academic procedures of the College of Liberal Arts and Sciences and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Academic Regulations for the College of Liberal Arts and Sciences, p. 299 and Academic Regulations, Graduate, p. 32, respectively.

CORE AREA I: Theory and Practice of Economic Development

- UP 6550 – Regional, State and Urban Economic Development: Policy and Administration (PS 6440) (ECO 6650): Cr. 3

CORE AREA II: Economic Development Policy, Politics and Institutions

Business Administration:

- MKT 7460 – International Business: Cr. 3
- MGT 7750 – Labor Relations and Collective Bargaining: Cr. 3

Industrial Relations:

- ELR 7400 – Labor Relations Law in North America: Cr. 3
- ELR 7450 – Employment Relations Law in North America: Cr. 3

Political Science

- PS 6340 – Public Sector Labor Relations: Cr. 3
- PS 7240 – Urban Public Policy (UP 7650): Cr. 3

Urban Planning

- UP 6350 – Housing Policy and Programs: Cr. 3

CORE AREA III: Economics and Finance of Economic Development

Business Administration

- FIN 7870 – International Finance: Cr. 3

Economics

- ECO 6510 - Advanced Public Finance: Cr.4
- ECO 6800 – Adv. Urban and Regional Economics (UP 5820): Cr. 4

Urban Planning

- UP 6310 – Real Estate Development: Cr. 3

CORE AREA IV: Economic Development Management and Analysis Technique

Business Administration

- ACC 7100 – Financial Accounting for Managers: Cr. 3
- B A 7020 – Corporate Financial Management: Cr. 3
- MGT 7660 – Entrepreneurial Management: Cr. 3

Political Science

PS 7250 – Seminar in Urban Administration (UP 7250): Cr. 3

PS 7460 – Program Evaluation: Cr. 3

Sociology

SOC 6580 – Applied Sociology I: Applied and Clinical Settings: Cr. 4

Urban Planning

UP 6650 – Planning and Development Law: Cr. 3

For further information about this certificate program, contact the graduate advisor of the program in which you are enrolled or wish to enroll. Students who are not in a graduate program in applied sociology, business administration, economics, industrial relations, public administration, or urban planning, or who do not already possess a graduate degree in one of these areas, should contact the Department.

Assistantships

Each year the Department offers graduate and/or student assistantships to qualified students. Details and applications may be obtained from the Chairperson.

Sources of financial aid for graduate students are enumerated in the section on Graduate Financial Aid, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Urban Planning Courses (UP)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Resources and Communication in Planning. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Introduction to the use of basic tools and techniques of professional planning practice, including data resources, computer applications, map and plan preparation, presentation techniques. (Y)

5110 Urban Planning Process. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Scope and historical development of planning. Topics relevant to the practice of planning: theory, planning practice, social and physical development policy. (Y)

5310 Current Planning Practice. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Practical application of planning theory to current issues of planning and community development, including land use, economic development, and environmental concerns. (B)

5430 Cities and Food. Cr. 3

Open only to upper-division undergraduates and graduate students. Analysis of urban food systems for their social, economic, health and environmental impacts; discussion of strategies to develop sustainable alternatives. (W)

5610 Managing Public Participation. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Development of conceptual and practical skills for eliciting and managing public participation in planning. Key approaches include community organizing, facilitating consensus building in public deliberations, and negotiation. (Y)

5650 Metropolitan Detroit. Cr. 3

Comprehensive geographic analysis of metropolitan Detroit: city, suburbs and surrounding region. Historical development, physical foundations, economic and political expansion, ethnic and cultural areas, geopolitical infrastructure, social change, present-day problems and current events shaping the area's spatial structure. (Y)

5670 (HIS 5670) Modern American Cities. Cr. 4

History of U.S. cities since World War II. Topics include suburbanization, deindustrialization, gentrification, and globalization. (I)

5820 (ECO 5800) Urban and Regional Economics. (ECO 6800) Cr. 4

Prereq: ECO 2010. Open only to graduate and post-bachelor students; others by consent of instructor. Introduction to the economic foundations of urban problems; land use, housing, poverty, transportation, local public finance; regional industry mix, income, growth and development; the national system of cities and location of firms. (Y)

5999 Special Topics. Cr. 1-4 (Max. 8)

Open only to graduate students. Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. (Y)

6120 Planning Studies and Methods. Cr. 4

Open only to graduate and post-bachelor students; others by consent of instructor. Economic base, population, and land use studies. Discussion of approaches used to solve selected community development problems. (Y)

6210 Urban Design Elements. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Introduction to the role of urban design and the concept of design criteria, design variables, and terminology. (B)

6260 Land Use Policy and Planning. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Role of economics, history, and technology in shaping land use patterns within limits established by public policies and the legal system. Development of conceptual and practical skills for effective ethical intervention in local land markets. (Y)

6310 Real Estate Development. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Process of urban real estate development; emphasis on market analysis, the construction process, and finance. (Y)

6320 Quantitative Techniques I. Cr. 4

Open only to graduate and post-bachelor students; others by consent of instructor. Statistical inference with emphasis on applications including central tendency, dispersion, hypothesis testing, correlation and regression. (Y)

6340 Community Development. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Overview of contemporary community development practice in U.S. cities with emphasis on community-based approaches and the role of non-profit organizations. Housing and economic development aspects of neighborhood revitalization; social and political development. (Y)

6350 Housing Policy and Programs. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Governmental housing policies and programs at the Federal, state and local levels. Role of community-based organizations in housing activities. (Y)

6420 Quantitative Techniques II. Cr. 4

Open only to graduate and post-bachelor students; others by consent of instructor. Multivariate analysis with emphasis on applications, including matrix algebra, vector spaces, linear and non-linear models, principal components analysis, and programming approaches. Material Fee As Indicated In The Schedule of Classes (B)

6455 Discrimination and Fair Housing. (AFS 6455) (ECO 6455) (PS 6455) (SOC 6455) (US 6455) Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Multidisciplinary investigation into the nature, motivations, consequences, and legal/public policy implications of racial/ethnic discrimination in housing and related markets in U.S. metropolitan areas. (B)

6470 Environmental Planning. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Overview of local and regional environmental planning and policy. Rationale and ethics of environmental interventions; major elements of environmental plans and impact statements; current approaches to environmental problems. (Y)

6510 Urban and Regional Systems. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Theory course dealing with concepts, processes and organization of urban and metropolitan regions, primarily focusing on the western world experience. Primary focus on system structure and change in response to market forces, technology, and public policy. (Y)

6520 Transportation Policy and Planning. (C E 6525) Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Introduction to the role of transportation in the planning process involving both regional and urban considerations. (Y)

6550 Regional, State, and Urban Economic Development: Policy and Administration. (ECO 6650) (PS 6440) Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

6570 Local Economic Development: Implementation and Finance. Cr. 3

Prereq: UP 6550. Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Detailed examination of economic development programs available to local governments for commercial revitalization (neighborhood and downtown), and industrial development and redevelopment. (Y)

6650 Planning and Development Law. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Techniques available to guide land development. Concepts in zoning, subdivision regulations, timing and sequence of land development. (Y)

6680 Neighborhood Decline and Revitalization. Cr. 3

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Examination of reasons for neighborhood change and how plans and policies can be specified and implemented for neighborhood improvement. (B)

6700 Geographic Information Systems. Cr. 4

Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Principles and applications of GIS, including spatial statistics, computer graphics, computer cartography. (Y)

6750 (ECO 5520) State and Local Public Finance. (ECO 6520) Cr. 4

Prereq: ECO 2010. Open only to graduate and post-bachelor students; others by consent of instructor. Theory and practice of state and local government taxation and expenditure. Attention devoted to State of Michigan and municipalities in Detroit metropolitan area. Topics include: government organization, voting and mobility models, property and sales taxes, user charges, grants, education expenditure, and economic development. (Y)

6830 Advanced GIS Applications. Cr. 4

Prereq: GPH 6700 or written consent of instructor. Open only to graduate and post-bachelor students; others by consent of instructor. Offered for graduate credit only. Use of GIS for spatial analysis and computer cartography. (Y)

7000 Detroit Revitalization Project. Cr. 0

Offered for S and U grades only. Open only to Detroit Revitalization Fellows. Employment placements in Detroit public and private institutions and companies for the purpose of workshop experience in practical solutions to urban and community revitalization. (T)

7010 Planning and Decision Theory. Cr. 3

Review of political, ethical, professional dimensions of planning; models of planning; communicative and group processes; negotia-

tion and conflict resolution; decision-making in contexts characterized by uncertainty and complexity. (Y) (Y)

7030 (PS 6050) Class, Race, and Politics in America. (AFS 6100) (HIS 5110) (SOC 7330) Cr. 3

Prereq: senior standing. Historical and analytic investigation into the role of class and race in American politics. (I)

7260 Urban Poverty and Racial Segregation. (AFS 6600) (ANT 7260) (PS 7260) (SOC 7350) Cr. 3

Prereq: graduate standing. Review of theories of poverty from various economic/political perspectives; historical intervention policies; current literature on interplay of racial, economic, and spatial factors on growing economic inequality among urban whites and African-Americans. Political rationale and meaning of "underclass" debate. (B)

7550 (PS 7300) Public Administration in the United States. Cr. 3

Emergence and evolution of public administration as both a profession and a field of study. Major normative concerns underlying public administration theory and practice. The role of public bureaucracies in the policy-making process and efforts to achieve an effective and accountable public bureaucracy. Ethical dilemmas and standards for administrators. (Y)

7650 (PS 7240) Urban Public Policy. Cr. 3

Overview of major theoretical approaches to understanding urban/regional problems and politics. Focus on following regional issues: interdependence of populations across municipal borders, municipal fragmentation, racial and economic segregation, mobility of labor and capital within and across regions. (B)

7700 Projects in Urban Planning. Cr. 4

Development and application of research design to specified urban problems. (B)

7800 Internship in Planning. Cr. 1-3

Prereq: urban planning major, written consent of instructor. Practicum for MUP Program. Field placement with public or nonprofit agency assigned by Urban Planning Intern Coordinator. (Y)

7990 Directed Study. Cr. 1-4 (Max. 8)

Independent reading and research. (T)

7996 Research Topics. Cr. 1-4 (Max. 6)

Individual problems in urban planning. (T)

7999 Master's Essay Direction. Cr. 3

Prereq: consent of advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: consent of advisor. (T)

Urban Studies Courses (US)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6050 Independent Field Study. Cr. 2-4 (Max. 4)

Prereq: written consent of instructor. Observation and interpretation of data in the field. (Y)

6455 Discrimination and Fair Housing. (AFS 6455) (ECO 6455) (PS 6455) (SOC 6455) Cr. 3

Prereq: senior or graduate standing. Multidisciplinary investigation into the nature, motivations, consequences, and legal/public policy implications of racial/ethnic discrimination in housing and related markets in U.S. metropolitan areas. (B)

School of Library and
Information Science

Dean: Sandra Yee

Foreword to the School of Library and Information Science

The Information Profession

The School of Library and Information Science (SLIS) prepares information professionals to assume leadership roles in libraries and other information organizations. By emphasizing the practical application of knowledge and skills, students are trained in the core principles of information management- information access, organization, services, and management - as well as emerging competencies such as digitization, competitive intelligence, information architecture, and website development. SLIS faculty research issues that improve library and information services as an essential component to cultural enrichment, knowledge dissemination, economic development, and the overall quality of life.

Qualified information professionals work in varied settings all over the globe. The majority of SLIS graduates currently work in libraries but a variety of diverse career opportunities exist across the public, private, and nonprofit sectors. As organizations continue to view their information as a critical resource and place greater importance on its cultivation, SLIS graduates can be found enjoying engaging and exciting careers throughout business, law, health sciences, publishing, government, archives and museums, communications and media, engineering, academia, and pre-K-12 education. The Master of Library and Information Science (M.L.I.S.) degree is recognized by the American Library Association (ALA) as the first professional degree in this field and serves as the credential for entry-level professional employment.

Graduate Degrees and Certificates

MASTER OF LIBRARY AND INFORMATION SCIENCE

(also offered as a joint degree with a Master of Arts in History)

SPECIALIST CERTIFICATE in Library and Information Science

GRADUATE CERTIFICATES in

Archival Administration

Information Management

Public Library Services to Children and Young Adults

Accreditation

The School of Library and Information Science has been accredited continuously for its master's degree by the American Library Association since 1967. The School's most recent continuing accreditation was granted by the ALA Committee on Accreditation in 2010. The School's next comprehensive accreditation review occurs in the Fall of 2016.

Mission and Goals of the School

Mission Statement

The School of Library and Information Science fosters learning and research about information policies, information fluency, and information accessibility within the global library and information environment. To this end the School combines theories with practices to educate leaders who advance the importance of information in society. The School delivers accessible, high quality education incorpo-

rating professional scholarship and best practices with intentional focus on three concerns:

Library Users and Services

Information Management

Archives and Digital Content Management

Goals and Objectives

RESEARCH: The SLIS will foster, facilitate, and support research by faculty and students.

The SLIS will assist students in appreciating the importance of research within practice, and for developing theoretical approaches to library and information science.

The SLIS will foster student engagement in research, through courses and directed studies, and other independent learning opportunities.

The SLIS will support students in presenting their research in courses, at conferences, and through publication.

The SLIS will support faculty research and scholarly communication.

The SLIS will cultivate faculty engagement with student research experiences and skill development.

TEACHING: The SLIS will encourage and teach professional approaches and a service philosophy.

The SLIS will provide the skills and dispositions for excellence in information service delivery.

The SLIS will offer opportunities to sustain professional growth and achievement, including career mentoring.

The SLIS will expose students to the historical, social, cultural, educational, political, and economic dimensions of information and information agencies.

The SLIS will educate students in the history, philosophies, theories, principles, policies, and ethics of library and information science.

The SLIS will inculcate the importance of career-long professional learning.

SERVICE: The SLIS will be engaged within the diverse communities and world.

The SLIS will seek and facilitate diversity among the faculty and the student body.

The SLIS will address the roles of library and information services in a diverse global society, paying particular attention to the underserved.

The SLIS will facilitate student experience in multicultural and multi-ethnic information environments.

The SLIS will integrate urban issues across its curriculum, activities, and provide opportunities for community engagement and professional growth.

LEADERSHIP: The SLIS will foster leadership in traditional as well as interdisciplinary research, scholarship, and practices that address important information and library issues.

The SLIS will engage with the library community, alumni, and employers.

The SLIS will promote commitment and involvement in professional associations and organizations.

The SLIS will encourage involvement in the community and community organizations.

The SLIS will support service activities and participation in leadership roles at the School, University, local, state, national, and international levels.

TECHNOLOGY: The SLIS will educate within and for an evolving technological world.

The SLIS will continuously evaluate and apply technologies to its teaching, learning, research, and service programs.

The SLIS will enable all students to assess critically the effective uses of technologies in information practice.

The SLIS will assist students in understanding the roles of information technologies.

LEARNING OUTCOMES

Students who successfully complete the Master of Library and Information Science degree at the Wayne State University School of Library and Information Science will be able to:

3. Critically evaluate, synthesize, and disseminate information.
4. Understand how complex interactions between diverse users, societal factors, and information environments affect professional situations.
5. Facilitate access to, and use of, information resources between users and communities.
6. Apply multiple and emerging approaches to the organization of knowledge for varied literatures, records, and historical documents.
7. Articulate and advocate for the foundations of the profession and its basic values and ethics such as intellectual freedom, information access and dissemination, and apply these principles to the advancement of the profession.
8. Determine the significance of intellectual property, security, and privacy issues.
9. Assess, adopt, and utilize the most relevant information technologies.
10. Utilize current management and leadership theories and practices in the workplace.
11. Evaluate and apply library and information science research to problems of professional practice by employing theories, best practices, and assessment strategies to the range of information functions.
12. Practice professional engagement through leadership, service work, lifelong learning and community involvement.

SCHEDULING AND FACULTY LIAISON:

Megen Rehahn Drulia: 106 Kresge Library; (313) 577-8543
e-mail: ay6086@wayne.edu

OFFICE ADMINISTRATION:

Llauna Parker: 106 Kresge Library; (313) 577-2512
e-mail: ab1790@wayne.edu

STUDENT RECORDS:

e-mail: asklis@wayne.edu

E-LEARNING INSTRUCTIONAL SUPPORT:

e-mail: slistech@wayne.edu

ONLINE AND OFF-CAMPUS PROGRAMS:

Stephen T. Bajjaly: 106 Kresge Library; (313) 577-0350

Faculty of the School of Library and Information Science

Office: 106 Kresge Library

Director: Stephen T. Bajjaly

Website: <http://www.slis.wayne.edu>

Professors

Stephen T. Bajjaly, Robert P. Holley (Emeritus), Philip P. Mason (Emeritus), Joseph J. Mika (Emeritus), Ronald R. Powell (Emeritus), Peter Spyers-Duran (Emeritus), Dian E. Walster

Associate Professors

Hermina G. B. Anghelescu, Kafi Kumasi, Gordon B. Neavill

Assistant Professors

Joan Beaudoin, Deborah Charbonneau, Peter Hook, Jen (J.L.) Pecoskie, Xiangmin Zhang

Senior Lecturers

Bin Li

Lecturers

Kimberly Schroeder

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Directory for the School of Library and Information Science

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ADMISSIONS AND RECRUITMENT:

Matt Fredericks: 106 Kresge Library; (313) 577-2446
e-mail: aj8416@wayne.edu

ACADEMIC SERVICES AND SUPPORT:

Jennifer Bondy: 106 Kresge Library; (313) 577-2523;
e-mail: aa1676@wayne.edu

Degree and Certificate Programs

Library and Information Science (M.L.I.S. Program)

For complete information regarding academic rules and regulations of the Graduate School, students should consult *Academic Regulations, Graduate*, p. 32. The following additions and amendments pertain to the degree and certificate programs of the School of Library and Information Science.

The accredited Master of Library and Information Science (MLIS) degree prepares professionals for leadership roles in libraries and other information organizations. By emphasizing the practical application of knowledge and skills, we educate students in the core principles of information management - access, organization, services and support - as well as emerging fields such as digital collections, competitive intelligence, information architecture and data analytics. The MLIS degree is available online with selected classes also offered on-campus.

Admission Requirements (M.L.I.S.)

Admission to the School is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, Master of Library and Information Science applicants must satisfy the following criteria:

1. Possess an undergraduate degree from an accredited college or university.
2. Have an undergraduate g.p.a. of 3.00 or better or possess another degree beyond the bachelor's degree. Applicants with an undergraduate g.p.a. between 2.50 and 2.99 can satisfy this requirement by one of the alternative methods (A or B) as follows:
 - a) Submit evidence of post-baccalaureate graduate course work completed with a g.p.a. of 3.0 or better in a minimum of twelve graduate credits; or
 - b) Submit an official score report for either of the following standardized tests taken within the last five years:

Graduate Record Examination (GRE): official score report for the GRE taken within the last five years. You may register online at <http://www.ets.org/gre>. Wayne State University's institution code is 1898.

For tests taken on or after August 1, 2011: A total score of 294 on the combined verbal and quantitative portions. The verbal portion must have a score of at least 153.

For tests taken prior to August 1, 2011: A total score of 950 on the combined verbal and quantitative portions. The verbal portion must have a score of at least 500.

Miller Analogies Test (MAT): Official score report for tests taken within the last five years must indicate a score of at least 410. For MAT information and testing center locations go to www.milleranalogies.com

3. Meet the SLIS Technology Requirements online at (<http://www.slis.wayne.edu/technology-requirements.php>).
4. Submit a personal statement reflecting relevant personal and academic background and experience. The statement should be a minimum of 250 words and a maximum of 500 words (1-2 pages).
5. Submit a current resume or curriculum vitae.
6. Attend New Student Orientation. MLIS students must attend orientation prior to starting classes. The School views orientation as an

essential element of the MLIS program. Students who do not attend the on-campus orientation sessions will be dropped from their classes. This is not applicable to certificate-only students.

Application:

1. To apply for the M.L.I.S. and/or graduate certificates, please complete the online Graduate Admission Application form at <http://gradadmissions.wayne.edu/apply.php> and submit it with the \$50 application fee.
2. Compose a personal statement of 250 words or less and upload it with the application form. Please visit http://slis.wayne.edu/forms/personal_statement.pdf to access the personal statement guidelines.
3. Upload a current resume or curriculum vitae with your application.
4. Request official transcripts from each university you have attended and have them sent directly to the Office of Graduate Admissions, Wayne State University,

Degree Requirements (M.L.I.S.)

The Master of Library and Information Science is offered only as a Plan C master's program (see Master's Degrees, p. 37) requiring a minimum of thirty-six credits to be distributed as follows: Eighteen credits in the library and information science professional core, and eighteen credits in elective professional courses. A maximum of six credits in courses outside of library and information science may be accepted as cognates. Students must maintain a minimum grade point average of 3.0.

Professional Core (Eighteen Credits)

- LIS 6010 – Introduction to the Information Profession: Cr. 3
- LIS 6080 – Information Technology: Cr. 3
- LIS 6120 – Access to Information: Cr. 3
- LIS 6210 – Organization of Knowledge: Cr. 3
- LIS 7996 – Research in Library & Information Science: Cr. 3

Plus one of the following management courses:

- LIS 7040 – Library Administration & Management: Cr. 3
- LIS 7310 – School Library Media Programs: Cr. 3

Professional Specialization (Eighteen Credits)

A Plan of Work is a formal statement of the goals and prescribed courses of a student's academic program. The library and information science master's degree program requires that a Plan of Work be submitted after completion of nine credits of graduate course work. The Plan is prepared in consultation with the faculty advisor and may be organized around one or more areas of specialization. The emphasis may relate to the type of environment in which the student intends to work or to specialized job activities or functions. Faculty advisors will assist the student in devising an optimal Plan of Work that meets the student's academic goals.

Practicum

The School offers students extensive opportunities for a supervised practicum experience with arts and cultural organizations, institutions and communities throughout metropolitan Detroit, southeast Michigan, and across the country. These opportunities ensure our students have the work experience all employers today want to see. A planned on-site experience that a student may elect for credit under the direction of an information professional and the supervision of a faculty member can be arranged. Applications deadlines will be posted to the SLIS electronic discussion list and website. For more information, please visit <http://slis.wayne.edu/students/classes/practicum.php>.

Library and Information Science (Specialist Certificate)

The Specialist Program in Library and Information Science is a post-master's certificate curriculum designed for the practicing professional who requires specialized competence in an area of librarianship or information management, such as public services, technical services, reference, or information technology. This program enables librarians to:

1. update knowledge in the rapidly changing field of librarianship and information management—the organization, storage, retrieval, and dissemination of the human record;
2. use investigative methods and research findings in problem-solving and in the planning and evaluation of library and information services;
3. advance and extend competencies in areas of specialization begun during the first professional degree program (M.L.I.S.). Specializations may be in a particular library function (such as organization of materials, retrieval of information, information technology, collection development, management, public relations, and adult education), or in a type of information center (such as public, school, academic, and special), or in a service to a specific target group (such as business and industry, early childhood, the elderly, the handicapped, the institutionalized);
4. develop a new specialization responsive to the changing economic, technological, or social climate or to changing conditions in the life of the individual information professional; and/or
5. achieve other professional goals, as needed.

ADMISSION REQUIREMENTS

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition, applicants to the Specialist program in Library and Information Science must satisfy the following criteria:

1. Possess a master's degree in library and information science;
2. Have professional employment experience as a librarian or information specialist;
3. Submit a goals statement reflecting relevant personal and academic background and experience.
4. Submit a current resume or curriculum vitae.
5. Demonstrate professional competence, leadership, and potential for further growth.
6. Meet the SLIS Technology Requirements found online at <http://www.slis.wayne.edu/technology-requirements.php>.

CERTIFICATE REQUIREMENTS

Candidates for the Specialist Certificate in Library and Information Science must complete thirty credits of 6000-8000 level course work providing the appropriate degree of concentration relevant to the student's career goals. Students in specialist certificate programs at Wayne State must maintain a minimum grade point average of 3.0. A Plan of Work and prescribed courses will be developed in consultation with a faculty advisor.

Archival Administration (Graduate Certificate)

The Graduate Certificate in Archival Administration was established both for individuals entering the archival profession and for those with experience in the field. The certificate program provides a professional education to individuals wishing to identify, preserve, and make archival records accessible for use.

The Archival Administration certificate includes courses which teach students basic archival theory, methods and practice of appraisal, arrangement, description, preservation, reference, and the legal and

ethical concerns regarding traditional, visual, and electronic records. In addition, other courses include records management, historical institutions and an archival practicum.

This program is open to students with baccalaureate degrees from accredited universities, students with advanced degrees, and students enrolled in other Wayne State University graduate programs.

Admission: See requirements for admission to the Master of Library and Information Science, under Library and Information Science (M.L.I.S. Program), p. 432.

CERTIFICATE REQUIREMENTS

Students in graduate certificate programs at Wayne State must maintain a minimum grade point average of 3.0. The fifteen-credit Archival Administration Certificate includes six credits of required coursework and nine credits of elective coursework. Students working concurrently on the M.L.I.S. degree and the Certificate in Archival Administration are required to complete an additional six credits beyond the thirty-six required for the M.L.I.S. degree.

Students must complete fifteen credits selected from the following:

REQUIRED COURSES:

- LIS 7710 – Archival Administration: Cr. 3
- LIS 7780 – Description and Access for Archives: Cr. 3
- LIS 7685 – Practicum: Archives (Prerequisite: LIS 7710): Cr. 3

ELECTIVES:

- LIS 6780 – Introduction to Records and Information Management: Cr. 3
- LIS 7450 – Digital Imaging: Cr. 3
- LIS 7730 – Admin. and Preservation of Visual Collections: Cr. 3
- LIS 7740 – Archives & Libraries in the Digital World: Cr. 3
- LIS 7750 – Introduction to Archival & Library Conservation: Cr. 3
- LIS 7770 – Oral History: Cr. 3
- LIS 7885 – Administration of Historical Agencies: Cr. 3

Information Management (Graduate Certificate)

The Graduate Certificate in Information Management (IM) serves the needs of those who wish to enter the rapidly expanding information field. This certificate program seeks to provide students, librarians, and information professionals with the tools needed to use technology efficiently and effectively in gathering, storing, and disseminating information. Computers and productivity tools are helping knowledge workers in accessing information, generating insights, structuring results into a useful format, and producing knowledge simultaneously. The use of these productivity tools by knowledge workers requires that information professionals alter their perceived traditional professional role so that they can provide expanded services and support to these knowledge workers as well as to continue to perform their traditional professional responsibilities.

The program is open to students with advanced degrees in related fields, students enrolled in the Library and Information Science master's program or other Wayne State University graduate programs, and, on a case by case basis, students with baccalaureate degrees from accredited universities who possess the appropriate background experience.

Admission: See requirements for admission to the Master of Library and Information Science, under Admission Requirements (M.L.I.S.), p. 432

CERTIFICATE REQUIREMENTS

Students admitted to the Information Management Graduate Certificate Program will be required to complete a minimum of 15 graduate credits. If this certificate is combined with the Master of Library and Information Science degree, 18 hours in the professional core, 15 hours in the Information Management specialization and 9 hours of elective courses will be required.

Students in graduate certificate programs at Wayne State must maintain a minimum grade point average of 3.0. Students working concurrently on the M.L.I.S. degree and the Certificate in Information Management are required to complete an additional six credits beyond the thirty-six required for the M.L.I.S. degree:

LIS 6080 – Information Technology: Cr. 3
(prerequisite for all Information Management coursework. Please note: LIS 6080 must have been successfully completed within the last three years.)

Information Management Electives:

7410 – Software Productivity Tools: Cr. 3
7415 – Project Management: Cr. 3
7420 – Website Design: Cr. 3
7430 – Building Web-Based Information Services: Cr. 3
7440 – Scripting Languages: Cr. 3
7460 – Database Concepts: Cr. 3
7470 – Information Architecture: Cr. 3
7490 – Competitive Intelligence and Data Mining: Cr. 3
7491 – Data Analytics: Cr. 3
7492 – Information Visualization: Cr. 3
7500 – Information Behavior: Cr. 3
7610 – Health Sciences Information Services and Resources: Cr. 3
7620 – Introduction to Health Informatics and E-Science: Cr. 3
7650 – Practicum: Information Management: Cr. 3
7940 – Human Computer Interaction: Cr. 3
8000 – Seminar in Information Policy: Cr. 3

Library Services to Children and Young Adults, Public (Graduate Certificate)

The Graduate Certificate in Public Library Services to Children and Young Adults is intended for: practicing library professionals who need to advance their competency in the field of children and youth services; SLIS graduate students wishing to pursue a professional career in children and youth services; and graduate students from other disciplines and professions who wish public library and youth services skills to aid their organizations in meeting community needs.

Children and young adults comprise a high proportion of the patrons of public libraries—from large urban library systems to suburban library districts to small rural independent libraries. Services to children and young adults requires specialized training in the development of programs, the creation of effective collections, and the skills necessary to collaborate with community organizations who serve children and young adults. Students completing the certificate will be able to: develop effective programs and outreach services for children and young adults in public libraries; create appropriate collections, both print and electronic, for children and young adults in public libraries; and collaborate with community agencies, such as schools, social services, health organizations, to provide needed instruction and support for children and young adults.

Admission Requirements: Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. In addition the LIS School requires minimally a 3.0 g.p.a. in the baccalaureate degree; a statement of relevant personal and academic background and experience; and a current resume or curriculum vitae.

CERTIFICATE REQUIREMENTS

The certificate may be completed in conjunction with the MLIS degree or as a post-MLIS certificate. The fifteen-credit Public Library Services to Children and Young Adults Certificate program includes nine credits of required coursework and six credits of electives. The nine credits of required courses cover the development of effective services for children and young adults (LIS 7250), outreach and marketing to communities and families (LIS 7250 and LIS 7420) and creating appropriate collections for children and young adults (LIS 7340). Students choose from among a wide range of elective

courses related to children's literature, bibliographic instruction and practical experiences for six hours to complete the certificate.

As with other certificates, nine credits of this certificate may be used toward completion of the Master's degree requirements.

REQUIRED CORE COURSES (nine credits):

LIS 7250 – Programming and Services for Children and Young Adults: Cr. 3
LIS 7420 – Client-Based Website Dvp. for Library and Info. Sci. Prfnls.: Cr. 3
LIS 7340 – Collection Development and Selection of Materials: Cr. 3

ELECTIVE COURSES (six credits from the following courses):

LIS 6510 – (RLL 7720) Survey & Anal. of Curr. Lit. for Chldrn.: PS-Grade 3: Cr. 3
LIS 6520 – (RLL 7740) Survey & Anal. of Lit. for Older Chldrn: Grades 4-8: Cr. 3
LIS 6530 – (EED 6310) Young Adult Literature: Cr. 3
LIS 6550 – (RLL 7780) Storytelling: Cr. 3
LIS 7640 – Practicum: Public Service: Cr. 3
LIS 7850 – Issues in Library and Information Science
(with permission of Certificate Lead Instructor): Cr. 1-3
LIS 7880 – Instructional Methods for Librarians: Cr. 3

Library and Information Science and History (M.A. / M.L.I.S. Joint Degree Program)

Joint-degree programs allow students to earn two degrees with fewer credits than if the degrees are earned separately. Students who enroll in the joint program will earn both the M.L.I.S. and M.A. in History degree. Graduates will increase their job market potential and be prepared to enter a new workforce that is capable of appraising and describing historical records, creating websites, and preserving electronic documents. Applicants to this fifty-seven credit program must be admitted to both the Department of History and the School of Library and Information Science master's degree program. Candidates must complete the required courses as outlined below for both programs in order to graduate. Core courses in one program may not be used as elective courses in the other; fourteen credits of electives may be double-counted.

Requirements: Library and Information Science

Students will complete twenty-nine credits in core and elective LIS courses and seven credits in History elective courses.

REQUIRED LIS COURSES (eighteen credits):

LIS 6010 – Introduction to the Information Profession: Cr. 3
LIS 6080 – Information Technology: Cr. 3
LIS 6120 – Access to Information: Cr. 3
LIS 6210 – Organization of Knowledge: Cr. 3
LIS 7040 – Library Administration and Management: Cr. 3
LIS 7996 – Research in Library and Information Science: Cr. 3

LIS ELECTIVE COURSES (eleven credits)

HIS ELECTIVE COURSES (seven credits)

Total: 36 credits for the M.L.I.S. degree

Requirements: History

Students will complete twenty-eight credits of History core and elective courses and seven credits of LIS elective courses.

REQUIRED HISTORY COURSES (eighteen credits, including):

HIS 7999 – Master's Essay Direction: Cr. 1-3
HIS 7830 – Methods and Research and History: Cr. 3

HISTORY ELECTIVE COURSES (twenty-two credits, including):

A minimum of three History courses in major field
A minimum of two History courses in minor field
Four History courses must be at the 7000 level
At least one 8000 level History seminar

LIS ELECTIVE COURSES (seven credits)

Total: 35 credits for the M.A. History degree

Total for both degrees: fifty-seven credits (no more than fourteen credits may be double-counted). For more information about the Department of History's admission requirements, see History (M.A. Program), p. 368.

Financial Aid, Awards, and Activities

Financial Aid

For a list of sources of institutional graduate financial aid, see the section beginning under Financial Assistance, Graduate, p. 26.

Financial assistance may be available to new and continuing students in the School of Library and Information Science. Scholarships, graduate student assistantships, work-study opportunities and Wayne State University student loans are available. Please note that international students are not eligible for financial aid but may be eligible for School scholarships or assistantships. Details of LIS scholarship opportunities are posted on the School of Library and Information Science web page at the online address: <http://slis.wayne.edu/financialaid.php>. For information on student loans, contact the WSU Office of Student Financial Aid.

The following information reviews employment and financial aid opportunities available to students in the School of Library and Information Science.

Assistantships and Library Employment

Student Assistants: Both the SLIS and University Library System hire students as part-time workers on an hourly pay scale. These jobs may be available at any time. As a graduate student, the student should continuously carry at least four credits during the fall semester, at least four credits during the winter semester, and at least one credit during the spring/summer semester. While classes are in session, students may work no more than twenty hours per week on average. Schedules will be set by the employing department. Interested students should contact the University Library System Dean's Office at 313-577-7710 for library work and the School of Library and Information Science at 313-577-2512 for departmental work.

Graduate Student Assistantships: A graduate student assistantship is designed primarily to provide a measure of economic support for a graduate student while also offering the opportunity to augment academic experience through teaching, research or other academically related activities associated with a student's major field of study. Graduate Student Assistantships should enhance the academic program and support the scholarly activities of the student. Appointments may be made for one, two or three semesters of the calendar year.

Graduate student appointees must be in good academic standing (minimum 3.0 honor point average). The graduate assistant must be enrolled for a minimum number of six graduate credits each per fall and winter semester appointments and one graduate credit for a spring/summer semester appointment.

Assistantship positions provide a salary, tuition scholarship, and subsidized medical and dental insurance. The tuition scholarship provides payment for up to ten graduate credits for each of the fall and winter semesters and up to two graduate credits for the spring/summer semester appointment. The scholarships will pay for only graduate credits listed on a student's Plan of Work. Students are not permitted to complete more credits than is required for the degree.

International Student Workers: International students may also work in the SLIS and for the University Library System. However, international students must meet specific visa and credit hour requirements. Current information is available through the Office of International Students and Scholars.

Placement Services

The School of Library and Information Science offers a variety of career and placement services to meet the needs of its students. The School maintains an extensive listing of positions in libraries and information centers in the Detroit metropolitan area and throughout the United States and Canada. All job announcements are posted to the LIS Jobs listserv. Individual career advising can be scheduled through the school's main office. The School also sponsors an annual job fair providing on-campus interviews with prospective employers. In addition to these services, students may visit Wayne State University Career Planning and Placement Services for career and employment assistance.

Scholarships and Awards

General sources of financial aid for graduate students are enumerated in the section beginning under Financial Assistance, Graduate, p. 26 of this bulletin. The following awards pertain to the School of Library and Information Science. The application period for SLIS scholarships is January 1 through February 15. Application forms and additional information are available on the SLIS website at <http://www.slis.wayne.edu/financialaid.php>.

Isabel James Bath Scholarship. The award recognizes scholastic achievement and provides assistance to students who plan to pursue careers as school, public, or academic librarians in the metropolitan Detroit area.

Rosemary Benedetta Scholarship. This scholarship recognizes scholastic achievement for students pursuing a career in school librarianship (minimum 3.0 g.p.a. required). Applicants must demonstrate financial need.

Bookstock Scholarship. This tuition award was established to provide financial support for students with extreme financial need who demonstrate career plans to serve children or youth reading or literacy services (such as a public librarian or school media specialist) in an underserved, urban community in the Detroit metropolitan area. The scholarship is provided by the Bookstock Fund, which supports reading and literacy initiatives in the Detroit metro area.

Genevieve M. Casey Endowed Scholarship. This scholarship recognizes scholastic achievement, encourage continue progress, and provide assistance to students in the School of Library and Information Science who demonstrate a commitment to serving disadvantage and under-served communities. Applicants must demonstrate a financial need.

LIS General Scholarships: award of variable amount supported by alumnae and other friends of the School of Library and information Science; recognizes students who demonstrate academic achievement, potential for leadership and financial need.

Dean's Merit Scholarships: award of variable amount given annually to students who have an excellent academic record, show high promise of success in graduate study and are interested in working in urban library and information environments. A minimum 3.75 undergraduate g.p.a. is required.

Distinguished Alumnus/Alumna Award: presented to a School of Library and Information Science graduate who has made outstanding contributions to the library and information science field.

Sallie Ellison Memorial Endowed Scholarship: award of variable amount which encourages continued academic progress and provides assistance to students who reflect Ms. Ellison's dedication to inner city, urban, minority communities and to quality library service; recipients will be selected based upon scholastic achievement with a minimum g.p.a. of 3.0, qualities of character, leadership, and financial need. Funds for award are provided by the family and friends of former Purdy Library Director Sallie Ellison.

Judith J. Field Scholarship: award of variable amount recognizing scholastic achievement (minimum 3.0 g.p.a.), qualities of character

and leadership, and financial need. Students must demonstrate a commitment to special librarianship. Award established by Judith J. Field, Senior Lecturer, Library and Information Science Program.

Gloria A. Francis Memorial Endowed Scholarship: award of variable amount, based on academic qualifications, character, and financial need and a special interest and expertise in the areas of rare books and archives; given in honor of the former Rare Books Librarian of the Detroit Public Library.

Margaret Hayes Grazier Endowed Scholarship: award of variable amount, based on academic qualifications, qualities of character and leadership, and financial need; for students pursuing careers in school library media or youth services. Given in honor of former Professor Emerita Margaret Hayes Grazier.

Paulette E. Groen Endowed Scholarship. This scholarship recognizes scholastic achievement (minimum 3.2 g.p.a.) encourage continued progress and provide assistance to students in financing their education in the School of Library and Information Science. Preference given to students who demonstrate a career commitment to public, urban, children and youth and/or special librarianship. Applicants must demonstrate a financial need.

Robert P. Holley Endowed Scholarship: award of variable amount, which recognizes scholarly achievement, encourages continued progress, and provides financial assistance to students in the School of Library and information Science, with a strong preference given to minority applicants, especially inner city, urban students who show an interest in a career in academic libraries; award based on scholastic achievement (minimum 3.0 g.p.a.), qualities of character and leadership, and financial need. Award established by Robert P. Holley, Professor, School of Library and information Science.

Patricia B. Knapp Award: given annually to the graduating M.L.I.S. student who has demonstrated a high level of scholarship and shows great promise of success in a career in library/information service. Given in honor of former School of Library and information Science faculty member Patricia B. Knapp.

Miriam T. Larson Memorial Endowed Scholarship: award of variable amount, based on academic qualifications, character, and financial need; for students pursuing careers in health science library and information centers. Given in honor of former Professor Miriam T. Larson.

Library and Information Science Alumni Scholarships: award of variable amount, available to library and information science students who carry at least six credits per term and are active in student associations and activities; applicants must submit a letter of recommendation from at least one faculty member and agree to remain in the program until completion of the degree. Scholarship winners will be appointed as the LIS student representative on the LIS alumni association board. Awards are based on scholarship, character, and financial need.

Margery A. Long Endowed Scholarship for Archival Administration. This scholarship recognizes scholastic achievement, encourages continued progress, and to provide assistance to students accepted into or enrolled in Archival Administration Graduate Certificate Program.

Joseph J. Mika and Marianne Hartzell-Mika Scholarship. This award recognizes scholastic achievement. A minimum 3.5 g.p.a. is required with preference given to applicants currently working in a library.

Roger S. and Muriel A. Pepper Endowed Scholarship: Award of variable amount, which recognizes scholastic achievement (minimum 3.0 g.p.a.) and provides financial assistance to full-time or part-time graduate or undergraduate students enrolled in or accepted for study in the School of Library and Information Science. Applicants need not demonstrate financial need. Award established by Alice and Barbara Pepper in memory of their parents, Roger S. and Muriel A. Pepper.

Edith B. Phillips Endowed Scholarship: award of variable amount in honor of Professor Emerita Edith B. Phillips which recognizes scholastic achievement, encourages continued progress, and provides assistance to students enrolled in the School of Library and information Science; preference given to students with interest in technical services.

Professional Service Award: awarded to alumni of WSU and other individuals who have made significant and sustained contributions to the Michigan library community over long-standing careers. Consideration is given to active members in Michigan state and regional professional associations and those who have held leadership roles in activities related to their jobs.

Diane M. Rockall Endowed Scholarship: award of variable amount established by Diane M. Rockall to recognize scholastic achievement, to encourage continued progress, and to provide assistance to students in the School of Library and information Science; award based on academic achievement (minimum 3.5 g.p.a.) and financial need.

Clara Lulis Russell Memorial Scholarship: award of variable amount recognizing scholastic achievement (minimum 3.0 g.p.a.) qualities of character and leadership, and financial need. Preference will be given to students who exemplify a capacity to overcome life obstacles similar to Mrs. Russell's who are enrolled in the School of Library and information Science and pursuing public librarianship. Award established by the Friends of the Detroit Public Library through a donation by Kathryn Russell in memory of her mother, Clara Lulis Russell.

Charles Samarjian Memorial Scholarship: award of variable amount which recognizes scholastic achievement, qualities of character and leadership, financial need, and which encourages continued academic progress. Scholarship established in memory of Detroit book dealer Charles Samarjian.

Robert L. Sherwood Scholarship: an award recognizing scholastic achievement (minimum 3.0 g.p.a.), qualities of character and leadership, and financial need. Award established by the Friends of the Herrick District Library to support students specializing in public librarianship and currently employed by the Herrick District Library or a resident of Ottawa or Allegan County.

Lothar Spang Memorial Scholarship. This award recognizes scholastic achievement (minimum 3.5 GPA is required) and provides assistant to students seeking an Urban Librarianship career.

Peter and Jane Spyers-Duran Endowed Scholarship: award of variable amount established by Professor Emeritus and former Dean of University Libraries, Dr. and Mrs. Peter Spyers-Duran to recognize scholastic achievement, to encourage continued progress, and to provide assistance to students in the School of Library and information Science; awarded on the basis of academic qualifications, character, and financial need.

Cymbrie Pratt Trepcynski Endowed Scholarship for Archival Administration. This scholarship recognizes scholastic achievement (minimum 3.0 g.p.a.), encourages continued progress, and to provide assistance to students accepted for study in the Archival Administration in the School of Library and Information Science.

Carolyn R. Williams Endowed Scholarship: award of variable amount, based on scholastic achievement (minimum 3.0 g.p.a.), character and leadership. Preference will be given to applicants from disadvantaged, underserved, urban communities. Named in honor of Carolyn M. Williams, former School of Library and information Science Administrative Assistant.

H. W. Wilson Scholarships: award of variable amount based on academic qualifications, character, and financial need. The scholarship is endowed by the H.W. Wilson Foundation, a long-time supporter of the field of information science.

Student Professional Development Award: Award to support current SLIS presenting at a national or regional conference.

Student Writing Award: an annual competition to encourage and acknowledge excellence in student writing. Documents submitted to the competition are usually papers or other media originally created for classroom assignments; original writing may also be submitted.

Student Activities

Student Organizations of Library and Information Science (SOLIS) is recognized by the university as the organization of students in the School of Library and information Science. Enrolled students automatically become members of the association. Meetings are held throughout the academic year.

American Library Association (ALA)—Student Chapter: Chartered by the ALA in 1988, the Chapter sponsors professional activities, promotes professionalism, and is open to all student ALA members.

Special Libraries Association (SLA)—Student Chapter: Chartered by the SLA in 1989, the group promotes professionalism, sponsors professional activities in special librarianship, and is open to all student SLA members.

American Society for Information Science and Technology (ASIS&T)—Student Chapter: Chartered by ASIS&T, the Chapter sponsors meetings and events throughout the year which promote the organization's goals concerning information technology and its transfer. Membership is interdisciplinary and is open to all student ASIS&T members.

Society of American Archivists (SAA)—Student Chapter: Chartered by the SAA in 1996, the chapter serves as a means of introducing and integrating new archivists into the profession; to engage in professional activities; to promote communication among student members of the Society; to develop leaders of tomorrow's archival profession; and to attract new members into the Society.

Future Librarians for Inclusivity and Diversity (FLID) provides a safe space for up and coming library and information science (LIS) professionals to gain a better understanding of diversity within the profession and underserved populations. In preparation for working with individuals from these groups, FLID's mission will be to expose SLIS students to issues surrounding diverse cultures, lifestyles, physical abilities, and religious beliefs within the LIS field.

This purpose shall be effectuated through promoting awareness by organizing on and off-campus events (social, educational or otherwise) for SLIS students to learn about, exchange ideas, and perhaps resolve issues surrounding diversity and inclusion in LIS.

The National Digital Stewardship Alliance (NDSA) has agreed to partner with Wayne State University's School of Library and Information Science for their first ever student chapter. Students joining this group delve into the issues of Digital Preservation, assist in the development of outreach education for these fragile formats, create educational videos and provide input to the NDSA Wiki. There is also a potential for further research in the arena and assisting to develop standards.

Library and Information Science Alumni Association (LISAA): Library and Information Science graduates have established the Library and Information Science Alumni Association, which is active at the local level. Meetings are held frequently throughout the year covering a broad range of library interests, including public, school, academic, and special libraries. Alumni work with the School of Library and information Science to sponsor alumni gatherings at professional conferences.

Library and Information Science Courses (LIS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6010 Introduction to the Information Profession. Cr. 3

Offered for graduate credit only. The development and place of libraries in society; objectives, functions of and trends in major types of libraries. Core course. Prerequisite for all MLIS courses. (T)

6080 Information Technology. Cr. 3

Prereq. or coreq: LIS 6010. Offered for graduate credit only. Storage and retrieval problems as approached by conventional and nonconventional methods. Computer applications in libraries. Core course. (T)

6120 Access to Information. Cr. 3

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Reference function of the library including print and electronic reference sources; development of interpersonal communication skills to increase effectiveness in response to patrons' information needs; effective search strategies for all types of reference. Core course. (T)

6210 Organization of Knowledge. Cr. 3

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Characteristics of recorded knowledge; identification and description of recorded information; principles of physical description, authority control, and subject access; creation of catalogs and databases. Core course. (T)

6350 Design Thinking and Knowledge. (LDT 6110) Cr. 4

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Exploring broad conceptions of design including all activities involved in generating intentional change via artifacts and experiences; design thinking and knowledge. (Y)

6360 Producing and Evaluating Technology-Based Instructional Materials. (LDT 5140) Cr. 4

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Design and development of instructional materials and media with an emphasis on technology applications integration. Creation and evaluation of instructional media and materials, based on national and state technology standards. (Y)

6510 Survey and Analysis of Current Literature for Children: PS-Grade 3. (RLL 7720) Cr. 3

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Intensive examination of books appropriate for preprimary and primary school children. Analysis of the literary and extra-literary factors that affect the young child's experiences with fiction, nonfiction, and poetry. (F)

6520 Survey and Analysis of Literature for Older Children: Grades 4-8. (RLL 7740) Cr. 3

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Intensive examination of books appropriate for children in grades four through eight. Analysis of literary and extra-literary fac-

tors affecting the older child's experiences with fiction, nonfiction, and poetry. (W)

6530 Young Adult Literature (EED 6310) Cr. 3

Prereq. or coreq: LIS 6010 and LIS 6080. Offered for graduate credit only. Standards for evaluating adolescent literature. Selection of literature for individual pupils in relation to interest and reading ability. Use of classroom collections. Techniques for helping pupils read poetry, drama, and fiction. (S)

6550 Storytelling. (RLL 7780) Cr. 3

Prereq: LIS 6510. Offered for graduate credit only. Selection of appropriate literature and materials for story performance; guided practice in selection and presentation of literature for oral communication by reading aloud, mediated storytelling, and storytelling. (I)

6780 Introduction to Records and Information Management. (HIS 6780) Cr. 3

Offered for graduate credit only. Management of information, including records creation, records inventory and appraisal, retention/disposition scheduling, filing systems, maintenance of inactive records, micrographics, vital records protection, and electronic impact on records management. (Y)

7040 Library Administration and Management. Cr. 3

Prereq or coreq.: LIS 6010 and LIS 6080. Library as an organization in various settings, functional diversification, staffing patterns, program planning, budgeting, performance evaluation, communication, and public relations. Core course. (T)

7050 Public Libraries. Cr. 3

Prereq: LIS 6010 and LIS 7040. Development of concepts introduced in LIS 6010; history, organization and function of public libraries; development of skills necessary to public librarianship. (Y)

7060 Academic Libraries. Cr. 3

Prereq: LIS 6010, 6080, and 7040. Development of topics introduced in LIS 7040; history, organization, and function of the academic library within educational and research institutions; development of management and personnel concepts necessary to academic librarianship. (F)

7070 Special Libraries and Information Centers. Cr. 3

Prereq: LIS 6120, LIS 7040. History, organization, and functions of various types of special libraries and skills necessary to deliver a wide range of services. (W)

7085 Arts/Museum Librarianship. Cr. 1

Prereq: LIS 6120. Fundamental concepts concerning fine arts and museum libraries. (W)

7110 Humanities Information Services and Resources. Cr. 1

Prereq: LIS 6120, LIS 6010, LIS 6080. The nature of the arts and the humanities; information needs of the artist, the humanistic scholar, and the layman; library programs in the arts and the humanities; problems of communication and information in the several humanistic fields of study. Material Fee As Indicated In The Schedule of Classes (Y)

7120 Science and Technology Information Services and Resources. Cr. 1

Prereq: LIS 6120, LIS 6010, LIS 6080. The generation, organization and pattern of bibliographic control of the literature of both the basic and the applied sciences. Characteristics of the scientific method and the scientific community. Bibliographic organization, reference tools and major databases. (I)

7130 Social Sciences Information Services and Resources. Cr. 1

Prereq: LIS 6120, LIS 6010, LIS 6080. Characteristics of the social science disciplines: structure, concepts, methods of investigation. Major figures and significant works in the general field. Bibliographic

control, reference tools, instructional resources. Material Fee As Indicated In The Schedule of Classes (I)

7140 Advanced Reference Service Strategies. Cr. 3

Prereq: LIS 6120. Information needs and seeking behaviors, reference interview techniques, and information literacy. (F)

7160 Advanced Online Searching. Cr. 3

Prereq: LIS 6120, LIS 6010, LIS 6080. Advanced topics in online searching using broad range of databases, including Internet resources. Topics include: sophisticated search strategies, competitive intelligence, retrieval and organization of citations. (W)

7250 Programming and Services for Children and Young Adults. Cr. 3

Prereq: LIS 6010 and LIS 6080 plus three additional LIS credits. Principles and procedures for planning, managing and delivery of public library services to children and young adults. (W)

7310 School Library Media Programs. Cr. 3

Prereq: LIS 6010, LIS 6080, and teaching certificate. Role of library media programs in the school; methods of planning, organizing, and operating such programs; impact of technology upon instruction and library service. Core course. (B)

7320 The Media Specialist as Teacher and Instructional Consultant. Cr. 3

Prereq: or coreq: LIS 6010 and LIS 6080. Instructional functions of the library media specialist in terms of integrating information processing skills in the curriculum through the instructional design process by working in partnership with teachers and applying the principles of teaching and learning theories. (B)

7340 Collection Development and Selection of Materials. Cr. 3

Prereq: LIS 6010; prereq. or coreq: LIS 6080. Philosophy, principles and procedures for provision of materials and a collection that will meet the needs of the library's clientele. Concepts and procedures of community study, intellectual freedom, evaluation of materials, the use of selection aids, and an introduction to the publishing world. (T)

7350 Advanced Instructional Design Tools and Techniques. (LDT 7110) Cr. 4

Prereq: LIS 6350, LIS 6010, LIS 6080. Exploration and application of those techniques, tools and competencies characteristic of expert designers. Topics may include: use of design software, program design, advanced analysis techniques, motivation design, rapid prototyping, reducing design cycle time, designing instruction for diverse learner populations. (Y)

7370 Multicultural Information Services and Resources. Cr. 3

Prereq: LIS 6010 and LIS 6120; prereq. or coreq: LIS 6080. Study of impact of cultural diversity on library services; development of relevant collections; effective interaction with a diverse community. (W)

7400 Urban Libraries. Cr. 1

Prereq: LIS 6010, LIS 6080, LIS 7040. Interdisciplinary approach to planning, managing, and implementing services in urban libraries. (I)

7410 Software Productivity Tools. Cr. 3

Prereq: LIS 6010, LIS 6080 or equiv. Concepts and skills for application and use of productivity tools in contemporary information environment. (Y)

7415 Project Management. Cr. 3

Prereq: LIS 6010, LIS 6080 and LIS 7040. Identification of current information systems and problems, determination and definition of information needs and requirements, evaluation of alternative solutions. (W)

7420 Website Development. Cr. 3

Prereq: LIS 6010 and LIS 6080. Use of Internet protocols (ftp, telnet, smtp, http, gopher), location of Internet resources for library refer-

ence and research uses, construction of World Wide Web resources using HTML and successor technologies. (T)

7430 Building Web-Based Information Services. Cr. 3

Prereq: LIS 6010, LIS 6080; LIS 7420 recommended. Principles of systems administration, file server supervision and local networks, and Internet and the World Wide Web management for library, information science, and archival environments. (F)

7435 Integrated Library Systems. Cr. 3

Prereq: LIS 6010, LIS 6080 and LIS 6210. Practical experience with common Integrated Library Systems; understanding the role of ILS in function of the information organization. Extensive use of computing facilities. (S)

7440 Scripting Languages. Cr. 3

Prereq: LIS 6010, LIS 6080. Basic skills in using scripting languages to program and manipulate data structures for text information in library applications such as databases and websites. (W)

7450 Digital Imaging. Cr. 3

Prereq: LIS 6010, LIS 6080. Overview of imaging, metadata, color theory, digital preservation and graphics, video processing; role this technology plays in presentation and dissemination of information. (F)

7460 Database Concepts. Cr. 3

Prereq: LIS 6010, LIS 6080. Fundamentals of database design and basics of database implementation; focus on library and information science practice. Related and current database management technologies used in hands-on experiences. (Y)

7470 Information Architecture. Cr. 3

Prereq: LIS 6010, LIS 6080. Dissemination of information that affects context, content and user. Associations with website development; use in technical writing, presentation preparation, report generation. (W)

7490 Competitive Intelligence and Data Mining. Cr. 3

Prereq: LIS 6010, LIS 6080. Use of multidimensional databases, competitive intelligence and visualization software, data mining tools; access to disparate information sources to support and provide a structure for fact-based decision making. (F)

7491 Data Analytics. Cr. 3

Prereq: LIS 6080. Key areas of information analytics used by data librarians: quantitative statistics, computer simulation, and data mining tools/techniques. (Y)

7492 Information Visualization. Cr. 3

Prereq: LIS 6080. Analysis of large data sets and drawing insights through use of information technology tools, statistical techniques, charts and graphs. (Y)

7500 Information Behavior. Cr. 3

Prereq: LIS 6010, LIS 6080. Totality of human behavior in relation to sources and channels of information. Information needs and barriers; information seeking, use and dissemination; information poverty and information overload; topics studied in variety of contexts. (F)

7610 Health Sciences Information Services and Resources. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120 and LIS 6210. First in series of three courses, designed to provide students with skills necessary to become health sciences librarians. (B)

7620 Introduction to Health Informatics and E-Science. Cr. 3

Prereq: LIS 6010 and LIS 6080. Overview of health informatics and e-science, and critical role of health information technologies to enhance quality healthcare. (W)

7640 Practicum: Public. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210, and LIS 7040, plus an additional nine LIS credits with written consent of advisor. Offered for S and U grades only. On-site experience in public library/information center under direction of professional librarian and supervision of faculty member; theory and competencies. Seminars to be arranged. (T)

7645 Practicum: Urban Librarianship. Cr. 6

Prereq: admission to graduate certificate program; LIS 6010 and LIS 6080. On-site experience in an urban library under direction of professional librarian and supervision of faculty member. Theory and competencies relevant to the environment. Seminars to be arranged. (T)

7650 Practicum: Health Science. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210, and LIS 7040, plus an additional nine LIS credits with written consent of advisor. Offered for S and U grades only. Planned on-site experience in a health science library/information center under direction of a professional librarian and supervision of a member of the faculty. Theory and competencies relevant to the environment. Recommended for students without experience in these changing informational environments. Seminars to be arranged. (T)

7655 Practicum: Information Management. Cr. 3

Prereq: LIS 6080. Practical experience with technology-based information management under direction of information professional and supervision of a faculty member. Theory and competencies relevant to the project activities. Seminars to be arranged. (T)

7660 Practicum: Academic. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210, and LIS 7040, plus an additional nine LIS credits with written consent of advisor. Offered for S and U grades only. On-site experience in academic library/information center under direction of professional librarian and supervision of faculty member; theory and competencies. Seminars to be arranged. (T)

7670 Practicum: Special. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210, and LIS 7040, plus an additional nine LIS credits with written consent of advisor. Offered for S and U grades only. Experience in special library/information center under direction of professional librarian and supervision of faculty member; theory and competencies. Seminars to be arranged. (T)

7680 Practicum: School Media. Cr. 2-3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210, LIS 7310 and LIS 7320, plus an additional nine LIS credits with written consent of advisor. On-site experience in school library media/information center under direction of professional librarian and supervision of faculty member; theory and competencies. Seminars to be arranged. (T)

7685 Practicum: Archives. (HIS 7685) Cr. 3

Prereq: LIS 7710, plus nine credits in AAC electives (final three AAC electives may be taken as coreq. with LIS 7685). Offered for S and U grades only. Planned on-site experience in an archives under the direction of a professional archivist/librarian and under the supervision of a member of the faculty. Theory and competencies relevant to the environment. Recommended for students without experience in archives. (W,S)

7700 Practicum: Digital Content. Cr. 3

Prereq: LIS 7900, LIS 7910, LIS 7920. Offered for S, M, or U grade only. Practical experience with digital content under direction of professional librarian and supervision of faculty member. Theory and competencies relevant to the environment. Seminars to be arranged. (Y)

7710 Archival Administration. (HIS 7840) Cr. 3

Basic training in archival methods. (F)

7730 Administration and Preservation of Visual Collections. (HIS 7890) Cr. 3

Prereq: LIS 7710 and written consent of instructor. Basic course in the fundamentals of administering a visual collection: evaluation, organization, and control of visual collections in archives, librarians, historical agencies, and museums. (W)

7740 Archives and Libraries in the Digital World. (HIS 7745) Cr. 3

Overview of electronic tools and the role of digital process in libraries and archives. (B)

7750 Introduction to Archival and Library Conservation. (HIS 7810) Cr. 3

Fundamentals of archival and library conservation problems and methods essential for effective preservation management of paper and associated materials. (B)

7770 Oral History: A Methodology for Research. (HIS 7860) Cr. 3

Techniques of gathering data from individuals for use in research, classroom teaching, historical, cultural or other contexts. (F)

7780 Description and Access for Archives. (HIS 7820) Cr. 3

Prereq: LIS 7710 or HIS 7840. Investigation of description of archival materials emphasizing the electronic technologies and standard practices. (Y)

7790 History of Books, Printing, and Publishing. Cr. 3

Prereq: LIS 6010, LIS 6080. Development of writing, the alphabet, early materials, manuscripts, paper making, invention and spread of printing, famous presses, modern methods of print and electronic production. The book as artistic output of the culture and part of the world in which it was produced. (Y)

7850 Issues in Librarianship. Cr. 1-3 (Max. 9)

Prereq: LIS 6010 and LIS 6080. Critical analysis of library research, socio-technological trends, implications for the profession. Topics to be announced in Schedule of Classes. (Y)

7880 Instructional Methods for Librarians. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120. Introduction to library instruction, bibliographic instruction, information literacy, or user education for those expected to provide library instruction to clients. (Y)

7885 Administration of Historical Agencies. (HIS 7880) Cr. 3

The operation of public and private historical agencies, archives and museums. Determination of agency priorities, problems of staffing and finance, governmental regulations, community relations, and professional ethics. (F)

7900 Digital Libraries. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, LIS 6210. Critical issues, theoretical and practical principles of digital libraries. (Y)

7910 Metadata in Theory and Practice. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, and LIS 6210. Theoretical and practical principles of metadata used to provide access to digital objects online. (Y)

7920 Digital Curation and Preservation. Cr. 3

Prereq: LIS 6210. Theoretical principles and practical aspects of digital curation and preservation within libraries, museums, archives and other institutions administering data and digital content. (Y)

7940 Human-Computer Interaction. Cr. 3

Prereq: LIS 7420. Interactions between human beings and computer technologies through usability evaluations and user experience design. (F)

7990 Research and Directed Study. Cr. 1-8 (Max. 8)

Prereq: LIS 6010, LIS 6080; written consent of advisor, program director, and Dean on Petition and Authorization for Directed Study

form prior to registration. Directed study and individual research under faculty guidance. Material Fee As Indicated In The Schedule of Classes (T)

7996 Research for the Information Profession. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120, and LIS 6210. Role of research in development of the profession. Research methods; analysis and evaluation of research reports. Core course. (T)

8000 Seminar in Information Policy. Cr. 3

Prereq: LIS 6010 and LIS 6080. How information policies improve or set constraints on the goals and objectives of libraries and other information organizations. Effect of policies on interpersonal and financial quality of communities. Economic, technical, and ethical policy questions. (Y)

8040 Advanced Library and Information Science Administration and Management. Cr. 3

Prereq: LIS 7040. Theory and practice of upper-level management in libraries, information centers, records and information management environments and archives. (I)

8110 Government Information Policies and Resources. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6120. Selection, acquisition, access, and reference use of major federal, state and local documents. Overview of federal publishing program; the document-generating processes of congress, the judiciary, and the executive departments and regulatory agencies; the federal, state and local documentary system. Federal information policies and role of professional and governmental agencies in formulating policy. Material Fee As Indicated In The Schedule of Classes (I)

8120 Legal Information Resources and Services. Cr. 1

Prereq: LIS 6010, LIS 6080, LIS 6120. Characteristics of legal literature, including federal, state and administrative law; structure of U.S. court system and its publications; introduction to legal databases; special problems in legal reference service and administration; selection and use of basic tools in legal research. Material Fee As Indicated In The Schedule of Classes (I)

8130 Business and Industry Information Resources. Cr. 1

Prereq: LIS 6010, LIS 6080, LIS 6120. Exploration of the structure, functional organization, and information needs of industrial, investment, and business enterprises. Study of bibliographic control of relevant literature, information sources, and specialized services. Material Fee As Indicated In The Schedule of Classes (I)

8210 Advanced Classification and Cataloging. Cr. 3

Prereq: LIS 6010, LIS 6080, LIS 6210. Advanced problems in descriptive cataloging, including different forms of materials, and automated cataloging. Further study of theory, structure and application of classification systems and subject heading lists. Material Fee As Indicated In The Schedule of Classes (I)

8230 Indexing and Abstracting. Cr. 3

Prereq: LIS 6010 and LIS 6080. Indexing and abstracting theoretics, standards, and practice in a range of disciplines, materials, and formats. Vocabulary control and thesaurus construction. Automatic indexing and computerized applications in information processing. (I)

8320 Information Issues and the Digital Environment. Cr. 3

Prereq: LIS 6010 and LIS 6080; plus twelve LIS credits. Fundamentals of production, dissemination, storage, preservation and use of digital records; policy issues. (I)

8370 Cultural Competence for Library and Information Professionals. Cr. 1

Discussion of socio-historical emergence of multiple user communities as a prerequisite for integrating library services into these communities. Focus on critical content. (I)

8410 Topics in Information Management. Cr. 1-3 (Max. 9)

Prereq: LIS 6010, LIS 6080. Current topics affecting information management systems and services. Topics to be announced in Schedule of Classes. Material Fee As Indicated In The Schedule of Classes (T)

8998 Specialist's Research Seminar. Cr. 3

Prereq: written consent of advisor. Advanced research methods and application. (S)

School of Medicine

Dean: Jack Sobel

Calendar, Medical School, 2016 - 2018

The following calendar is a tentative schedule for the M.D. curriculum.

For the general University Academic Calendar, see Calendar, Academic 2016 - 2018, p. 5

Year I Students: 2016 - 2017

Registration and Orientation: Mon.-Fri., Jul. 25 - Jul 29, 2016
Classes Begin: Mon., Aug 1, 2016
Labor Day Recess: Mon., Sept. 5, 2016
Thanksgiving Recess: Thurs. and Fri., Nov. 24-25, 2016
Winter Recess: Tues., Dec. 20, 2016 – Mon, Jan. 2, 2017
Spring Recess: Mon.-Fri., Feb. 20-24, 2017
Classes End: Fri., May 5, 2017

Year II Students: 2016 - 2017

Registration: . Mon. - Fri., Jul. 11-15, 2016
Classes Begin: Mon., Aug. 1, 2016
Labor Day Recess: Mon., Sept. 5, 2016
Thanksgiving Recess: Thurs. and Fri., Nov. 24-25, 2016
Winter Recess: Mon., Dec. 16, 2016 - Thurs., Jan 2, 2017
Martin Luther King, Jr. Recess: Mon., Jan. 16, 2017
Spring Recess: Mon. – Fri., Mar. 13-17, 2017
Classed End: Mon., June 23, 2017

Year III Students: 2016 - 2017

Registration: Mon., - Fri., Jun 13-17, 2016
Classes Begins: Thurs., Jun. 30, 2016
Orientation: Thurs. and Fri., Jun 30- Jul 1, 2016
Independence Day Recess: Mon., July 4, 2016
Labor Day Recess: Mon., Sept. 5, 2016
Thanksgiving Recess: Thurs. and Fri., Nov. 24-25, 2016
Winter Recess: Thurs., Dec. 20, 2016 - Mon., Jan. 2, 2017
Martin Luther King, Jr. Recess: Mon., Jan 16, 2017
Memorial Day Recess: Mon., May 29, 2017
Rotation I: July and Aug., 2016
Rotation II: Sept. and Oct., 2016
Rotation III: Nov. and Dec., 2016
Rotation IV: Jan. and Feb., 2017
Rotation V: Mar. and April, 2017
Rotation VI: May and Jun., 2017
OSCE Examination: To Be Announced
Classes End: Fri., Jun. 16, 2017

Year IV Students: 2016-2017

Registration: Mon. - Fri., June 13-17, 2016
Classes Begins: Fri., July 1, 2016
Period 1: July, 2016
Period 2: Aug., 2016
Period 3: Sept., 2016
Period 4: Oct., 2016
Period 5: Nov., 2016
Period 6: Dec., 2016
Period 7: Jan., 2017
Period 8: Feb., 2017
Period 9: Mar., 2017
Period 10: April, 2017
Period 11: May, 2017
Residency Match Day: Mar., 2017
Classes End: May 31, 2017
Commencement: June, 2017

Year I Students: 2017- 2018

Registration & Orientation: Mon.-Fri., Jul. 24 -28, 2017
Classes Begin: Mon., Jul. 31, 2017
Labor Day Recess: Mon., Sept. 4, 2017
Thanksgiving Recess: Thurs. and Fri., Nov. 23-24, 2017
Winter Recess: Dec., 2017
Martin Luther King, Jr. Recess: Mon., Jan. 15, 2018
Spring Recess: Mar., 2018
Classes End: May 8, 2018

Year II Students: 2017- 2018

Registration: Mon-Fri., July 10-14, 2017
Classes Begin: Mon., Jul 31, 2017
Labor Day Recess: Mon., Sept. 4, 2017
Thanksgiving Recess: Thurs. and Fri., Nov. 23-24, 2017
Winter Recess: Dec., 2017
Martin Luther King, Jr. Recess: Mon., Jan. 15, 2018
Spring Recess: Mar., 2018
Classes End: June 22, 2018

Year III Students: 2017-2018

Registration: Mon-Fri., Jun 5-9, 2017
Orientation/Begin Classes: Jun., 2017
Independence Day Observance: Tues., Jul. 4, 2017
Labor Day Recess: Mon., Sept. 4, 2017
Thanksgiving Recess: Thurs. and Fri., Nov 23-24, 2017
Winter Recess: Dec., 2017
Martin Luther King, Jr. Recess: Mon., Jan. 15, 2018
Memorial Day Recess: Mon., May 28, 2018
Rotation I: July and Aug., 2017
Rotation II: Sept. and Oct., 2017
Rotation III: Nov. and Dec., 2017
Rotation IV: Jan. and Feb., 2018
Rotation V: Mar. and Apr., 2018
Rotation VI: May and Jun., 2018
OSCE Examination: To Be Assigned
Classes End: Jun., 2018

Year IV Students: 2017-2018

Registration: Mon.-Fri. Jun 12-16, 2017
Period 1: July, 2017
Period 2: Aug., 2017
Period 3: Sept., 2017
Period 4: Oct., 2017
Period 5: Nov., 2017
Period 6: Dec., 2017
Period 7: Jan., 2018
Period 8: Feb., 2018
Period 9: Mar., 2018
Period 10: Apr., 2018
Period 11: May., 2018
Residency Match Day: Mar., 2018
Classes End May 31, 2018 Commencement: June, 2018

Foreword to the School of Medicine

The primary mission of the School of Medicine is to improve the overall health of the Michigan community by providing medical and biotechnical knowledge and trained professionals in medical fields.

The school offers educational programs leading to the Doctor of Medicine, Doctor of Philosophy, Master of Science and Master of Public Health degrees. Graduate education in clinical fields, post-doctoral study and continuing medical education programs, as well as a joint M.D.-Ph.D. degree, also are offered. About 300 students are admitted annually to the medical degree program and approximately 400 students are enrolled in doctoral or master's degree study in 19 program areas, including the medical degree/doctoral combined-degree program. More than 900 students are post-graduate trainees as medical residents, post-doctoral fellows, or fellows in 29 clinical research programs. Continuing education programs, seminars and colloquiums serve the faculty and students, as well as professionals throughout the community as a resource for current and ongoing developments in the health sciences. In addition to degree programs, the school offers courses in many basic medical science disciplines appropriate for students in other colleges and schools of Wayne State University. Non-degree enrollment in basic science courses at the graduate level is permitted on a limited basis for qualified students.

Research focusing on human health is the foundation of activities in the School of Medicine. Fundamental and applied research in biomedical sciences, clinical specialties and health care systems is directed by the faculty. Research programs are supported by more than \$140 million annually in research grants, contracts and gifts. Members of the faculty serve on scientific boards, panels, study groups and in professional leadership roles in health care regionally, nationally and internationally. Research facilities are modern, well-equipped and grow continually with the pace of technological advances.

Clinical services provided by the faculty, post-graduates and students are rendered predominantly through the Detroit Medical Center institutions, including five hospitals on the downtown campus, three hospitals outside the campus and in the near suburbs, and many outpatient facilities throughout the greater Detroit area. The school also is affiliated with 14 other hospitals throughout the metropolitan area for the purpose of conducting undergraduate and graduate medical education.

The school's mission includes a responsibility to the population of the Detroit metropolitan region as a whole, both as an educational institution and as a supplier of physicians who are highly skilled providers of health care to staff other institutions and to practice in the community. The school is committed to its educational and health care delivery activities within the context of medical education as a national activity, to which each institution contributes responsibly according to its abilities and resources.

History of the School

The Wayne State University School of Medicine has been operating and granting degrees as a school of medicine since 1868. Originally named the Detroit Medical College, it was founded by Dr. Theodore A. McGraw, a native of Detroit who returned to the city in 1865 after serving for two years in the United States Army as a contract surgeon.

In 1879, a second medical college, the Michigan College of Medicine, opened in Detroit. The two colleges soon united to become the Detroit College of Medicine. In 1919, the Detroit College of Medicine and Surgery, as it was then known, became an official part of the Detroit Board of Education and thus an important unit in the rapidly

developing Colleges of the City of Detroit. In 1933, the name of the Colleges of the City of Detroit changed to Wayne University in honor of American Revolutionary War hero Gen. Anthony Wayne. Wayne University became a state institution in 1956.

Accreditation

Programs in the Wayne State University School of Medicine are accredited by the Liaison Committee on Medical Education, representing the American Medical Association and the Association of American Medical Colleges (the medical doctor program); the Liaison Committee of Graduate Medical Education of the Accrediting Council for Graduate Medical Education and various Residency Review Committees (residency programs); and the Accreditation Council of Continuing Medical Education (Continuing Medical Education).

Graduate Degrees and Certificates

There are two major types of academic programs in the School of Medicine, those leading to the M.D. degree and postgraduate medical education; and those programs in the basic medical sciences which offer Master of Science or Doctor of Philosophy degrees.

DOCTOR OF MEDICINE

DOCTOR OF PHILOSOPHY with a major in:

Anatomy and Cell Biology
Biochemistry and Molecular Biology
Cancer Biology
Immunology and Microbiology
Medical Physics
Molecular Genetics and Genomics
Pathology
Pharmacology
Physiology
Translational Neuroscience

JOINT M.D. / PH.D. IN MEDICINE

MASTER OF SCIENCE with a major in:

Biochemistry and Molecular Biology
Cancer Biology
Immunology and Microbiology
Physiology
Medical Physics

MASTER OF PUBLIC HEALTH

MASTER OF SCIENCE IN BASIC MEDICAL SCIENCES

MASTER OF SCIENCE IN GENETIC COUNSELING

MASTER OF SCIENCE IN MEDICAL RESEARCH

GRADUATE CERTIFICATE in

Clinical and Translational Science (Bridge Program)
Medical Physics
Public Health Practice

Medical School Facilities

The Richard J. Mazurek, M.D., Medical Education Commons is the main education building for the School of Medicine. It provides facilities for pre-clinical and basic science education, basic science departments, computer laboratories and many of the administrative offices. It also is home to the Kado Clinical Skills Center, where students interact with trained patients in a floor of exam rooms, and with

state-of-the-art patient simulators in a number of simulated emergency rooms.

Gordon H. Scott Hall houses research laboratories for basic and clinical programs, lecture halls, administrative offices and the dean's offices.

The Helen Vera Prentis Lande Medical Research Building houses research laboratories for clinical and basic science faculty.

The Louis M. Elliman Clinical Research Building provides research laboratories, experimental surgical suites and specialized research facilities for the Departments of Internal Medicine, Surgery, Pediatrics, and Neurology. It also houses the Cardiovascular Research Institute.

The C.S. Mott Center for Human Growth and Development provides research space for programs in human reproduction, growth and development, as well as researchers with the Perinatology Research Branch of the National Institutes of Health.

The Hudson-Webber Cancer Research Center, adjacent to the Wertz Clinical Cancer Center at Harper University Hospital, provides basic research and collaborative activities near a clinical setting.

The Wayne State University Medical Office Building at Tolan Park houses the offices of the Department of Psychiatry and Behavioral Neurosciences, as well as offices and exam facilities for the Division of Infectious Diseases.

The School of Medicine is closely affiliated with the John D. Dingell Veterans Administration Medical Center, seven Detroit Medical Center hospitals, Henry Ford Hospital, Oakwood Hospital, Crittenton Hospital Medical Center, and other major urban and suburban hospitals in the metropolitan Detroit area. All offer programs for third- and fourth-year medical students.

Wayne State University also works in affiliation with the Barbara Ann Karmanos Cancer Institute, one of the nation's leading cancer research, treatment, education, and outreach centers.

Detroit Medical Center Facilities

The Detroit Medical Center includes:

Children's Hospital of Michigan, which specializes in medical research and treatment of infants and children — in particular, pediatric hematology, oncology, cardiac surgery, and the treatment of renal disease. The hospital houses the state's poison control center.

Detroit Receiving Hospital and University Health Center, which specializes in the treatment of adult emergency/trauma cases, and includes special facilities for the care of emergency psychiatry, burn and spinal injuries. **The University Health Center**, connected to the hospital, is one of the country's largest multidisciplinary outpatient facilities, with twelve primary care service groups and more than twenty-five medical specialty services for ambulatory care.

Harper University Hospital, which specializes in oncology, cardiology, general surgery and a number of additional surgical specialties and subspecialties.

Hutzel Women's Hospital, adjacent to Harper University Hospital, includes among its areas of excellence: obstetrics, gynecology, gynecologic oncology, neonatology, perinatology, and urology. Hutzel Hospital houses the Perinatology Research Branch of the National Institutes of Health and the National Institute of Child Health and Human Development.

Huron Valley-Sinai Hospital, located in a northern suburb, is a general medical-surgical community hospital.

Sinai-Grace Hospital, a full-service hospital in northwest Detroit.

The Rehabilitation Institute of Michigan, incorporates an interdisciplinary approach to help physically disabled patients reach their maximum level of independence.

The Kresge Eye Institute of Wayne State University is a major center for the research and treatment of eye diseases.

The Gershenson Radiation Oncology Center provides high-technology radiation treatment services for the Barbara Ann Karmanos Cancer Institute and all medical center hospitals. A magnetic resonance imaging center and the world's first superconducting cyclotron are housed there.

Shiffman Medical Library and Learning Resources Centers

Director: Sandra I. Martin

Website: <http://www.lib.wayne.edu/shiffman/>

HOURS:

Monday - Thursday: 8:00 a.m. - midnight

Friday: 8:00 a.m. - 8:00 p.m.

Saturday: 12:00 noon. - 8:00 p.m.

Sunday: 12:00 noon. - 8:00 p.m.

Librarians: Katherine Akers, LaVentra Ellis-Danquah, Wendy Gang Wu

Email: askmed@wayne.edu

Circulation and Reserves: 313-577-4118

Reference and Research: 313-577-1094

Information Management and Educational Programs: 313-577-6665

Document Delivery: 313-577-1094

HOURS: Mon.-Thurs., 8:00 am - 12 Midnight; Fri. 8:00 am - 8 pm;

Sat. & Sun. Noon - 8 pm

Library services are provided to graduate students through a variety of programs held at the newly renovated Shiffman Medical Library in the Richard J. Mazurek Medical Education Commons. Resources and services are also available online including over 4700 online journals in the health sciences, a growing number of e-books. Services include reference support and the delivery of documents to the student's desktop. Orientation programs, small group workshops and individualized instruction featuring the latest information resources are available to graduate students throughout their program and may be requested via askmed@wayne.edu. Key services in support of graduate education include: reference service, remote and on-site electronic access to the major biomedical databases including PubMed, Scopus, Science Citation Index, the National Center for Biotechnology Information, Dissertation Abstracts with full text, and an array of electronic tools for effective information management. Materials not available in the WSU Libraries are obtained for graduate students free of charge. Access to the libraries of the University of Michigan, Michigan State University and various specialized collections is also available to graduate students. See <http://www.lib.wayne.edu/shiffman/> or consider sending an inquiry to askmed@wayne.edu for more information about access to the above resources, to sign up for workshops, to ask reference questions, or to make suggestions to the library.

The library's goal is to support each graduate student's individualized needs through graduation and for self-directed, life-long learning. Librarians are available for consultation, for help in identifying useful literature and using the latest file management programs to organize the references at any point during their program. Librarians can also provide students with tips for time-saving ways to use in preparing manuscripts. In addition the library has access to a number of databases to assist students in acquiring external funding. The library staff is committed to acquiring the materials needed to support the array of graduate programs offered by the affiliated colleges. Students are encouraged to identify their needs regularly.

A computer lab is available in the library for graduate students use. The lab contains ten workstations, one adaptive workstation, a stand-alone scanner, and a fully wired teacher's lectern.

Please contact the library for more information about current and planned services. The staff of the Shiffman Library is committed to enabling transparent discovery and access to the best possible resources that expeditiously and effectively meet student and faculty needs.

Student Affairs, Office of

Assistant Dean for Student Affairs and Career Development: Lisa MacLean, M.D.

This office is under the supervision of an assistant dean. Services include: career and supportive counseling; crisis intervention; liaison for referrals; academic advising; guidance for residency application; support for student government and organization activities as well as oversight of Special Events, the Health and Wellness Program and the Medical Student Faculty Mentoring Program. The staff is committed to assisting students in every way possible as the students work toward M.D. degrees. These programs are part of the School's commitment to provide each matriculant with support services so that the rigorous educational program can be presented within as comfortable an environment as possible.

Services and Counseling

Counseling

Appointments for confidential supportive and career counseling can be arranged through the Office of Student Affairs.

Mentoring

Faculty mentors are provided through the Office of Student Affairs for the purpose of giving guidance and support to the medical students throughout their medical school careers.

Health and Wellness

Health and Wellness Program was developed so that each student optimizes healthy coping strategies, finds good balance and achieves academic success throughout medical school.

Email Address: lmaclea@med.wayne.edu

Web Address: <http://studentaffairs.med.wayne.edu/index.php>

Phone: 313-577-1463; Fax: 313-577-0361

Development Office

Office: 540 E. Canfield, 1369 Scott Hall; Detroit, MI 48201

Associate Vice President: Stephen Henrie, CFRE

This Office maintains a staff to support all aspects of fund raising from private sources. It is dedicated to helping meet current challenges and prepare for future opportunities in keeping with the spirit and traditions established by the School's founders.

The Development Office's fund-raising program is based on the premise that the personal and financial involvement of its alumni and friends enhance the quality and reputation of this School. Only through a broad base of volunteer assistance can the School of Medicine secure enough private gifts to help supplement State assistance, tuition, and other means of support essential to providing an outstanding program of education and research.

Alumni Affairs, Office of

Office: 540 E. Canfield, 1369 Scott Hall, Detroit, MI 48201

Associate Director of Alumni Affairs: Dian Puhl

The purpose of the Office of Alumni Affairs is to advance the School of Medicine's (SOM) mission by promoting partnerships of alumni and the School of Medicine. This is done by administrating the SOM

Alumni Association's events and activities including Alumni Annual Fund which supports SOM student organizations and projects; developing programming that brings alumni together; collaborating internally with SOM offices such as Admissions and Student Affairs to connect alumni with medical students; and by identifying, training and appreciating alumni volunteers who use their experiences and leadership skills in ways that benefit the School.

Public Affairs, Department of

Office: 540 E. Canfield, 1320 Scott Hall, Detroit, MI 48201

This department is responsible for the communications and public relations programs for the school. The office publishes alumni and faculty newsletters and a variety of collateral publications. In addition, the department conducts media relations and promotional activities and serves as an information resource regarding faculty, student and alumni achievement related to research, clinical care, and medical education.

Directory for the School of Medicine

University Telephone Area Code: 313

DEAN: 1241 Scott Hall; 577-1335

ADMINISTRATION AND FINANCE:
1241 Scott Hall

CONTINUING MEDICAL EDUCATION:
4201 St. Antoine, U.H.C.-9A; 577-1180

DEVELOPMENT AND ALUMNI AFFAIRS

ALUMNI AFFAIRS: 1369 Scott Hall,
Detroit, MI 48201; 577-3587

DEVELOPMENT: 1369 Scott Hall
Detroit, MI 48201; 577-1429

PUBLIC AFFAIRS: 1369 Scott Hall
Detroit, MI 48201.; 577-1429

PERSONNEL OFFICE:

170 Lande Medical Research Bldg.; 577-9618

INFORMATION: 1102 Scott Hall; 577-1460

M.D. PROGRAMS:

Academic & Student Programs: 310 Mazurek; 577-1450

Admissions: 322 Mazurek; 577-1466

Student Affairs: 315 Mazurek; 577-1463

Financial Aid: 317 Mazurek; 577-1039

Graduate Medical Education, 1560 E. Maple Road,
Troy, MI 48083(248) 581-5900

Records and Registration: 318 Mazurek; 577-1470

Ph.D. AND M.S. PROGRAMS: 1128 Scott Hall; 577-1455

RESEARCH: 1261 Scott Hall; 577-9553

RESIDENCY GRADUATE MEDICAL EDUCATION:

4201 St. Antoine, 9C - U.H.C.; 745-5146

SPONSORED PROGRAM ADMINISTRATION:

5057 Woodward, Suite 13001, 13th Floor; 577-3726

Mailing address for all Scott Hall offices: Wayne State University, School of Medicine, 540 East Canfield, Detroit, Michigan 48201

Mailing address for Mazurek offices: Wayne State University, School of Medicine, 320 East Canfield, Detroit, Michigan 48201

Medicine (M.D. Program)

Educational Goals

The Wayne State University School of Medicine has established a comprehensive set of competencies and institutional learning objectives for the Doctor of Medicine program. This list formalizes the goals of a WSU medical education, and defines what a graduating physician should know to practice medicine in the 21st century. There are six general competencies, including: 1) integration of the basic sciences in medicine; 2) integration of clinical knowledge and skills to patient care; 3) interpersonal and communication skills; 4) professionalism; 5) organizational and systems-based approaches to medicine, and; 6) life-long learning and self-improvement. Each of these competencies is further refined into specific educational objectives which are taught and measured through the medical school curriculum. For more detail about the competencies and educational objectives, go to the School of Medicine website at <http://www.med.wayne.edu/educational%5Fprograms/form.asp>

Admission and Registration (M.D.)

Interim Associate Dean for Admissions: Dr. Kevin Sprague, M.D.

The School of Medicine currently accepts 290 students selected from a large number of applicants to its entering class. Every effort is made to choose those students who possess the academic and personal characteristics which will enable them to succeed in completing the School of Medicine curriculum.

Admission, Academic Recommendations for

Although the Wayne State University School of Medicine prefers that applicants for admission have earned a bachelor's degree, it will occasionally consider students of unusual academic attainment and maturity who have completed three years of college.

Required subjects for baccalaureate preparation are: general physics with laboratory, one year; inorganic and organic chemistry with laboratory, one year each; general biology or zoology with laboratory. Additionally, starting with students admitted for the 2014-2015 academic year, it is strongly recommended that students take a course in statistics, ethics, and biochemistry. The student is urged to select additional subjects which will contribute substantially to a broad cultural background.

It is to be noted that when students are accepted before completion of their premedical requirements, they must maintain a satisfactory scholastic average in their continued premedical work to warrant enrollment in the School of Medicine.

The *Medical College Admission Test* is required of all applicants for admission into the first year class. Students seeking admission into the August freshman class should take this test no later than September of the previous year. After a preliminary review of application credentials, interviews are held with those applicants who warrant further consideration.

Admission to the First-Year Class

The School of Medicine adheres to the acceptance procedures of the Association of American Medical Colleges, including the 'Early Decision Plan.' Admission procedures of the School are:

1. No place in the first-year class shall be offered to an applicant more than one year before the actual start of instruction for that class.

2. Following the receipt of an offer of a place in the first-year class, a student shall be allowed three weeks in which to make a written reply.

3. No student who has at any time been requested to withdraw for any reason from a medical school in which he/she has been registered will be accepted by the WSU School of Medicine. Students who have been dropped for poor scholarship by the School of Medicine should not expect favorable consideration for readmission.

4. Any applicant accepted by the School of Medicine who does not complete enrollment must apply for readmission and meet all requirements in force at the time of such new application.

Admission with Advanced Standing

Students from approved L.C.M.E. American medical schools may be admitted with advanced standing to the third year only, subject to the number of vacancies which may exist in the second and third years. Application for advanced standing should be made not later than July 15. The following requirements must be met:

1. An applicant must have matriculated as a student in an approved United States or Canadian medical school for a period of time equal to that spent by the class in which he/she seeks entrance and must have completed courses equivalent to those required of that class.

2. The applicant must file a completed application form and must present official transcripts from each school attended showing that he/she meets, in full, the entrance requirements for admission to this school.

3. The applicant must be a student in good standing at the medical school from which he/she is withdrawing. A letter of support from the dean of that school is required.

4. The applicant must take such examinations in the courses for which he/she seeks credit as may be required by the faculty of the School of Medicine, such as the USMLE Step 1 examination.

Diversity and Integrated Student Services

Director: DeAndrea Wiggins

This unit supports the medical school to maintain its representation of diversity across economic, personal and social dimensions. This is accomplished through pipeline outreach programs and special projects that present a combination of academic and extra-curricular activities designed to inform high school, undergraduate and post-baccalaureate students about career opportunities in medicine and other health professions, and prepare them to gain admission.

A special program feature of the unit is the Post Baccalaureate Program. This medical school preparatory program offers an opportunity to a small number of applicants who are Michigan residents, and whose undergraduate academic achievement has been compromised by certain disadvantaging factors to gain admission into medical school. Successful completion of this special one year program facilitates entry into medical school for those selected applicants from disadvantaged backgrounds.

Registration Requirements

Physical Examination

Freshman medical students are sent a physical form with registration materials. Each student must present proof of a physical examination at or before registration for the freshman year. Students are also required to be annually tested for TB (skin test or chest x-ray).

Health Insurance

Health insurance is mandatory and students must demonstrate proof of insurance at registration. Students have the option of purchasing the group plan offered by the Medical School, which can be purchased at registration.

Disability Insurance is mandatory and can be purchased at registration.

Criminal Background Check: All accepted applicants to the medical school will be required to complete a criminal background check through AMCAS and Certiphi, the selected vendor for criminal background checks.

Transcripts

Transcripts of all university-level work must be on file in the Registrar's Office for each medical student, including the degree statement from the university from which the student obtained his/her degree.

Fees

All fees are payable in advance. Listed below are the fees in effect as of the publication of this bulletin. They are subject to change at any time without notice by action of the Board of Governors.

MEDICAL STUDENT FEES REGULAR PROGRAM

Annual Tuition: Resident: \$30,452.00; Nonresident: \$63,372.00

(based on fifty credits) (\$1,125.00 Student Service Fee and the \$25.00 Fitness Center fee are included.)

Annual Student Support Fee for Years I - IV: \$825.00

Cancellation of Registration and Refunds

If a student finds it necessary to withdraw from the University, he/she should notify the Office of Student Affairs, Wayne State University School of Medicine, in writing. If notice of withdrawal is sent by mail, the date of its postmark will be considered the effective date. Please see <http://www.med.wayne.edu> regarding the refund schedule.

Books and Equipment

The total four-year cost for books, supplies and equipment is approximately \$4,700. The costs are approximately \$2,800 for the first two years, and \$1,900 for the subsequent two years. Books and equipment are available in bookstores near the School. Student organizations and volunteers also conduct sales of certain equipment and of used books each year.

Financial Aid

The primary responsibility for financing a medical education rests with the student and his or her family. However, assistance is available to students who demonstrate financial need and meet all other eligibility criteria. Students anticipating the need for financial assistance during their medical education should begin researching their options as early as possible.

Students wishing to be considered for financial assistance must begin by completing a Free Application for Federal Student Aid (FAFSA) online at <http://www.fafsa.ed.gov>. Although medical students are automatically considered independent for the purposes of completing the FAFSA, parental data is required if a student wishes to be considered for institutional aid programs. The School of Medicine's priority filing deadline is March 1st of each year. Students interested in attending the WSU School of Medicine should complete the application process by the priority date even if their admission has not yet been confirmed. Complete application instructions and other required documents are available on the School of Medicine's Web site, http://www.med.wayne.edu/student_affairs/financial_aid.

For students who qualify, financial aid is available in the form of loans, grants, scholarships and/or work-study, from federal, state, institutional and/or private sources. Offers of assistance are made to students after they have fulfilled all financial aid requirements and have been admitted to the School of Medicine.

The Admissions Office awards renewable full and partial tuition scholarships to a number of incoming freshmen per year in the amount of resident tuition. Partial tuition Board of Governors grants are awarded each year based on family financial need. Restricted

private donor and private organization funds are awarded to students who demonstrate financial and merit-based criteria and meet the guidelines specified by the donor. Student loans are available through U.S. and Canadian government loan programs and credit-based private educational loan programs. Credit-based private educational loan programs generally require that non-U.S. students provide a credit worthy U.S. co-signer.

Service obligation programs are available to students who are willing to fulfill a commitment of 'service' to the organization providing the funding. Most programs require one year of service for each year of funding. The Health Professions Scholarship Program offered by the Army, Navy and Air Force requires payback as a military medical officer. The U.S. Public Health Service offers the National Health Service Corps scholarship to medical students who commit to practicing primary care medicine in federally designated physician shortage areas for their service payback.

Students may wish to pursue outside sources of aid through community foundations, clubs, churches, employers, hospitals, or other non-profit agencies. Web-based scholarship searches are available at no cost to the user. Students should avoid using fee-based scholarship search services and be wary of scholarship scams.

The School of Medicine Office of Financial Aid is located at 317 Mazurek Education Commons, 320 East Canfield, Detroit, MI 48201 and may be reached by calling (313) 577-1039 or email address financialaid@wyane.edu. For further information please go to <http://financialaid.med.wyane.edu>

Degree Requirements (M.D.)

Vice Dean for Medical Education:

Richard Baker, M.D.

Associate Dean for Undergraduate Medical Education

Patrick D. Bridge, Ph.D.

Assistant Dean for Basic Science Education

Matt Jackson, Ph.D.

Assistant Dean for Clinical Science Education

Kendra Swartz, M.D.

Assistant Dean for Student Affairs

Lisa Maclean, M.D.

Records and Registration Recorder:

JaEsta Jones

Academic Program

The Office of Undergraduate Medical Education is responsible for the overall management, administration, and supervision of the undergraduate medical curriculum. The undergraduate program in medicine consists of a core curriculum in normal and abnormal human biology followed by clerkships in clinical medicine and a year of required and elective experiences.

In the first year, through concentrated study of anatomy, histology, embryology, physiology, biochemistry, and genetics, students learn about the normal structure and function of the human body. In addition, there are units of study devoted to the neurosciences, translational medicine and to an introduction to clinical medicine.

In the second year, through concentrated study of pathology, immunology and microbiology, pharmacology, and psychiatry, students learn the basics of the effects of disease processes on structure and function, and the principles of drug action and therapy. This is followed by interdisciplinary organ system units of study devoted primarily to pathophysiology. Clinicians as well as basic scientists serve as lecturers. Additionally, students take a translational medicine course and through the clinical medicine II course, students receive training in preventive medicine, human values and ethics, physical diagnosis, clinical interviewing, human sexuality, laboratory medicine, and public health.

The third year curriculum consists of clerkships providing inpatient and outpatient clinical education and training in internal medicine, surgery, gynecology/obstetrics, pediatrics, psychiatry, neurology, and family medicine, and an office-based continuity clerkship.

The fourth year is devoted to required and elective study and all students are required to take a subinternship in medicine, and a month of emergency medicine. Within certain guidelines (for example, five of the eight elective periods must be spent in hospitals with a major Wayne State University affiliation), students can select from over 150 electives in 23 disciplines. In addition to the many programs offered by Wayne University, students can take advantage of approved elective programs offered by other institutions.

Students must pass Step 1 of the USMLE (United States Medical Licensing Examination) in order to be promoted from Year II to Year III. Students must also pass Step 2 (both clinical knowledge and clinical skills) examinations in order to graduate.

Matriculation and Promotion

Primary evaluation of students is the responsibility of the faculty of the appropriate departments or courses for Year I-III students, and the Elective Course Coordinators for Year IV students.

Students are evaluated promptly by the primary evaluators, who make recommendations to the Promotions Committee which may include: promotion, re-examination, repetition of all or part of the year, interruption or suspension or probation of a student's program, or dismissal. Questions of suitability for the study and practice of medicine on other than academic grounds are handled according to the University's 'Guidelines for Assisting Persons with Behavioral Problems.'

The Promotions Committee is chaired by the Vice Dean for Medical Education or his/her designee and consists of twelve members: four nominated from the faculty by the President of the Faculty Senate, with the advice and consent of the Executive Committee; four nominated from the Council of Departmental Chairpersons; and four selected by and from the student body. Faculty members serve three-year terms. Student members serve for one year and have full discussion privileges. Their votes are advisory to the Committee.

At appropriate intervals, the Promotions Committee meets to make promotional decisions based upon the student's academic performance. The Committee has the obligation to assure that the rules of the School and the rights of the individuals involved have been fairly met. Decisions are transmitted for the Committee by the Associate Dean for Academic and Student Programs. Students have the right to appeal such decisions by direct petition to the Promotions Committee. In the event of such an appeal, the Committee may gather evidence and hear witnesses. The student involved has the right to be heard by the Committee and may call a reasonable number of witnesses to testify in his/her behalf. The Promotions Committee is the final decision-making body with regard to the promotion process. The student has the right to request the Office of the Provost to review any determinations made by the Promotions Committee of the School of Medicine relative to academic performance on his/her part.

Leaves of Absence may be granted to students with documented health problems (medical leave of absence), or to those with appropriate educational opportunities outside the School (educational leave of absence), for personal reasons (personal leave of absence); or the medical school can put students on an administrative leave of absence.

Any students whose enrollment is continued by the Promotions Committee, or, in the case of Leaves of Absence, by the Vice Dean for Medical Education or his/her designee, is considered to be making academic progress toward the M.D. degree.

Grading

The grading system throughout all years of the School's curriculum is: 'H' (Honors), 'S' (Satisfactory), 'U' (Unsatisfactory), 'I' (Incomplete). The exception to this rule is Year 3 where an S+ (Satisfactory with commendations) can be achieved in all clerkships except the Continuity Clinic Clerkship. The minimum passing grade is 'S.' In order to be promoted from year to year, students must obtain 'S' on all course work and complete all requirements established by course directors.

Graduation Requirements

A student regularly registered in the School of Medicine may receive the degree Doctor of Medicine upon the fulfillment of the following requirements:

1. He/she must be at least 21 years of age, must exhibit good moral character, and must be suitable for the practice of medicine.
2. He/she must have satisfactorily completed all the academic requirements established by the School.
3. He/she must have paid all fees in full, and have all holds released.
4. He/she must pass Step 1 and pass Step 2 (clinical knowledge) and Step 2 (clinical skills) of National Board examinations.

M.D. Curriculum

YEAR 1 (MD1): Students must take eight required courses

- MD1 5000 – Gross Anatomy: Cr. 12
- MD1 5100 – Histology/Embryology: Cr. 6
- MD1 5200 – Biochemistry: Cr. 6
- MD1 5300 – Physiology: Cr. 6
- MD1 5400 – Medical Genetics: Cr. 3
- MD1 5500 – Clinical Nutrition: Cr. 3
- MD1 5600 – Neuroscience: Cr. 8
- MD1 5700 – Clinical Medicine I: Cr. 4
- MD1 5720 – Translation Medicine I: Cr. 2

YEAR 2 (MD2): Students must take six required courses

- MD2 6000 – Immunology/Microbiology/Infectious Disease: Cr. 10
- MD2 6100 – Pharmacology: Cr. 5
- MD2 6200 – Psychiatry: Cr. 3
- MD2 6300 – Pathobiology: Cr. 5
- MD2 6400 – Pathophysiology: Cr. 18
- MD2 6500 – Clinical Medicine II: Cr. 7
- MD2 6520 – Translational Medicine 2: Cr. 2

YEAR 3 (MD3): Students must take eight required courses and one elective or vacation month. Students not taking the elective in Year 3 must complete an additional elective in Year 4.

- MD3 7000 – Continuity Clinical Clerkship: Cr. 3
- MD3 7100 – Family Medicine Clerkship: Cr. 4
- MD3 7200 – Internal Medicine Clerkship: Cr. 8
- MD3 7300 – Pediatrics Clerkship: Cr. 8
- MD3 7400 – Surgery Clerkship: Cr. 8
- MD3 7500 – Psychiatry Clerkship: Cr. 4
- MD3 7600 – Obstetrics and Gynecology Clerkship: Cr. 8
- MD3 7700 – Neurology Clerkship: Cr. 4

YEAR 4 (MD4): Students must take three required courses, including one sub-internship, and five electives. If an elective month was not taken in Year 3, students must take an additional elective in Year 4.

Required Sub-internship (choose 1 of 4 sub-internships below to fulfill the requirement):

- MD4 8210 – Family Medicine Subinternship: Cr. 7
- MD4 8470 – Internal Medicine Subinternship: Cr. 7
- MD4 9210 – Pediatrics Subinternship: Cr. 7
- MD4 9490 – Surgery Subinternship: Cr. 7

Required Course:

MD4 8160 – Emergency Medicine Subinternship: Cr. 7

Required MD4 Electives: six courses to be chosen from MD4 courses not taken to satisfy any of the above requirements.

Cooperative Electives Exchange Program

The Deans of the four Michigan medical schools, acting as the Michigan Medical Schools Liaison Committee, have signed cooperative agreements allowing students full credit for courses taken as electives at any one of the participating medical schools: Wayne State University, University of Michigan, Michigan State University and Michigan State University College of Osteopathic Medicine. The Deans intend the program 'to make the best use of one another's resources to the greater advantage of the student and the Michigan community. By allowing medical students full academic credit for elective courses taken at any one of our respective medical schools, our students will be able to share productively in the learning and training opportunities of the entire State.'

Under the course exchange program, election of an 'away course' at one of the cooperating schools requires approval of both the parent and host institutions. Enrollment, matriculation and fee payments continue without alteration at the parent institution; however, students are responsible for all travel and living expenses incurred during the 'away' elective. Additional information can be obtained from Records and Registration, School of Medicine. Under the course exchange program, election of an 'away course' at one of the cooperating schools requires approval of both the parent and host institutions. Enrollment, matriculation and fee payments continue without alteration at the parent institution; however, students are responsible for all travel and living expenses incurred during the 'away' elective. Additional information can be obtained from Records and Registration, School of Medicine.

Medical Doctor Courses (MD1 - MD4)

The following courses, numbered 5000-9999, are offered for graduate credit only. For interpretation of numbering systems, signs and abbreviations, see Signs and Abbreviations, p. 696.

All courses listed below are categorized by year-level of instruction in the Doctor of Medicine program. All Year 1 courses have a code of MD1 and course numbers range from 5000-5999; Year 2 courses are coded MD2 and range from 6000-6999; Year 3 courses are coded MD3 and range from 7000-7999; and Year 4 courses are coded MD4 and range from 8000-9999. Students can only register for courses corresponding to the year of Doctor of Medicine program to which they have been officially promoted. Exceptions must be approved by the Medical School prior to registration, unless otherwise specified in the course descriptions (e.g., Year 3-4 electives).

Medical Doctor Courses - First Year (MD1)

5000 Gross Anatomy. Cr. 12

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Normal structure and organization of the human body; lectures, small group presentations, radiologic anatomy sessions, and dissection of the human body. (Y)

5100 Histology/Embryology. Cr. 6

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Normal appearance of human cells, tissues and organs; structure and functional role in the human body and their development in the human embryo and fetus. (Y)

5200 Biochemistry. Cr. 6

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Principles of medically-related biochemistry; structure and function of proteins, energy metabolism, biochemical pathways, and gene expression. (Y)

5300 Physiology. Cr. 6

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Normal function of the human body: cells, tissues, musculo-skeletal, hematopoietic, and other organ systems. (Y)

5400 Medical Genetics. Cr. 3

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Basic genetic principles and tools of molecular genetics; preparation for application of these concepts in clinical practice. (Y)

5500 Clinical Nutrition. Cr. 3

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Concepts related to clinical nutrition, and their application; function of nutrients, how nutrients are used in the body, role of nutrients in disease. (Y)

5600 Neuroscience. Cr. 8

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Anatomical, physiological, biochemical, and behavioral parameters of neuroscience: neuroembryology of nervous tissue and organization of major centers and nerve pathways in human central nervous system. (Y)

5700 Clinical Medicine I. Cr. 4

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Knowledge, skills and attitudes needed for clinical practice of medicine: medical interviewing skills, doctor/patient communication skills, physical exam skills, role of professionalism in ethics and medicine. (Y)

5710 Clinical Medicine I: Small Group. Cr. 0

Coreq: MD1 5700. Open only to students in MD Program of School of Medicine. Clinical practice, including medical interviewing, doctor/patient communication, physical exam skills, role of professionalism in medicine. (Y)

5720 Translational Medicine I. Cr. 2

Open only to students in the Medical School MD program. Students learn the importance of the scientific method to determine causation in health and sickness and develop the necessary skills to translate current clinical research to patients. (Y)

5800 Directed Study. Cr. 1-12

Open only to students in Medical School MD Program. Offered for S and U grades only. Prereq: prior consent of Assistant Dean for Basic Science Education. Individualized curriculum designed to enhance knowledge and skills in preparation for the next phase of medical school. (Y)

6520 Translational Medicine II. Cr. 2

Open only to students in the Medical School MD program. Students build upon the knowledge and skills learned in the Year 1 Translational Medicine course, focusing on the scientific method to determine causation in health/sickness and skills to translate current clinical research to patients. (Y)

Medical Doctor Courses - Second Year (MD2)

6000 Immunology / Microbiology / Infectious Disease. Cr. 10

Open only to students in Medical School MD Program. Offered for S, U and H grades only. Understanding host-parasite relationships, including workings of the innate and acquired immune protective systems. (Y)

6100 Pharmacology. Cr. 5

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Understanding biochemical and molecular mechanisms of drug action with the anatomical distribution of drugs in the body and the physiologic responses to drugs. (Y)

6200 Psychiatry. Cr. 3

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Recognizing, assessing, and treating the common psychiatric disorders seen in adults and children in the general hospital setting. (Y)

6300 Pathobiology. Cr. 5

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Introduction to mechanisms and cellular consequences of human disease. (Y)

6400 Pathophysiology. Cr. 18

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Interdisciplinary course; pathophysiology of the organ systems, including respiratory, hematologic, cardiovascular, renal, dermatology/connective tissue, endocrine, gastrointestinal, and neurologic systems. (Y)

6500 Clinical Medicine II. Cr. 7

Open only to students in Medical School MD Program. Offered for S, U or H grades only. Knowledge, skills and attitudes needed for the clinical practice of medicine, learned through continued instruction in advanced physician-patient communication skills; additional competencies in physical examination and diagnosis. (Y)

6510 Clinical Medicine II: Physical Diagnosis. Cr. 0

Coreq: MD2 6500. Open only to students in medical School MD Program. Advanced physician-patient communication skills; additional competencies in physical examination and diagnosis. (Y)

6520 Translational Medicine II. Cr. 2

Open only to students in the Medical School M.D. program. Students build upon the knowledge and skills learned in the Year 1 Translational Medicine course, focusing on the scientific method to determine causation in health/sickness and skills to translate current clinical research to patients. (Y)

6600 Directed Study. Cr. 1-12

Prereq: prior consent of Assistant Dean for Basic Science. Open only to students registered in the Medical School M.D. Program. Offered for S and U grades only. Students participate in an individualized curriculum designed to enhance their knowledge and skills in preparation for the next phase of medical school. (Y)

6610 Independent Study: Step 1 Preparation. Cr. 0

Students will develop and implement independent study plans in preparation for taking the mandatory Step 1 United States Medical Licensing Examination (USMLE). (Y)

6650 Step 1 Summer Preparation Cr. 2-8

Prereq: written consent of Assistant Dean for Basic Sciences. Open only to Year 2 MD students. Students will be provided the opportunity to enhance their Step 1 examination readiness through formal classroom and independent learning. (Y)

Medical Doctor Courses - Third Year (MD3)

7000 Continuity Clinical Clerkship. Cr. 3

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S and U grades only. Coreq: pediatric clerkship, family medicine clerkship with an elective or vacation month, and internal medicine clerkship. A continuity experience in which the basic skills, knowledge and attitudes necessary to manage the care of patients in an out-patient primary care setting are learned. (T)

7100 Family Medicine Clerkship. Cr. 4

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must register for an elective month or vacation month along with the family medicine clerkship. The elective or vacation must be taken the month prior to, or the month immediately following the family medicine clerkship. Students must also take the pediatric, internal medicine, and continuity clinic clerkships to fulfill the remaining primary care block requirement. Practice of family medicine learned in a community-based primary care setting; experiencing care and treatment of children, adolescents, and adults with acute and chronic disease. (T)

7200 Internal Medicine Clerkship. Cr. 8

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must take the pediatric clerkship, the family medicine clerkship with an elective or vacation month, as well as the continuity clinic clerkship to fulfill the remaining primary care block requirement. Practical experience in recognition, evaluation, diagnosis, and management of hospitalized adult patients with acute non-surgical illnesses. (T)

7300 Pediatrics Clerkship. Cr. 8

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must take the internal medicine clerkship, the family medicine clerkship with an elective or vacation month, as well as the continuity clinic clerkship to fulfill the remaining primary care block requirement. Practical experience in recognition, evaluation, diagnosis, and management of pediatric patients in in-patient and ambulatory care settings. (T)

7400 Surgery Clerkship. Cr. 8

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must take the psychiatry, OB/GYN, and neurology clerkships to fulfill the remaining specialty block requirement. Practical experience in recognition, evaluation, diagnosis, and management of patients in general surgery or surgical sub-specialties. (T)

7500 Psychiatry Clerkship. Cr. 4

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must take the surgery, OB/GYN, and neurology clerkships to fulfill the remaining specialty block requirement. Practical experience in recognition, evaluation, diagnosis, and management of patients with behavioral and emotional brain disorders. (T)

7600 Obstetrics and Gynecology Clerkship. Cr. 8

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must take the psychiatry, surgery, and neurology clerkships to fulfill the remaining specialty block requirement. Practical experience in recognizing, evaluating, diagnosing, and managing the health care of women in a variety of inpatient and outpatient settings. (T)

7700 Neurology Clerkship. Cr. 4

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S, S+, U or H grades only. Coreq: student must take the psychiatry, OB/GYN, and surgery clerkships to fulfill the remaining specialty block requirement. Practical experience in recognition, evaluation, diagnosis, and management of patients with disorders of the nervous system. (T)

7800 Directed Study. Cr. 1-12

Open only to students in Medical School MD Program registering for Year 3 courses. Offered for S and U grades only. Prereq: prior consent of the Assistant Dean for Clinical Education. Individualized curriculum designed to enhance knowledge and skills in preparation for the next phase of medical school. (T)

7810 Independent Study: Step 1 Extended Prep. Cr. 0

Prereq: completion of all Year 2 course work; prior consent of academic and student programs. Open only to students in Medical School MD program. Students use curricular time for continued preparation for the Step 1 board exam. (Y)

7815 Year 3 General Elective Month. Cr. 3

Open only to students in MD Program. Prereq: completion of Year 2 course work; prior consent from academic and student programs. (Y)

7820 Examination Preparation. Cr. 0

Prereq: completion of all Year 2 course work. For use in preparation for a BME re-examination. (T)

Medical Doctor Courses - Fourth Year (MD4)

8000 Fabric of Society. Cr. 6

Offered for S, U or H grades only. Prereq: good academic standing; prior consent of faculty. Students who received cocurricular elective credit in Year 1-2 must register for this course in Year 4 to receive credit. Work with vulnerable populations and stigmatized patients including the elderly, homeless, addicted, handicapped, pregnant teens and others. (T)

8010 Humanities in Medicine. Cr. 6

Offered for S, U or H grades only. Prereq: good academic standing; prior consent of faculty. Students who received cocurricular elective credit in Year 1-2 must register for this course in Year 4 to receive credit. Work with vulnerable populations and stigmatized patients including the elderly, homeless, addicted, handicapped, pregnant teens and others. (T)

8020 Medical Education. Cr. 6

Offered for S, U or H grades only. Prereq: good academic standing; prior consent of faculty. Students who received cocurricular elective credit in Year 1-2 must register for this course in Year 4 to receive credit. Processes involved in evaluation of courses; coordination of the assessment of Year 1-2 courses. (T)

8025 Curriculum Development. Cr. 6

Prereq: Prior approval of Assistant Dean for Basic Science Education. (Y)

8030 Medicine and Political Action. Cr. 6

Offered for S, U or H grades only. Prereq: good academic standing; prior consent of faculty. Students who received cocurricular elective credit in Year 1-2 must register for this course in Year 4 to receive credit. Observation and participation in medical areas that are politically in the forefront of medicine today. (T)

8035 Students Teaching and Educating Peers. Cr. 6

Only open to students in the Medical School MD program. Students must have pre-approval by the Assistant Dean for Basic Sciences. Students will learn and apply techniques to prepare medical students for the Step 1 examination, as well as lead Step 1 preparation sessions. (Y)

8036 Independent Service Learning Cr. 6

Prereq: prior approval of Director of Co-Curricular Programs. Students will participate in a Service Learning Program within a community organization providing direct service to the organizations specific clientele. (Y)

8040 Special Topics in Anatomy and Cell Biology. Cr. 3 or 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Review of research training in gross anatomy, cell biology, histology, embryology, or neuroscience. (T)

8041 Gross Anatomy Teaching Lab. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Prereq: Must have participated in the summer pro-sector program and have approval from the course director before registering. Students taking this elective will gain teaching and mentorship experience in preparation for a career in academic medicine by teaching freshman medical students dissection skills in the anatomy labs. (T)

8045 Medical Ethics Cr. 6

Prereq: fourth year Medical student standing. Medical ethics issues and concerns in the ICU, PICU, NICU, as well as those associated with a medical ethics committee. (T)

8046 Street Medicine: Detroit. Cr. 3 or 6

Prereq: Approval by the Director of Co-curricular Programs. Must be a Year 3 or Year 4 student enrolled in medical school; Only two students per elective month can take this elective. Knowledge and skills necessary to promote health, prevent illness, and manage the common chronic, and minor acute primary care needs of adults who are experiencing homelessness in Detroit. Clinical Experience (CLN): students will complete 120 hours of clinical education experience during their one-month rotation (T)

8050 General Anesthesiology. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Practice of anesthesia including preoperative assessment, delivery of general and regional anesthesia, equipment use, and monitoring techniques. (T)

8060 Pain Management. Cr. 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Diagnosis, treatment and management of acute and chronic pain syndromes related to malignant and non-malignant diseases. (T)

8070 Pediatric Anesthesiology. Cr. 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Prereq: must have passed general anesthesia Year 4 elective. Preoperative assessment, delivery of general and regional anesthesia, equipment use, and monitoring techniques in pediatric patients. (T)

8100 Law and Medicine. Cr. 3 or 6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Legal issues associated with practicing clinical medicine. (T)

8120 General Dermatology. Cr. 3 or 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Fundamentals of diagnosing, treating and managing patients with common dermatologic disorders. (T)

8130 Dermatology Research. Cr. 3 or 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Knowledge and experience in dermatology research. (T)

8140 General Emergency Medicine. Cr. 3 or 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Initial evaluation, stabilization, and management of patients in the emergency department. (T)

8150 Emergency Medicine Research. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Process and participation in emergency medicine research. (T)

8160 Emergency Medicine Subinternship. Cr. 7

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Required of all Year 4 medical students. Evaluation, stabilization, and treatment of a variety of patients presenting to the ER with urgent and emergent illness and trauma. (T)

8163 Emergency Medicine Critical Care. Cr. 6

Open only to fourth year medical school students. (T)

8165 Advanced Emergency Medicine. Cr. 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Prereq: MD4 8160. Being the primary provider for patients while in the ER, from initial evaluation to completion of disposition. (T)

8170 General Family Medicine. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Enhancement of knowledge and skills in conducting a history/physical, diagnosing/managing patients, and participation in common office procedures in the outpatient setting. (T)

8171 Rural Family Medicine. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Students will gain a better understanding of the unique needs, challenges and rewards of practicing medicine in a medically underserved, rural or small-town community. (T)

8172 Family Medicine Student Run Free Clinic. Cr. 6

Open only to students in M.D. program registering for Year 4 courses. Prereq: member of WSU Student Run Free Clinic organization; prior consent before registering. Students are involved in supervision of day-to-day operations of Student Run Free Clinic. (T)

8180 Clinical Aspects of Occupational Medicine. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Health risks of different occupational settings; basic skills to diagnose and manage select occupational illnesses and injuries. (T)

8210 Family Medicine Subinternship. Cr. 7

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Students must choose one subinternship in: family medicine, surgery, pediatrics, or internal medicine. Students expand on Year 3 family medicine clerkship experience with more intensive involvement in select patient populations. (T)

8220 Hospice/Palliative Medicine. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Care of terminally ill patients; basic communication and interactive skills associated with these patients and their families. (T)

8230 Maternal and Child Health. Cr. 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Prereq: MD3 7600. Gaining experience in an aggressive family medicine OB service. (T)

8240 Research in Family Medicine. Cr. 3 or 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Research process; participation in family medicine research. (T)

8250 Sports Medicine. Cr. 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Knowledge and skills to assess the fitness and health risks of athletes. (T)

8255 International Elective. Cr. 6

Open only to students rotating at Technion-Israel Institution of Technology. Prereq: written consent of program director. (T)

8258 International Away. Cr. 6

Prereq: written consent of program director. This rotation is for travel outside the United States excluding Canada. (T)

8260 Allergy and Clinical Immunology. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Conducting an allergic H & P; understanding basic mechanisms, pathophysiology and testing of allergic and immunologic disorders. (T)

8261 Advanced Physical Diagnosis. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Prereq: Must have taken the Internal Medicine clerkship. Students will refine their basic physical examination, as well as advance their skills in evaluating hypertension, thyroid disease, cardiac murmurs, breast abnormalities, and geriatric assessment. (T)

8262 Ambulatory Subspecialty in Internal Medicine. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Prereq: Must have taken the Internal Medicine clerkship. Students will learn the practice of ambulatory internal medicine, with an emphasis placed upon bedside teaching, physical diagnosis and in-depth discussion of the clinical, diagnostic and therapeutic aspects of each case. (T)

8263 Clinical Skills and Competency. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Students will be provided with a variety of experiences to prepare them for their role as residents and physicians. (T)

8264 Independent Study in Medical Education. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Students will improve their skills as learners and critical thinkers, and gain an appreciation of the importance of lifelong learning. (T)

8265 Urban Medicine for Visiting Students. Cr. 6

Open only to students visiting Wayne State University School of Medicine from another university. Prereq: must have taken their primary

clerkship in internal medicine. Students will learn academic internal medicine in an urban setting with an emphasis on recognizing, studying, treating, and preventing disparities in healthcare. (T)

8280 Cardiology. Cr. 3-6

Offered for S, U or H grades only. Open only to students registering for Year 3 or 4 of medical school. Basic history/physical, diagnostic, treatment and management skills associated with common inpatient cardiac problems. (T)

8281 Interventional Cardiology. Cr. 6

Offered for S, U or H grades only. Open only to students registering for Year 4 of medical school. Prereq: MD4 8280. Exposure to an interventional lab. Gaining familiarity with the clinical utility of routine cardiovascular interventions and hemodynamic measurements. (T)

8290 Cardiology Consultation. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Skills needed to consult with medical and surgical patients with cardiac problems. (T)

8310 Coronary Care Unit. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Diagnosis and treatment of common cardiac problems; care for critically ill patients admitted to cardiac care unit. (T)

8320 Critical Care Medicine. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Management of critically ill patients to improve diagnostic, problem solving, assessment, and treatment skills. (T)

8340 Endocrine/Bone and Mineral Metabolism. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnosing, treating, and managing patients with metabolic bone diseases. (T)

8350 Endocrinology Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in research associated with medical endocrinology. (T)

8360 Endocrine/Metabolism. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Techniques of conducting a history and physical; diagnostic, therapeutic, and laboratory approaches to endocrine disorders. (T)

8370 Gastroenterology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Conducting a history and physical exam, and diagnosing, treating, and managing patients with common gastrointestinal diseases. (T)

8380 Gastroenterology Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in specific gastroenterology research. (T)

8390 General Internal Medicine Inpatient. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Common problems encountered in an internal medicine inpatient clinical setting. (T)

8391 Internal Medicine: Miscellaneous. Cr. 3 or 6

Open only to third and fourth year medical school students. Prereq: away form must be filled out by student and WSU chairperson must sign it before it is mailed by Office of Student Affairs; student must confirm Records and Registration has received approval from school to ensure that credit is awarded for the elective. Students learn various topics and issues in general internal medicine. (T)

8392 Metabolic Nutrition and Weight Management. Cr. 3 or 6

Offered for S, U or H grades only. Open only to third- or fourth-year medical students. (T)

8395 Clinical Pharmacology. Cr. 6

Prereq: Year 4 medical student. Written consent of program director. Four-week on-line elective where students use case-based scenarios to apply pharmacology principles in a clinical setting. (Y)

8400 Clinical Genetics. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Interviewing, conducting a physical examination, and other patient interactions in patients with suspected or known genetic diseases. (T)

8420 Geriatric Medicine. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Conduct of a comprehensive assessment and treatment of a geriatric patient; factors affecting the health of the elderly. (T)

8430 Hematology. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Familiarization with a variety of hematologic and oncologic disorders; how to diagnose, treat, and manage patients with these disorders. (T)

8440 HIV/AIDS. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Basic knowledge and skills associated with care of HIV-infected persons in outpatient and inpatient settings. (T)

8450 Infectious Disease. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluating, diagnosing and treating patients with acute and chronic infectious diseases. (T)

8460 Infectious Disease Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in specific infectious disease research. (T)

8470 Internal Medicine Subinternship. Cr. 7

Open only to students registering for Year 4 of medical school. Required course. Students must choose one subinternship in: internal medicine, surgery, pediatrics, or family medicine. Offered for S, U or H grades only. Expanding on Year 3 internal medicine clerkship experience; more intensive involvement in select patient populations. (T)

8480 Medicine/Pediatrics. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Aspects of the day-to-day practice of a physician specializing in an internal medicine/pediatric practice. (T)

8490 Nephrology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Prereq: passing of Year 3 internal medicine clerkship. Offered for S, U or H grades only. Experience in diagnosing and managing patients with acute and chronic nephrologic problems. (T)

8500 Nephrology Consultation Service. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Evaluation, diagnosis, and treatment of patients with renal problems. (T)

8510 Oncology: Medical Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Evaluation, diagnosis, treatment and management of patients with oncologic conditions. (T)

8520 Oncology: Outpatient Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Cancer patients in the outpatient setting: initial evaluations, types of malignant diseases, role of staging, conducting a focused follow-up of cancer patients. (T)

8530 Oncology Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in research involving patients with cancer. (T)

8540 Otolaryngology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. History and basic head and neck examination on patients with otolaryngologic disease. (T)

8550 Otolaryngology Medical and Surgical: Head and Neck. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Prereq: passing of Year 3 internal medicine and surgery clerkships. Offered for S, U or H grades only. Additional training in otolaryngology head and neck surgery. (T)

8560 Otolaryngology Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in otolaryngology research. (T)

8570 Palliative Medicine. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Understanding of and skills in palliative medicine: communication, cultural issues, psycho-emotional and spiritual aspects of end of life care and death and dying. (T)

8575 Complementary Medicine. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The world of complementary medicine: what it is, how it is different from conventional medicine, how it is practiced, and what its benefits are. (T)

8580 Primary Care Medicine. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Common problems encountered in internal medicine outpatient clinical setting. (T)

8590 Pulmonary Medicine. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnosis and management of a variety of pulmonary disorders; diagnosis of acute and chronic respiratory failure; interpretation of pulmonary tests. (T)

8600 Pulmonary and Sleep Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in pulmonary and sleep research. (T)

8610 Pulmonary Consultation. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Diagnosis and management of a variety of pulmonary disorders; diagnosis of acute and chronic respiratory failure; interpretation of pulmonary tests. (T)

8620 Rheumatology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnosis and management of common rheumatologic problems; understanding ancillary procedures and lab tests. (T)

8630 Sleep Disorders. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Interviewing, physical examination, diagnosis, and therapy of patients with sleep disorders. (T)

8640 Molecular Medicine. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. State-of-the-art molecular biological research and methods, relating to basic and applied research of human disease. (T)

8650 General Neurology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluation, diagnosis, treatment and management of patients with an array of general neurologic conditions. (T)

8660 Neurology Consult. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Pathogenesis, genetics, neurochemistry, imaging, diagnostic testing, presentation and treatment of Alzheimer's and other forms of dementia. (T)

8670 Clinical Neurology of AIDS. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Common neurologic manifestations of AIDS and their evaluation and management. (T)

8680 Neurology Consultation. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Participation with neurology physicians in consultation for patients in the ER and other inpatient services. (T)

8690 Movement Disorders. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Evaluation, diagnosis, treatment and management of patients with neurologic movement disorders. (T)

8700 Neurology - Oncology. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Diagnosis, treatment and management of patients with malignancies of the neurologic system. (T)

8710 Neurologic Sleep Disorders. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Operations of a sleep lab and evaluation of patients with sleep disorders. (T)

8720 Neurology Research. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. The research process; participation in neurology research. (T)

8730 Neurology Pediatrics. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnosis, treatment, and management of a variety of neurologic disorders of infancy and childhood. (T)

8740 Protective Mechanisms in the Nervous System. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Basic mechanisms of nerve cell survival/injury; understanding the role of growth factors in the central nervous system. (T)

8750 General Neurosurgery. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Preoperative, intraoperative, and post-operative care of neurologic patients. (T)

8760 Neurosurgery Research. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Basic research principles as they apply to clinical questions in neurosurgery. (T)

8780 General Gynecology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Signs, symptoms, and management of both surgical and nonsurgical gynecologic disease. (T)

8781 Family Planning and Abortion. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Students will learn the principles and counseling techniques for contraceptive management and abortion. (T)

8790 Gynecologic Oncology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluation and treatment of patients presenting with a range of gynecologic malignancies. (T)

8800 Obstetrics. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Signs, symptoms and management of normal/abnormal labor, and experience patients with intrapartum high risk conditions and intrapartum/postpartum complications. (T)

8810 Obstetrics/Gynecology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Care of inpatient and outpatient obstetric and gynecologic patients, and participation in obstetric and gynecological procedures. (T)

8820 Obstetrical Ultrasound. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Basic knowledge and skills in obstetrical ultrasound. (T)

8830 Maternal Fetal Medicine. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Experience patients with common medical and obstetrical complications; development of skills in fetal assessment and evaluation of high risk pregnancies. (T)

8840 Molecular Basis of Development and Disease. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Current molecular/cellular biological methods used to answer questions of growth and development in normal and pathological states. (T)

8850 Nurse Midwifery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Ambulatory women's health care delivery as performed by a certified nurse midwife, including management of labor and delivery. (T)

8860 Reproductive Endocrine and Infertility. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Prereq: passing Year 3 OB/GYN clerkship. Offered for S, U or H grades only. Diagnosis and treatment of couples with infertility and reproductive endocrine disorders. (T)

8870 Reproductive Genetics. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnostic, therapeutic and counseling procedures associated with reproductive genetics, fetal diagnosis, and fetal therapy. (T)

8890 Ophthalmology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Conducting basic eye examinations; evaluation methods, management and treatment of eye diseases. (T)

8900 Ophthalmic Research. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. The research process; participation in ophthalmic research. (T)

8910 General Orthopedic Surgery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Conduct of an H & P, diagnosis and treatment of patients with orthopedic problems; participation in pre-operative, operative, and post-operative care. (T)

8911 Orthopedic Surgery Sports Medicine. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Through the clinic and operating room settings, students will learn the assessment of the athlete, emergent care of injuries on the field, as well as common sport injuries. (T)

8912 Orthopedic Hand Surgery. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Students will learn about the care of patients with upper extremity disorders, including carpal tunnel, tendon injuries, hand fractures, arthritis of the hand and common congenital deformities. (T)

8913 Orthopedic Foot/Ankle Surgery. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Through the clinic and operating room, students will learn how to perform a history and physical exam, diagnose and treat patients that have foot or ankle complaints. (T)

8914 Orthopaedic Surgery Research. Cr. 3 or 6

Open only to third or fourth year medical students. Students participate in current orthopaedic surgery and biomechanics research. (T)

8930 Orthopedic Traumatology. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Basic surgical principles and pathophysiology, diagnosis, and management of a variety of traumatic orthopedic conditions. (T)

8940 General Pathology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Functions of a clinical laboratory, including interpretation of surgical pathology. (T)

8950 Anatomic Pathology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Basic pathologic processes; how gross, microscopic and other techniques are applied to the diagnosis and treatment of disease. (T)

8970 Forensic Pathology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Basic mechanisms of injury; characteristic features of injury patterns; relationship between medicine and law. (T)

8980 Tumor Genetics. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Role of cytogenetics and molecular cytogenetics in diagnosis, management and prognosis of a patient's disease. (T)

8990 General Pediatrics. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluating and managing children with common pediatric problems; aspects of normal growth and development. (T)

8991 Child Abuse Identification and Treatment. Cr. 6

Open only to students registering for Year 4 of medical school. Prereq: must have completed the third year Pediatric clerkship. Offered

for S, U or H grades only. Students will learn the techniques to identify and report suspected child abuse and neglect, as well as methods of treatment and prevention. (T)

8992 Pediatric Pulmonary. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Students will learn the evaluation and treatment of pediatric patients with acute and chronic respiratory diseases. (T)

9000 Adolescent Pediatrics. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Interviewing and physical examination on adolescent patients; normal physical, cognitive and psychosocial development of adolescent patients. (T)

9010 Allergy, Immunology, and Rheumatology. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Day-to-day care of pediatric patients with common allergic, immunologic and rheumatologic disease. (T)

9040 Developmental Behavioral Pediatrics. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Distinguishing normal from abnormal development; approaches to assessment of disorders of learning and development. (T)

9050 Pediatric Genetics. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Abnormal morphology of children; diagnostic skills in various inborn errors. (T)

9060 Medical Toxicology and Poison Control. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Assessment and management of pediatric patients with suspected or known poisoning or toxic exposure. (T)

9070 Neonatology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluation of healthy newborns; common newborn conditions; care of high risk infants and their mothers. (T)

9080 Pediatric Cardiology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Skills in taking and performing a cardiac exam; normal hemodynamics; natural history of children with congenital and acquired heart disease. (T)

9090 Pediatric Ear, Nose and Throat. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Entire scope of pediatric otolaryngology. (T)

9100 Pediatric Emergency Medicine. Cr. 3 or 6

Open only to students who have completed Year 3 pediatrics clerkship. Offered for S, U or H grades only. Observation and participation in care of children presenting with a wide range of conditions in pediatric emergency medicine. (T)

9110 Pediatric Endocrinology and Diabetes. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluation of normal physical growth and development; recognition of common pediatric endocrine problems. (T)

9120 Pediatric Gastroenterology, Hepatology, and Nutrition. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Performance of a history and phys-

ical exam, development of a diagnosis, and caring for patients with disorders of the gastrointestinal tract. (T)

9130 Pediatric Hematology/Oncology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Prereq: passing of Year 3 pediatric clerkship. Offered for S, U or H grades only. Basic skills to conduct an H & P and diagnose and treat children with hematologic and oncologic problems. (T)

9140 Pediatric Infectious Disease. Cr. 6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluation, diagnosis, treatment, and management of common pediatric infections. (T)

9150 Pediatric Intensive Care. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Basic diagnostic and therapeutic approach to care of critically ill children. (T)

9160 Pediatric Nephrology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Basic skills to examine, diagnose and treat patients with common renal diseases. (T)

9170 Pediatric Neurology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Performance of a complete neurological history, examination, and ordering of appropriate laboratory tests to diagnose and manage pediatric patients with neurologic disease. (T)

9180 Pediatric Pathology: Autopsy and Surgical. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Correlation of clinical, anatomical and laboratory findings in diagnosing pediatric disease. (T)

9190 Pediatric Plastic Surgery/Craniofacial. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Recognition and development of a treatment plan for congenital craniofacial anomalies and vascular lesions. (T)

9200 Pediatric PMR. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Childhood functional impairments including head injury, spinal cord injury, cerebral palsy, neuromuscular diseases, sports medicine, and electromyography. (T)

9210 Pediatric Subinternship. Cr. 7

Open only to students registering for Year 3 or 4 of medical school. Required course. Student must choose one subinternship in internal medicine, surgery, pediatrics, or family medicine. Offered for S, U or H grades only. Senior students expand upon Year 3 pediatric clerkship experience with more intensive involvement in select patient populations. (T)

9230 Physical Medicine and Rehabilitation. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Performance of an H & P; development of greater understanding of diagnosis, management and treatment of patients with neuromuscular and musculoskeletal problems. (T)

9240 Spinal Cord Injury Rehabilitation. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Management of patients with spinal cord injuries; role of rehabilitation team approach to spinal cord injuries. (T)

9250 Traumatic Brain Injury Rehabilitation. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Management of patients with traumatic brain injuries; role of a rehabilitation team in management of patients with traumatic brain injuries. (T)

9260 Brain Imaging of Childhood Onset of Neuropsychiatric Disorders. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Prereq: student must meet with Year 3 Clerkship Coordinator prior to registration. Offered for S, U or H grades only. Brain imaging techniques; neurodevelopmental approaches. (T)

9261 Emergent and Consult Liaison Psychiatry. Cr. 6

Open only to students registering for Year 4 of medical school and considering a career in psychiatry. Prereq: must have completed the third year Psychiatry clerkship. Offered for S, U or H grades only. Students will learn to assess psychiatric patients, manage acute intoxication and withdrawal syndromes, manage psychiatric patients with medical comorbidities and learn basic managed care principals. (T)

9262 Emergency Psychiatry. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Students will learn to evaluate, diagnose, and treat psychiatric patients in an emergency setting. (T)

9263 Clinical Electro-Physiology Research. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Students will participate in the academic research process, as well as learn the strengths and weakness of the different electrophysiological testing modalities. (T)

9264 Psychiatry Research. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Students will participate in research projects and learn the clinical components associated with neuropsychiatric research. (T)

9265 Outpatient Psychiatry. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. The student will observe routine outpatient practice and have an opportunity to evaluate new outpatients under the supervision of residents/staff. (T)

9266 Psychiatry Sleep Medicine. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Students will learn to evaluate and treat various sleep disorders, including apnea, breathing disorders, insomnias, narcolepsy, and others. (T)

9270 Child and Adolescent Psychiatry. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Experience of a variety of children and adolescents with psychiatric disorders; evaluation of patients and provision of care. (T)

9290 Psychiatric Consultation. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Knowledge and skills associated with the psychiatric interview; mental status examination; development of knowledge base in behavioral medicine and treatment of psychiatric illness. (T)

9300 Psychiatry: Geriatrics. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Knowledge and skills associated with the psychiatric interview; mental status examination; interpretation of data, diagnosis, psychopharmacology and psychotherapy in geriatric patients. (T)

9310 Psychotherapy Elective. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Prereq: student must meet with Year 3 Clerkship Coordinator prior to

registration. Offered for S, U or H grades only. Psychodynamic, cognitive, and group therapies; observation and participation in psychotherapeutic encounters. (T)

9320 Research and Practice in Addiction Psychiatry. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Prereq: student must meet with Year 3 Clerkship Coordinator prior to registration. Offered for S, U or H grades only. Diagnosis and management of individuals with addictive disorders; psychotherapeutic and pharmacotherapeutic interventions for problems with psychotropic substances. (T)

9330 Research Topics in Membrane Physiology. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Several methodologies of current membrane physiology research. (T)

9340 Substance Abuse. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Inpatient and outpatient treatment of substance use disorders. (T)

9345 Psychiatric Care of Veterans. Cr. 6

Prereq: completion of Year 3 psychiatry clerkship. Year 4 standing in psychiatry residency. Clinical Experience; Students will complete 160 hours of clinical education experience during their one-month rotation. (T)

9350 General Diagnostic Radiology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Basic techniques of imaging; skills to diagnose and interpret radiographic studies. (T)

9360 Intervention Radiology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Role of interventional radiologic techniques in diagnosis and management of disease. (T)

9370 Nuclear Medicine. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Performing and interpreting clinical nuclear medicine procedures; role of nuclear medicine in clinical practice. (T)

9380 Radiation Oncology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Role of radiation therapy in variety of adult and pediatric malignancies. (T)

9390 General Surgery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Experience in a variety of elective and acute surgical cases; diagnostic skills; basic surgical techniques and procedures. (T)

9392 Advanced Surgical Skills. Cr. 6

Open only to students registering for Year 4 of medical school and must be planning a surgery residency. Offered for S, U or H grades only. Students will learn advanced surgical skills in preparation for their surgery residency program. (T)

9393 Breast Surgery. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Students will gain exposure to the diagnosis and treatment of breast diseases at the Walt Comprehensive Breast Center. (T)

9400 Acute Burn Care. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Physiologic principles and clinical management of burn victims. (T)

9410 Cardiovascular Surgery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnosis and treatment of cardiologic diseases using invasive surgical approaches. (T)

9430 Gastrointestinal Surgery. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Pathophysiology and management of gastrointestinal surgical diseases. (T)

9440 Pediatric Surgery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Diagnosis and care of surgical disorders in children. (T)

9450 Surgery Research. Cr. 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. The research process; participation in surgical research. (T)

9470 Plastic and Reconstructive Surgery. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Evaluation, formulation of treatment plan, management of postoperative care, and participation in surgical procedures for patients requiring plastic surgery. (T)

9480 Surgical Intensive Care Unit. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Care of critically ill surgical patients; common surgical intensive care unit procedures. (T)

9490 Surgery Subinternship. Cr. 7

Open only to students registering for Year 4 of medical school. Students must choose one subinternship in surgery, family medicine, pediatrics, or internal medicine. Offered for S, U or H grades only. Senior students expand upon their Year 3 surgery clerkship experience with more intensive involvement in select patient populations. (T)

9495 Advanced Maxillofacial Surgery. Cr. 7

Prereq: enrollment in maxillofacial program, and Year 4 student. (T)

9500 Transplant Surgery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Prereq: passing Year 3 internal medicine and surgery clerkships. Offered for S, U or H grades only. Basic surgical principles and pathophysiology, diagnosis and management of a variety of transplant surgical conditions. (T)

9510 Acute Care Surgery. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Evaluation, diagnosis, treatment, and management of critically ill patients; basic procedures in the care of this population. (T)

9520 Vascular Surgery. Cr. 3 or 6

Open only to students registering for Year 4 of medical school. Offered for S, U or H grades only. Pathophysiology, evaluation, diagnosis, and management of patients needing vascular surgery; participation of procedures for this population. (T)

9525 Colorectal Surgery. Cr. 3 or 6

Open only to third and fourth year medical school students. (T)

9528 Maxillofacial Surgery. Cr. 6

Prereq: completion of Surgery and Internal Medicine clerkships. In-depth exposure to the field of maxillofacial surgery and its subspecialties of trauma, oncology, and micro-vascular reconstruction. (T)

9530 General Urology. Cr. 3-6

Open only to students registering for Year 3 or 4 of medical school. Offered for S, U or H grades only. Pathophysiology, evaluation, diagnosis and management of patients with urologic disease; participation in urologic surgery. (T)

9535 Step 2 Preparation. Cr. 0

Prereq: completion of all Year 3 course work. Students use this curricular time to prepare for the Step 2 board exam. (T)

9540 Male Reproductive Medicine. Cr. 3 or 6

Prereq: completion of Year 3 Surgery clerkship. Understanding of the basic physiology of sperm production and photophysiology that lead to infertility and sexual dysfunction. (T)

9545 Step 2 Preparation. Cr. 1

Open to Year 4 Medical students. Students will be introduced to methods for successfully passing the mandatory Step 2 CK United States Licensing Examination (USMLE).

9999 Year 3 Additional Course Work. Cr. 0

Open only to fourth year medical students with outstanding Year 3 course work; must have prior approval through Records and Registration. Students complete Year 3 course work prior to starting Year 4 course work. (T)

Continuing Medical Education

Assistant Dean: David R. Pieper, Ph.D.

The Division of Continuing Medical Education (CME) was established to provide medical education activities to physicians who have completed their training, as well as support in graduate medical education programs. The CME Division is concerned with addressing the continuing medical education needs of physicians residing in the tri-county area of metropolitan Detroit, as well as the needs of the other physicians in the state and country.

Various special conferences, symposia and workshops, lasting one to five days, are offered under the academic sponsorship of the departments in the Medical School. Physicians from Michigan and many other states and countries attend meetings which reflect new discoveries and changes in needs and interests in medicine. Every effort is made to assist physicians in their continuing efforts to increase their competence and to improve their skills on behalf of the patients they serve.

In addition to these special programs, 'continuing' activities of one- to two-hour duration are scheduled at regular intervals during the year. Physicians are encouraged to participate in the departmental workshops, teaching rounds and grand rounds that meet their interests or needs; they are conducted in the clinical settings of Wayne State University and the Detroit Medical Center.

Other types of CME activities offered by the Wayne State University School of Medicine include journal based CME, web based CME and CME associated with Learning from Teaching.

There are increasing pressures on practicing physicians to maintain and update their professional competence and skills. Wayne State University School of Medicine is striving to respond to these needs through continuing medical education. Inquiries may be directed to the Division for information about programs on specific subjects or programs for specific medical specialties.

Accreditation (CME)

Wayne State University School of Medicine is accredited by the Accreditation Council of Continuing Medical Education (ACCME) to sponsor continuing medical education (CME) for physicians. As an accredited sponsor of CME, the School designates certain of its continuing medical education offerings as meeting the criteria for Category 1 of the Physician's Recognition Award of the American Medical Association, and for the requirements for license renewal by the Michigan Medical Practice Board. Other certifications from various medical specialty societies and boards are secured for individual offerings as may be required.

Graduate Medical Education Program (GME)

Associate Dean and Designated Institutional Official: Tsveti Markova, MD, FAAFP

Graduate Medical Education (GME) at Wayne State University (WSU) is an essential element of a diverse and rich academic environment encompassing many specialties and subspecialties in the practice of medicine. The residency programs directly impact the lives of thousands through patient care, but most importantly through the educational mission that reaches beyond hospitals to the community. Graduate Medical Education at WSU produces exceptional physicians who are committed to provide outstanding care to the communities we serve including not only the city of Detroit and the surrounding metropolitan area, but the state of Michigan and beyond. GME provides service to our communities, support to our peers, and training to our residents, and extends our medical knowledge, compassion and skills toward our mission of patient safety and quality

healthcare for today and tomorrow. Wayne State University as a sponsoring institution has achieved the maximum Accreditation Council for Graduate Medical Education (ACGME) accreditation status with no citations and a commendation. The next site visit is scheduled in 2024.

WSU is the sole sponsoring institution of nine Graduate Medical Education programs for 150 residents and fellows in the following areas: Dermatology, Family Medicine, Internal Medicine, Ophthalmic Plastic and Reconstructive Surgery, Orthopaedic Surgery, Otolaryngology, Physical Medicine and Rehabilitation, Urology, and Transitional Year. These programs are based mainly at: Crittenton Hospital Medical Center (CHMC), Oakwood Hospital and Medical Center, Oakwood Heritage Hospital, Barbara Ann Karmanos Cancer Institute, and John D. Dingell Veterans Administration Medical Center, our hospital partners, to assure an optimal learning environment.

The School of Medicine, through its Graduate Medical Education Committee (GMEC) and the Office of Graduate Medical Education, holds the ultimate responsibility for all GME programs sponsored by the university. The Office of GME tracks program outcome measures, conducts extensive internal reviews of each GME program, and ensures that each program teaches and assesses the ACGME general competencies and associated milestones in the areas of: patient care, medical knowledge, practice-based learning and Improvement, interpersonal and communication skills, professionalism, and systems-based practice. Other GME office responsibilities include:

- Demonstrating an overall commitment to GME;
- Maintaining affiliation agreements with other institutions participating in GME;
- Monitoring the Joint Commission status of participating institutions;
- Ensuring that formal quality assurance programs are conducted at participating institutions;
- Monitoring eligibility and selection of residents;
- Monitoring all aspects of resident appointment;
- Ensuring resident participation in:
 - educational and professional activities,
 - patient safety and quality of care education,
- Overseeing the residents' work environment; and adhering to the ACGME Duty Hour standards.
- Development and implementation of residency and faculty educational programs,
- Oversight of Graduate Medical Education Committee,
- Designing curricula and oversee the development of scholarship and research,
- Organizing an annual GME orientation and
- Overall design and implementation of policies and procedures adhering to the ACGME requirements.

All participants in the programs are involved in a system of graduate teaching responsibilities within the realm of clinical diagnosis and patient care, including contribution to the teaching of medical students who rotate through the clinical department. Orientation programs, teaching conferences and seminars, bedside teaching, and a wide variety of supervised surgical and technical training are a systematic part of the graduate medical education of the physicians in the various specialty programs.

In addition to the WSU-sole sponsored programs, the SOM has affiliated GME programs with two major regional health care systems: Detroit Medical Center and Henry Ford Health System. Wayne State University Affiliated Programs:

DMC-Sponsored Programs: Accredited Programs: 49 with 670 residents/fellows

Henry Ford-Sponsored Programs: Accredited Programs: 48 with 613 residents/fellows

For more information visit the WSUSOM GME web site at: <http://gme.med.wayne.edu>.

Graduate Programs of the School of Medicine

Academic Regulations Governing Master's and Doctoral Degrees

Associate Dean for Biomedical Graduate Programs:
Stanley R. Terlecky, Ph.D.

Advanced study programs leading to the Doctor of Philosophy and Master of Science degrees are available in the School of Medicine. Their primary purpose is to provide an opportunity for graduate training in preparation for careers in biomedical research including those in academia, industry, biotechnology, and government. In addition, the programs are designed to provide an educational springboard into a wide variety of related careers including those in medicine, intellectual property (patent) law, regulatory affairs, compliance, healthcare management, science advocacy/policy, teaching, scientific writing, clinical and translational sciences, forensics, and environmental affairs, among others.

Graduate students enter a community of team-oriented scholars and are expected to become acquainted with the development of a main area of study and its relationship to other pursuits. Students should develop into independent and self-directed learners and researchers, acquire useful perspectives on the meaning and limitations of exact science, and maintain a balance between practical and abstract intellectual activity. They are expected to draw from and add to the wealth of accumulated knowledge in their chosen discipline. Graduate students work closely with faculty advisors who help plan course schedules and research programs, supervise laboratory training, and help navigate career options.

For complete information regarding the academic rules and regulations of the University, students should consult *Academic Regulations, Graduate*, p. 32. The following additions and amendments pertain to the School of Medicine.

Admission

Admission to these graduate programs is contingent upon admission to the Graduate School; for requirements, see *Admission, Graduate School*, p. 17. Requests for program-specific information and requirements should be made directly to the program of interest. Mailing address and individuals to contact are cited below.

Application

Applicants must complete/submit: (i) University Graduate School application; (ii) official transcripts of all undergraduate (and graduate) academic work; (iii) Graduate Record Examination scores, verbal, quantitative and analytical writing components. Individual programs may have additional application requirements.

Most study programs are planned for students who begin in the fall semester; however, matriculation may be possible at other times during the year in individual cases.

International students, including U.S. residents whose degrees were awarded by non-U.S. institutions, should refer to the admission requirements for international students listed on the Graduate School website: <http://gradschool.wayne.edu/future/admission-requirements.php>. Individual graduate programs may have higher standards for G.P.A. and English proficiency than the Graduate School. Students for whom English is not their native language will be required to demonstrate competency in verbal and written English within the first year of study.

The recommended procedure for application is:

1. Consult departmental websites and/or contact the appropriate Graduate Officer for additional information and forms relevant to that program;
2. Submit ALL application materials by February 1 for admission to begin study in the fall semester;
3. Earlier applications will be accepted in most cases. Late applications will be evaluated; however, the graduate programs have limited enrollment, and thus late applicants may encounter programs already filled. Most graduate assistantships and fellowships are awarded in the months of February and March; late applicants may have very limited opportunities for this type of financial assistance. Additional financial aid may be available through the Office of Student Financial Aid: <http://finaid.wayne.edu>

Graduate Officers

The following Graduate Officers associated with the programs as listed may be contacted through the School of Medicine, Wayne State University, 540 E. Canfield Avenue, Suite 1128, Detroit, Michigan 48201 (telephone: 313-577-1455; Fax: 313-577-8796), or at our Web site: <http://www.med.wayne.edu/gradprog/>:

Anatomy and Cell Biology: Ph.D., M.S.
Paul D. Walker, Ph.D.
Basic Medical Sciences: M.S.
George S. Brush, Ph.D.
Biochemistry and Molecular Biology: Ph.D., M.S.
David R. Evans, Ph.D.
Cancer Biology: Ph.D., M.S.
George S. Brush, Ph.D.
Genetic Counseling: M.S.
Angela M. Trepanier, M.S.
Immunology/Microbiology: Ph.D., M.S.
T. R. Reddy, Ph.D.
Medical Physics: Ph.D.
Jay Burmeister, Ph.D.
Medical Research: M.S..
George S. Brush, Ph.D.
Molecular Genetics and Genomics: Ph.D., M.S.
Gregory Kapatoss, Ph.D.
Pathology: Ph.D.
Todd Leff, Ph.D.
Pharmacology: Ph.D., M.S.
Sokol Todi, Ph.D.
Physiology: Ph.D., M.S.
Douglas Yingst, Ph.D.
Public Health: M.P.H.
Kim Campbell-Voytal, Ph.D., R.N.
Translational Neuroscience: Ph.D.
Jeffrey A. Stanley, Ph.D.

Tuition and Fees, Graduate

Students in the graduate programs offered by the School of Medicine pay the regular graduate fees of the University; see *Tuition and Fees*, p. 21. Also see *Financial Support for Graduate Study* below.

Master of Science Degrees

Descriptions of individual programs may be found in the departmental sections which follow. Two interdisciplinary programs are offered in addition to the discipline-based courses of study: a master's degree program in basic medical sciences and a master's degree program in medical research. These are described below. General requirements for the Master of Science degree may be found under *Master's Degrees*, p. 37, or at our Web site: <http://www.med.wayne.edu/gradprog/>.

Doctor of Philosophy Degrees

Programs leading to the Doctor of Philosophy degree in the basic medical sciences are under the jurisdiction of the Graduate School of the University. Majors within the School of Medicine are available in the following academic areas: anatomy and cell biology, biochemistry and molecular biology, cancer biology, immunology and microbiology, medical physics, molecular genetics and genomics, pathology, pharmacology, physiology, and translational neuroscience. Brief program descriptions are provided under each department heading in the following pages, as are listings of graduate courses offered by the School of Medicine. The program in medical physics is described in the Oncology Departmental section of this bulletin. Programs in cancer biology, molecular genetics and genomics, and translational neuroscience are described below.

Ph.D. students, admitted to one of the graduate programs listed above, typically enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) core curriculum (see Interdisciplinary Biomedical Sciences (Ph.D. Program), p. 463) during their first year. The IBS is a broad-based curriculum involving courses in Interdisciplinary Molecular and Cellular Biology and selected courses in the systems curriculum. Department- and program-specific course requirements and additional information may be found in the individual descriptions of each Ph.D. program. General requirements for the Doctor of Philosophy degree may be found at our Web site: <http://www.med.wayne.edu/gradprog/>

The thirty credit dissertation registration requirement is fulfilled by registering for the courses 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively) offered under various subject area codes, in consecutive academic year semesters.

Joint M.D. - Ph.D. Program

A joint M.D. and Ph.D. program of study may be designed to provide an opportunity for exceptionally talented students to acquire knowledge and expertise in both research and clinical medicine. By combining and interrelating the Doctor of Medicine and Doctor of Philosophy programs, the dual degree objectives may be accomplished effectively and often in a shorter time than is possible by two separate degree programs completed in sequence. Such a program will prepare the student to assume investigative leadership in medical schools and in institutes for medical research. This program is flexible so that it can be adapted to best suit the student's discipline, needs and objectives.

Admission: Students will apply to the joint degree program at the time that they apply to the School of Medicine via the American Medical College Application Service (AMCAS). However, failure to be admitted to the joint degree program will not alter the student's opportunity to be considered for medical admission. In some instances, medical students may be admitted during their first or second year of undergraduate medical school, but this will involve other means of financial support than when he/she has been admitted by a joint process to the M.D.-Ph.D. program in the School of Medicine. At the time of acceptance to the joint degree program, students will be required to submit a graduate application. Students interested in a joint degree program may contact the Graduate Programs Office in the School for further information and counseling.

DEGREE REQUIREMENTS

The requirements for the joint M.D.- Ph.D. degrees conform to those established for the separate degrees by the School of Medicine, the Graduate School, and the individual departments involved. For M.D. requirements see Degree Requirements (M.D.), p. 449; for Ph.D. requirements, see the following degree-specific sections.

Financial Support for Graduate Study

Graduate assistantships, fellowships and tuition scholarships are available for qualified students admitted to the various graduate programs. All forms of support are limited in number and are awarded on a competitive basis. The School endeavors to generate support for all qualified full-time doctoral and M.D.-Ph.D. students.

Interdisciplinary Biomedical Sciences (Ph.D. Program)

The School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum is open only to doctoral students in the School of Medicine and the graduate medical programs listed here. They include: Anatomy and Cell Biology; Biochemistry and Molecular Biology; Biomedical Engineering; Cancer Biology; Immunology and Microbiology; Medical Physics; Molecular Genetics and Genomics; Pathology; Pharmacology; Physiology; and Translational Neuroscience. Admission of other students requires the consent of the Curriculum Director, Stanley R. Terlecky, Ph.D.

The Core Curriculum consists of the foundational courses IBS 7015, plus two additional courses from the IBS Systems Course offerings (IBS 7030-7130). For a complete list of the IBS courses see Interdisciplinary Biomedical Sciences Courses (IBS), p. 468. Completion of the Core Curriculum is recommended during the first year of Ph.D. study; it must be completed by the end of the second year.

Basic Medical Sciences (M.S. Program)

Office: 1128 Scott Hall

Program Director: George S. Brush, Ph.D.

The Basic Medical Sciences (BMS) program offers a didactic, multi-disciplinary (broadly-based), and human biology-oriented curriculum. The BMS program can enhance the academic preparation of individuals holding a bachelor's, master's or professional degree who are seeking to subsequently matriculate into human or veterinary medical, dental, or pharmacological professional degree programs. The curriculum can facilitate career advancement of individuals employed in the areas of biomedical research and science education. The curriculum is NOT for individuals holding M.D., D.D.S., Pharm.D. or equivalent degrees; such individuals interested in medical or biomedical research are referred to the M.S. in Medical Research program (see below).

The curriculum involves courses from several basic science departments and programs, each one representing a unique discipline within the Wayne State University School of Medicine. At least one BMS CORE course from each of at least four different disciplines is required. The curriculum also has advanced basic medical science electives. The Master of Science in Basic Medical Sciences degree is a Plan B master's essay curriculum that requires an original critical evaluation of a specific topic in current biomedical science commonly based on analysis of current biomedical literature; original experimental research is not required. For a complete list of all BMS courses see Basic Medical Science Courses (BMS), p. 468. Additional curriculum information is available at: <http://gradprograms.med.wayne.edu/program-spotlight.php?id=34>

Admission to the BMS program is contingent upon admission to the Graduate School, for requirements, see Admission, Graduate School, p. 17. A minimum of a bachelor's degree or equivalent is required. A major in a biological or chemical science is preferred; applicants with other majors will be considered. Applicants must have completed at least one year of general biology, two years of chemistry (inorganic and organic), and one year of physics at the undergraduate level or above. An earned cumulative Grade Point Average of 3.0 together with strong science grades are required for regular admission. Applications must be submitted online (see url at the end of this paragraph). A complete application requires submission of the basic application form, a statement of purpose, three let-

ters of recommendation, transcripts from all prior academic institutions in which the applicant is/was enrolled, and a recent standardized test score (original or copy): either MCAT, DAT, GRE or PCAT. Copies of transcripts may be submitted for application review; however, the Graduate School will require submission of an official transcript showing degree awarded prior to enrollment. Additional information concerning application to the Basic Medical Sciences M.S. Program is available here: (<http://gradprograms.med.wayne.edu/program-spotlight.php?id=34>)

Applications may be initiated here: <http://gradschool.wayne.edu/future/grad-admission.php>

DEGREE REQUIREMENTS

The Master of Science in Basic Medical Sciences is offered only as a Plan B master's degree that requires completion of thirty-four credits in the BMS curriculum and must include a graded Master's essay (BMS 7999). All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively. For courses specifically associated with this program see Basic Medical Science Courses (BMS), p. 468. Specific requirements include:

REQUIRED CORE COURSES:

A minimum of four CORE courses, each one from a different basic science discipline/subject area (as reflected in the different two- or three- letter course prefixes), must be chosen from the following (a few alternative Core courses are available with Program Director approval):

BMB 7010 – General Biochemistry Lecture: Cr. 4
CB 7210 – (PHC 7210) Fundamentals of Cancer Biology: Cr. 3
IM 7010 – Fundamentals of Immunology: Cr. 2
IM 7020 – Fundamentals of Microbiology: Cr. 2
IM 7030 – Molecular Biology of Viruses: Cr. 2
IM 7520 – Bacterial Pathogenesis: Cr. 2
MGG 7010 – Molecular Biology and Genetics: Cr. 4
PHC 6500 – Drugs and the Addictive Process: Cr. 3
PHC 7010 – Pharmacology Lecture: Cr. 4
PHC 7410 – Principles of Toxicology: Cr. 3
PSL 7010 – Basic Graduate Physiology Lecture I: Cr. 4
PSL 7030 – Basic Graduate Physiology Lecture II: Cr. 4
PTH 7500 – Systemic Pathophysiology: Cr. 3
PYC 7010 – Neurobiology I: Cr. 3

Elective Courses

Elective credits, from selected BMS elective courses, sufficient to complete the thirty-four earned cumulative credit degree requirement must be approved by written consent of the Program Director.

Plan of Work Requirement

The Plan of Work is developed and filed in association with the Program Director or his/her designee. The deadline is specified by the Graduate School and enforced by the Registrar.

Essay Requirement

BMS 7999 – Essays in Basic Medical Science: Cr. 3

The Essay Advisor, Committee, and essay topic are selected with the advice and approval of the BMS Program Director. The committee must be composed of three graduate faculty members, including the Essay Advisor who may also be appointed as the student's academic advisor. The Essay Outline must be approved by the BMS Program Director. The Essay document must be presented to all Committee members for evaluation, approval and final grading. At the discretion of the Essay Advisor and Committee the evaluation may require an oral presentation and defense of the essay.

Medical Research (M.S. Program)

Office: 1128 Scott Hall; 313-577-1455

Program Director: George S. Brush, Ph.D.

The Master of Science in Medical Research (M.S.M.D.R) program provides a broadly based, multi-disciplinary, human biology-oriented master's level education and requires basic and/or clinical biomedical research training. Admission to the program is available to individuals who have a professional medical (M.D., D.O.), dental (D.D.S.), pharmaceutical (Pharm.D.), or equivalent degree in human health care and who are actively participating in Wayne State University School of Medicine affiliated post-graduate clinical medicine training, or are affiliated faculty members. The M.S.M.D.R program enables individuals to obtain research credentials for entry into an academic medical, dental, or pharmacologic research career, or for individuals already in an academic medical, dental, or pharmacologic career to change their research emphasis.

An additional MSMDR program has been developed for students enrolled in the M.D. program at Wayne State University School of Medicine. The master's portion of this joint M.S.-M.D. program is designed to provide a multi-disciplinary, human biology-oriented education with basic and/or clinical research training. The program will be of value to medical students who wish to include research in their future careers, and will prepare them to understand how concepts, therapies, and technologies are translated from the laboratory to the clinic. Inquiries should be sent to the Program Director; for further details consult the program website:

<http://gradprograms.med.wayne.edu/program-spotlight.php?id=33>.

Admission to this program is contingent upon admission to the Graduate School, for requirements, see Admission, Graduate School, p. 17. Applications must be submitted online which allows submission of the applicant's information, statement of purpose, and the three required references. One of the references must be from the prospective thesis advisor who must be a WSU School of Medicine Graduate Faculty member. For application review, a professional applicant must provide the M.S.M.D.R Program transcripts with proof of a degree from a professional degree-granting institution, either medical (M.D., D.O.), dental (D.D.S.), pharmaceutical (Pharm.D.) or equivalent. Copies of transcripts may be submitted for application review; however, the Graduate School will require submission of an official transcript showing degree awarded prior to enrollment. International medical graduates must provide a valid certificate from the Educational Commission for Foreign Medical Graduates. A medical school applicant must be in good standing in the second or third year of the M.D. program at Wayne State University School of Medicine. Students who have completed the Medical Student Summer Research Fellowship are encouraged to apply. Application details are at

<http://gradprograms.med.wayne.edu/program-spotlight.php?id=33>.

DEGREE REQUIREMENTS

The Master of Science in Medical Research is offered only as a Plan A master's program requiring completion of thirty credits, including eight credits in MDR 8999-Master's Thesis Research and Direction, and a Master's Thesis. Completion of the degree requires original and independent experimental research reported in the Master's thesis. All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively. For courses specifically associate with this program see Medical Research Courses (MDR), p. 469. Specific requirements include:

COURSES:

For students with professional degrees, a minimum of two courses, each one reflecting a different discipline/subject area (as reflected in the different two- or three-letter course prefixes) must be chosen from the following:

- BMB 7010 – General Biochemistry Lecture: Cr. 4
- BMS 6010 – Responsible Conduct in Biomedical Research: Cr. 1
- CB 7210 – (PHC 7210) Fundamentals of Cancer Biology: Cr. 3
- FPH 7015 – Biostatistics I: Cr. 3
- FPH 7210 – Research Methods for Health Professionals: Cr. 4
- IM 7010 – Fundamentals of Immunology: Cr. 2
- IM 7020 – Fundamentals of Microbiology: Cr. 2
- IM 7030 – Molecular Biology of Viruses: Cr. 2
- IM 7520 – Bacterial Pathogenesis: Cr. 2
- MGG 7010 – Molecular Biology and Genetics: Cr. 4
- MGG 7091 – Scientific Communication: Cr. 2
- PHC 6340 – Chemical Basis of Pharmacology: Cr. 3
- PHC 6500 – Drugs and the Addictive Process: Cr. 3
- PHC 7010 – Introduction to Pharmacology: Cr. 4
- PHC 7410 – Principles of Toxicology: Cr. 3
- PSL 7010 – Basic Graduate Physiology Lecture I: Cr. 4
- PSL 7030 – Basic Graduate Physiology Lecture II: Cr. 4
- PTH 7500 – Systemic Pathophysiology: Cr. 3
- PYC 7010 – Neurobiology I: Cr. 3
- PYC 7020 – Neurobiology II: Cr. 3

For medical students, 12 credits from the M.D. program will be counted towards the M.S. degree:

- MD 5200 - Biochemistry: Cr. 6
 - MD 5300 - Physiology: Cr. 6
- The following courses are required:
- BMS 6010 - Responsible Conduct in Biomedical Research: Cr. 1
 - MBG 7091 - Scientific Communication: Cr. 2
- or
- MDR 7090 - Fellowship Writing: Cr. 2

In addition, a minimum of two courses must be chosen, upon consultation with the thesis advisor and program director, that complement the research activities.

Elective Courses

Elective credits sufficient to complete the degree requirements must be approved by written consent of the Program Director.

The Plan of Work is developed by the student in consultation with the prospective thesis advisor and filed with the Program Director. The deadline is specified by the Graduate School and enforced by the Registrar. With the Program Director's approval the student is advanced to candidacy status.

Thesis Requirement: Completion of MDR 8999, Master's Thesis Research and Direction, Cr. 8; prereq: M.S. in Medical Research candidacy status, approved thesis outline, consent of advisor, and authorization by M.S.M.D.R Program Director.

Thesis Advisor: The advisor is selected with the advice and consent of the Program Director. The Thesis Committee, selected with the advice and consent of the Thesis advisor, must be composed of three graduate faculty members, including the thesis advisor who also serves as the student's academic advisor for the remainder of his/her program. The candidate must prepare an outline of the thesis, obtain signatures of approval from all Committee members, and file with Program Director for approval.

Thesis and Defense: The thesis document must be provided to the Thesis Committee for review prior to the oral defense. The Committee evaluates the thesis document and following the subsequent oral defense determines the MDR 8999 final grade.

Molecular Genetics and Genomics (M.S. and Ph.D. Programs)

Office: 3127 Scott Hall; 313-577-5323

Director: Lawrence I. Grossman

Website: <http://www.genetics.wayne.edu>

Professors

Gerald L. Feldman, Russell Finley, Jr., Alexander Gow, James Granneman, Lawrence I. Grossman, Henry H.Q. Heng, Gregory Kapatos, Stephen A. Krawetz, Markku Kurkinen, Wayne D. Lancaster, Li Li, Michael Tainsky

Adjunct Professors

Scott Dulchavsky, Gary Gibson, Edward Griffor, George Grunberger, Jeffrey Loeb, Roberto Romero, Derek Wildman

Associate Professors

Leon Carlock, Tiffany Cook, Maik Hüttemann, Susan Land, Leonard Lipovich, Lobelia Samavati, Angela M. Trepanier, Kezhong Zhang

Adjunct Associate Professor

Monica Uddin

Assistant Professors

Siddesh Aras, Erin Carmany, Samiran Ghosh, Francesca Luca, Roger Pique-Regi, Karli Rosner, Jeffrey Tseng, Jiemei Wang, Ren Zhang.

Adjunct Assistant Professors

Julie Zenger Hain, Cheryl Hess, Allison Jay, Mary Quigg, Jacquelyn Roberson, David Svinarich

Adjunct Instructors

Nancy Petrucelli-Walden, Peggy W. Rush

Associates

Michael Bannon (Pharmacology), David Bassett (Occupational and Environmental Health), George Brush (Pathology and Oncology), Donald DeGracia (Physiology), Felix R. Fernandez-Madrid (Internal Medicine), Zhengqing Hu (Otolaryngology), Karin Przyklenk (Physiology and Emergency Medicine), Jeffrey Ram (Physiology), Assia Shisheva (Physiology), Robert P. Skoff (Anatomy and Cell Biology), Bonnie F. Sloane (Pharmacology)

Graduate programs in Molecular Genetics and Genomics are offered in cooperation with the Center for Molecular Medicine and Genetics (CMMG). Students participate in research on gene expression and regulation, including the role of DNA-protein interactions and DNA methylation; the structure, function, and evolution of genes; molecular cytogenetics, genome organization, and mammalian gene mapping; long non-coding RNA discovery and characterization; genetic and molecular basis of inter-individual and inter-population differences in complex phenotypes; human reproductive biology; protein-protein interactions; cellular stress responses; mitochondrial biology and genetics; neuroscience and the genetic basis for neurological disease; computational biology and bioinformatics. Considerable emphasis is placed on understanding human molecular genetic diseases.

Degree Programs: The Molecular Genetics and Genomics Program offers degrees leading to the Master of Science and Doctor of Philosophy. Plan A and Plan B curricula are available for the Master of Science degree. A joint MD-Ph.D. program is also available. Inquiries about these programs should be directed to the Graduate Officer, Molecular Genetics and Genomics Program.

Admission to the M.S. and Ph.D. programs is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Programs of the School of Medicine (see

Graduate Programs of the School of Medicine, p. 462). Applicants must have: 1) a minimum grade point average of 3.0; 2) a background in mathematics, computer science and science; 3) three letters of recommendation sent directly to the Graduate Officer, Molecular Genetics and Genomics Program; 4) a personal statement; and 5) applicants should provide Graduate Record Examination scores, which must be provided. International students must be proficient in English and demonstrate a satisfactory performance on the TOEFL English proficiency examination. Members of the admissions committee will interview select applicants.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; for requirements, see the sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

Ph.D. DEGREE REQUIREMENTS

Requirements for students enrolled in graduate degree programs are described in this bulletin beginning under Degree and Certificate Requirements, Graduate, p. 36. Ph.D. students in the graduate program in molecular genetics and genomics enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum during their first year. The IBS curriculum includes:

Required IBS courses

IBS 7015– Interdisciplinary Cell and Molecular Biology: Cr. 7
BMS 6010 – Integrity in Science: Cr. 1

Required courses in Molecular Genetics and Genomics

FPH 7015 – Biostatistics I: Cr. 4
MGG 7030 – Functional Genomics and Systems Biology (IBS 7030): Cr. 2
MGG 7050 – Bioinformatics: Theory and Practice: Cr. 2
MGG 7091 – Scientific Communication: Cr. 2
MGG 7460 – Research Training in Molecular Biology and Genetics: Cr. 1-8
MGG 7600 – Advanced Human Genetics: Cr. 4

Elective courses in Molecular Genetics and Genomics

MGG 7400 – Molecular Biology of Cellular Signaling: Cr. 2
MGG 7700 – Hot Topics in Molecular Medicine: Cr. 2
MGG 8680 – Advanced Topics in Molecular Genetics and Genomics: Cr. 2
MGG 8770 – Molecular Biology of Mitochondrial Disease: Cr. 2
BMS 7100 – The Business of Biotechnology: Cr. 3

Students will select a variety of other courses in the program, should have a basic understanding of biochemistry, and are expected to become computer-literate. Advanced topics courses will be arranged to meet student needs. The program will enable the student to demonstrate a basic understanding of molecular genetics and genomics, in order to pass a general examination for candidacy for the Ph.D. degree.

Dissertation: Thirty credits in dissertation research are required in the Ph.D. program. The dissertation requirement is fulfilled registering for the courses MGG 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. The remaining credits will be assigned to research or course work in accordance with the needs of the students and the requirements in the field of concentration. At least fifteen credits in research are required beyond the minimum Ph.D. program requirements.

Financial Support: All students admitted to the program are supported by graduate research assistantships. For more complete information, students should consult or write the Graduate Officer, Molecular Genetics and Genomics Program, Wayne State University School of Medicine, 540 East Canfield, Detroit, Michigan 48201.

M.S. DEGREE REQUIREMENTS

Requirements for students enrolled in graduate degree programs are described in this bulletin under Degree and Certificate Requirements,

Graduate. The Plan A MS degree requires completion of Master's Thesis Research and Direction (MGG 8999, Cr. 8), which includes original research and writing and defense of a thesis. The Plan B MS degree requires completion of Master's Essay in Molecular Genetics and Genomics (MGG 7999, Cr. 4) and the writing of an essay on a topic in the genetics and genomics field. Both Plan A and B require 34 credit hours to graduate. Students in the MS program are required to enroll in the following courses.

MGG 7010 – Molecular Biology and Genetics: Cr. 4
BMS 6010 – Integrity in Science: Cr. 1
FPH 7015 – Biostatistics I: Cr. 4
MGG 7030 – Functional Genomics and Systems Biology (IBS 7030): Cr. 3
MGG 7050 – Human Genomics through Bioinformatics: Cr. 3
MGG 7091 – Scientific Communication: Cr. 2

Elective courses in Molecular Genetics and Genomics

MGG 7400 – Molecular Biology of Cellular Signaling: Cr. 2
MGG 7700 – Hot Topics in Molecular Medicine: Cr. 2
MGG 7810 – Systems Neuroscience: Cr. 2
MGG 7910 – Molecular Male Reproduction and Chromatin: Cr. 1
MGG 8680 – Advanced Topics in Molecular Genetics and Genomics: Cr. 2
MGG 8770 – Molecular Biology of Mitochondrial Disease: Cr. 2
BMS 7100 – The Business of Biotechnology: Cr. 3

Genetic Counseling (M.S. Program)

Office: 2375 Scott Hall; 313-577-6298

e-mail: geneticcounseling@med.wayne.edu.

Program Director: Angela M. Trepanier, M.S., C.G.C.

Associate Director: Erin Carmany, M.S., CGC

The graduate program in Genetic Counseling is located in the Center for Molecular Medicine and Genetics (CMMG). Genetic counselors are medical professionals who help people understand and adapt to the medical, psychological and familial implications of genetic contributions to disease. This is achieved by procuring and interpreting family and medical histories to assess the chance of disease occurrence or recurrence, educating patients about inheritance, testing, management, prevention, resources and research, and providing counseling to promote informed decision making and adaptation to genetic risk or genetic disease. The practice of genetic counseling requires comprehensive knowledge of human and medical genetics in combination with an appreciation for the psychological, ethical, and social issues associated with genetic disorders. It also requires critical thinking and interpersonal communication skills. Genetic counselors generally work as part of a health care delivery team in a variety of genetics clinics such as pediatric genetics, reproductive genetics, cancer genetics, metabolic clinic, cardiovascular genetics and neurogenetics. Genetic counselors also work in a variety of other settings including clinical laboratories, public health departments, universities, advocacy organizations, and public policy organizations. In addition to providing genetic counseling services to patients, genetic counselors may have roles in research, genetic testing, leadership, advocacy, public policy, and/or education.

The graduate program in genetic counseling is designed to prepare students with the appropriate knowledge base and practical experience to function as genetic counselors in a variety of clinical work settings. The curriculum consists of course work in fundamental genetic principles, human and medical genetics, embryology, epidemiological principles, and interviewing and counseling techniques. In addition, students gain practical experience by doing supervised clinical internships in a variety of genetic and subspecialty clinics as well as clinical genetics laboratories. Students are also required to complete a clinical research project (Plan B) and obtain research training as part of the research project process. This program is accredited by the Accreditation Council of Genetic Counseling.

Additional information and requests for application materials can be obtained by contacting the, Genetic Counseling Graduate Program office, 2375 Scott Hall, Wayne State University School of Medicine.

Admission to this program is contingent upon admission to the Graduate School and the Graduate Programs of the School of Medicine, see Admission, Graduate School, p. 17 and Graduate Programs of the School of Medicine, p. 462, respectively. Applicants must have a baccalaureate degree with a grade point average of at least 3.0 or equivalent. Undergraduate course work in biology, biochemistry, chemistry, genetics, organic chemistry, statistics and psychology is required. Also required are three letters of recommendation, a written essay, and Graduate Record Examination scores. Prospective students are encouraged to shadow and/or speak with a genetic counselor to obtain in depth knowledge about the field before applying. The genetic counseling program also holds open houses 2-3 times a year to give applicants exposure to genetic counselors and genetic counseling situations. Advocacy experience is also a prerequisite to admission.

DEGREE REQUIREMENTS

The Master of Science in Genetic Counseling is offered only as a Plan B Graduate School program, requiring a research project, including approximately forty-seven credits: thirty-two credits in core course work, six credits in clinical internships, six credits for the research project and three elective credits. A detailed listing of the required courses is available from the Program Director. All course work must be completed in accordance with the academic rules and regulations of the Graduate School and the School of Medicine, see Academic Regulations, Graduate, p. 32 and Graduate Programs of the School of Medicine, p. 462, respectively.

Clinical and Translational Science (Bridge Graduate Certificate for M.D./Ph.D. Students)

Certificate Director: Daniel A. Walz, Ph.D.

Office: School of Medicine Biomedical Graduate Programs, 1128 Scott Hall

The Graduate Certificate in Clinical and Translational Science (Bridge Program) trains M.D./Ph.D. students in the key elements of clinical and translational science. Thus, the curriculum for this certificate includes courses in biostatistics; epidemiology; development of novel clinical and translational methodologies; designing and implementing clinical trials and clinical research; understanding the clinical presentation, diagnosis, management and treatment of patients in the context of cutting-edge research methodologies; adhering to federal regulatory and ethical requirements in conducting clinical and scientific research; and preparing, writing and submitting competitive fellowship and grant applications to national and federal peer-reviewed funding agencies as well as performing research.

Admission to this program is contingent upon admission to the Graduate School and the Graduate Programs of the School of Medicine, see Admission, Graduate School, p. 17 and Graduate Programs of the School of Medicine, p. 462, respectively. Admission is limited to students in the M.D./Ph.D. program. Applicants should file a Change of Graduate Status with the School of Medicine Graduate Program Office and include a very brief statement of purpose for enrolling in this curriculum.

DEGREE REQUIREMENTS

This Graduate Certificate in Clinical and Translational Science requires fifteen credits of course work. Under this Bridge Program, all of the certificate credits may be applied toward the requirements of the M.S. in Medical Research (see Medical Research (M.S. Program), p. 464). The program is designed for seven to eight years, over the duration of the M.D./Ph.D. program. All course work must be completed according to requirements of the Graduate School (see Academic Regulations, Graduate, p. 32) and the Graduate Programs of the School of Medicine (see Graduate Programs of the School of Medicine, p. 462), including a cumulative earned 3.0 g.p.a. in the

courses offered for credit, and Satisfactory ('S') grades in the courses graded Satisfactory/Unsatisfactory (S/U).

REQUIRED COURSES: The Graduate Certificate in Clinical and Translational Science requires fifteen credits of courses including:

BMS 6010 – Responsible Conduct in Biomedical Research: Cr. 1

FPH 7010 – Introduction to Public Health: Cr. 1

FPH 7240 – Epidemiology: Cr. 3

MDR 7090 – Fellowship Writing for M.D./Ph.D. Students: Cr. 2

MDR 7100 – Clinical Research Design for M.D./Ph.D. Students: Cr. 2

MDR 7110 – Bench to Bedside for M.D./Ph.D. Students: Cr. 2

PSL 7710 – Disease States & Reproductive Proc.: Cr. 1 (or equivalent course)

Basic Medical Science Courses (BMS)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6010 Responsible Conduct in Biomedical Research. Cr. 1

Offered for S and U grades only. Offered for graduate credit only. Nature, motivation and ethics in biomedical science situations liable to fraud, misconduct, conflicts of interest, and plagiarism in research, in peer and editorial review, and in authorship. Methods of safe laboratory practice and ethical human and animal use as research subjects in science. (S)

6550 Medical Anatomy for Health Professionals. Cr. 4

Prereq: consent of BMS program director. Basics of human anatomy for BMS and selected graduate students. Material Fee As Indicated In The Schedule of Classes (S)

7100 Introduction to the Business of Biotechnology. (IBS 7110) Cr. 3

Translation of biomedical innovation from bench to bedside, with focus on interplay between healthcare needs, regulatory agencies, and commercialization pathways. (W)

7115 Special Topics in Biotechnology Commercialization. (IBS 7115) Cr. 1

Prereq: BMS 7100 or IBS 7110. Designed to provide practical experience in defining the relationships between academic discovery science and business development, with a focus on best practices for presenting basic research-commercial products to external, interested individuals. (W)

7880 Special Topics/Projects. Cr. 1-4

Prereq: consent of BMS program director. Open only to Basic Medical Science M.S. program students. Up to four credits in research, laboratory, discussion, or field work, in any combination; for students in Basic Medical Sciences or Medical Research program. (T)

7999 Essays in Basic Medical Science. Cr. 3

Prereq: approved Plan of Work; consent of advisor and BMS program director. Open only to Basic Medical Science M.S. program students. Methodologies in library research and critical evaluation of current biomedical literature. Written summary and report on a specific topic in current biomedical literature. (T)

Interdisciplinary Biomedical Sciences Courses (IBS)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7015 Interdisciplinary Cell and Molecular Biology. Cr. 7

Open only to Ph.D. students in the School of Medicine. Molecular biology, biochemistry, and genetics with focus on structure and function of macromolecules, synthesis of macromolecules and their regulation, and genetics. In addition, cellular components, function, and regulation involved in fundamental processes, including: cell communication and signaling, intracellular protein targeting and trafficking, cell cycle, apoptosis, immunology, cancer, and differentiation. Particular emphasis on human health, disease, and aging. (F)

7030 (MGG 7030) Functional Genomics and Systems Biology. Cr. 2

Open only to Ph.D. students in School of Medicine. Prereq: IBS 7010 and 7020; coreq: IBS 7040, 7050, 7060, or 7090. Exploration of several new technologies for determining gene function on a genome-wide scale and for integrating information into a systems-level view of biological processes. (W)

7050 Biomedical Neurobiology. Cr. 2

Open only to Ph.D. students in School of Medicine. Prereq: IBS 7010 and 7020. Sensory, motor, and integration of nervous systems, including anatomic and cellular organization, systemic and cellular-molecular functions, and diseases. (W)

7090 Biomedical Immunology. Cr. 2

Open only to Ph.D. students in School of Medicine. Prereq: IBS 7010 and IBS 7020. Cellular-molecular and systemic functions, and diseases of the immune system. (W)

7100 (BMS 7100) Biomedical Neuropharmacology. Cr. 2

Open only to Ph.D students in School of Medicine. Prereq: IBS 7010 and IBS 7020. General principles, including cellular and molecular basis of drug action with special emphasis on neuronal systems. (W)

7110 (BMS 7100) Introduction to the Business of Biotechnology. Cr. 3

Open only to Ph.D students in School of Medicine. Prereq: IBS 7010 and IBS 7020. Insights into interface between science and business, during the translation of basic biomedical discoveries into commercial and clinical practice. (W)

7115 (BMS 7115) Special Topics in Biotechnology Commercialization. Cr. 1

Prereq: BMS 7100 or IBS 7110. Designed to provide practical experience in defining the relationships between academic discovery science and business development, with a focus on best practices for presenting basic research-commercial products to external, interested individuals. (W)

7120 (PHC 7210) Fundamentals of Cancer Biology. (CB 7210) Cr. 3

Open only to Ph.D students in School of Medicine. Prereq: IBS 7010 and IBS 7020. Introduction to the basic principles of neoplastic development and progression. (B:W)

7130 Systems Neuroscience: Structure and Function of the Nervous System. Cr. 2

Open only to Ph.D students in School of Medicine. Prereq: IBS 7010 and IBS 7020. Basic principles of neural science through examination of structure and function of the major physiological systems within the brain and spinal cord. (W)

7140 (BMB 7140) Foundations of Computational Biology. Cr. 3

Introduction to basic concepts of linear algebra and their application to biomedical research data analysis. MATLAB programs are introduced and employed as the tool for practical implementation of computational methods. (F)

Medical Research Courses (MDR)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7090 Fellowship Writing. Cr. 2

Open only to students in combined M.D./Ph.D. program. Preparation and submission of fellowship applications to national funding agencies such as the NIH. Advanced scientific communication, including bibliographic and online resources, organization of federal funding agencies, composition and function of study sections, NIH grant application process, fellowship writing, Institutional Review Boards (IRBs). Students work with faculty and research mentors to prepare and submit applications. (F)

7100 Clinical Research Design. Cr. 2

Open only to students in combined M.D./Ph.D. program. Design and implementation of authorized clinical research projects, with exposure to such topics as drug discovery, study design, obtaining FDA approval, subject recruitment and retention, data management, translational and biotechnological aspects, GCRC, and bioinformatics; preparation for establishment of career in clinical and translational research. (F,W)

7110 Clinical Field Experience. Cr. 0-2 (Max. 2)

Open only to students in combined M.D./Ph.D. program. Offered for S and U grades only. Complexity of the disease process from initial presentation of patient in a clinic, to understanding the pathophysiological basis of the disease, to diagnosis, treatment, and patient management; application of clinical and laboratory research training and current technology. Topics may include: diabetes, sickle cell anemia, asthma, seizures, hypertension, congestive heart failure, chronic myeloid leukemia, genetics of cancer, stroke, lupus. (F,W)

7120 Clinical and Translational Science Colloquium. Cr. 1

This colloquium will address current topics in clinical and translational science and research. Student will present topics in these areas and will be involved in discussions (verbal and written) to address relevant issues in these areas. (F)

7410 (LEX 7410) International Organizations and Public Health. Cr. 3

Prereq: LEX 6200 and LEX 6600. Course has two objectives: first, to give students a working understanding of the structure, function, and mission of the international organizations that increasingly impact modern life: the WTO, EHO, World Bank, IMF, and UN; second, to explore the effects of globalization on public health. Topics include: WHO control of infectious diseases such as SARS, impact of the WTO on pharmaceutical pricing of AIDS drugs and genetically-modified foods, international conventions for tobacco control, and influence of World Bank and IMF privatization requirements on health sector reform in developing countries. (Y)

7420 Topics in International Health Medicine. Cr. 2

Prereq: written consent of instructor. Clinical trainees are exposed to topics in understanding and managing health care and other needs of children involved in international travel, as well as of children adopted locally from other countries. One-hour biweekly lectures by experts in various areas of international health. (B)

7990 Directed Study in Pediatric Global Health. Cr. 4

Prereq: written consent of instructor. Clinical trainees develop and execute research projects in international settings, using international and culturally sensitive protocols and regulations. Conducting research in clinical areas at partnering sites in India and China. (B)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)
Prereq: candidacy status; approved thesis topic and outline; written consent of advisor and MDR Program. Open only to students enrolled in Master of Science in Medical Research Program. (T)

Molecular Genetics and Genomics Courses (MGG)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Molecular Biology and Genetics. Cr. 4

Prereq: organic chemistry background. Basic aspects of molecular genetics. (F)

7015 Introduction to Genetics. Cr. 2

Forges a link between genotype and phenotype and covers topics in contemporary genetics, including Mendelian analysis, chromosomes, mitosis/meiosis, recombination, mutations and mutagenesis, linkage mapping, complementation, extranuclear inheritance, genetic interactions and epistasis, epigenetics, and developmental genetics. (F)

7030 Functional Genomics and Systems Biology. (IBS 7030) Cr. 2

Prereq: IBS 7010 and IBS 7020. Exploration of several new technologies for determining gene function on a genome-wide scale and for integrating information into a systems-level view of biological processes. (B)

7050 Bioinformatics: theory and practice. Cr. 3

This course will teach graduate students in the biological sciences how to use public web-based bioinformatics resources that were generated by, and after, the Human Genome Project to analyze the structure and function of protein-coding and noncoding-RNA genes. (W)

7091 Scientific Communication. Cr. 2

Prereq.: written consent of instructor. Advanced technical and grant-writing techniques related to the unique requirements in NIH grant proposals. (W)

7400 Molecular Biology of Cellular Signalling. (CB 7400) Cr. 2

Molecular basis of cell-cell interactions, hormonal interactions, and interactions between different cellular compartments. (B)

7460 Research Training in Molecular Biology and Genetics. Cr. 1-8

Prereq: written consent of advisor or graduate officer. Direct participation in laboratory research under the supervision of faculty advisor. Design and execution of experiments; analysis of laboratory data; interpretation of results and their relation to published findings. (T)

7600 Advanced Human Genetics. Cr. 4

Concepts, problems, and methods of human genetics at an advanced level. (B)

7640 Principles of Genetic Counseling. Cr. 3

Prereq: admission to genetic counseling graduate program. History and evolution of genetic counseling and how it relates to clinical genetic services within the health care delivery system. Genetic counseling skills such as case preparation, interviewing techniques, and family history assessment; counseling methods. (B)

7660 Practical Applications of Genetic Counseling. Cr. 2

Prereq: MGG 7640; student in Genetic Counseling graduate program. Through a variety of instructional methods, students gain a foundation for understanding and applying the practical aspects of genetic counseling to clinical settings in reproductive, pediatric, adult, and cancer genetics. (W)

7700 Hot Topics in Molecular Medicine. Cr. 2

Prereq: completion of first year in interdisciplinary biomedical sciences curriculum. Lectures and discussion groups for graduate-level students in the biological sciences. How to go from the bench-top to the bedside by exploring the latest developments in basic biomedical research and translating them into new treatments for human disease. (B)

7740 Theory and Practice of Genetic Counseling. Cr. 3

Prereq: MGG 7640; admission to genetic counseling graduate program. Major theories of human behavior and application of these theories to the practice of genetic counseling. Development of interpersonal communication and psychosocial assessment skills. (W)

7741 Advanced Genetic Counseling Theory and Practice. Cr. 3

Prereq: MGG 7740; admission to genetic counseling graduate program. Cultural, social, ethical, legal, professional and health-related issues that influence delivery of genetic counseling service and patient decision-making. Application of knowledge to practice. (F)

7800 Advanced Medical Genetics. Cr. 3

Prereq: MGG 7600. Overview of medical genetic disorders taught at a level suitable for those preparing for certification examinations in clinical genetics specialties or for those whose research focus or clinical practice will have a strong emphasis in medical genetics. (T)

7830 Human Development and Teratology Seminar. Cr. 1

Prereq: admission to Master of Science program in genetic counseling. Through lecture, self-study, exam, and oral presentation, students learn key aspects of fetal development, the embryological basis of birth defects and genetic dysmorphology syndromes, clinical teratology, and the associated medical terminology. (F)

7850 Current Topics in Molecular Biology and Genetics. Cr. 1 (Max. 4, M.S.; max. 6, Ph.D.)

Offered for S and U grades only. Current literature in molecular biology and genetics; one student makes oral presentation with student and faculty discussion. (I)

7860 Evaluating the Health Care Literature. Cr. 1

Prereq: admission to genetic counseling graduate program. Reading and analysis of health care literature with focus on research articles. Principles of health research design and analysis; skills for critical assessment of medical literature. (Y)

7880 Genetic Counseling Seminar. Cr. 1-6

Prereq: admission to graduate program in genetic counseling. Discussion format; issues relevant to medical genetics and the genetic counseling process. Presentations by students and invited faculty. (T)

7881 Senior Seminar in Genetic Counseling. Cr. 2

Prereq: admission to genetic counseling program. Preparation for the transition to from student to practicing professional in the areas of the job search, billing and reimbursement, clinical supervision, developing effective educational programs, advocacy, and other relevant areas. (W)

7999 Master's Research Project and Direction. Cr. 1-5 (4 req.)

Open only to M.S. candidates in genetic counseling program. Prereq: written consent of instructor. Student conducts hypothesis-driven research and prepares written manuscript and oral presentation. (T)

8680 Advanced Topics in Molecular Biology and Genetics. Cr. 1-3 (Max. 12)

Prereq: written consent of instructor. In-depth study of concepts and research in specific fields. (I)

8770 Molecular Biology of Mitochondrial Disease. Cr. 2

Prereq: IBS 7010 and IBS 7020 or equiv. Mitochondrial structure and function; mitochondria as sites of phenomena such as cell death,

generation of free radicals, and production of most cellular energy. Traditional mitochondrial diseases (e.g., caused by mutations in the mitochondrial DNA); more recent findings of involvement of mitochondria in pathologies such as cancer, diabetes, aging, and neurodegenerative diseases. (F)

8998 Genetic Counseling Internship. Cr. 1-8

Prereq: admission to genetic counseling graduate program. Students work in variety of genetics and subspecialty clinics as well as laboratory settings, under supervision of genetic counselor/geneticist. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: written consent of instructor. Open only to departmental M.S. candidates. Student conducts research and prepares written presentation, designed to test specific hypothesis dealing with method, concept, or data. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: MGG 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following MGG 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: MGG 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following MGG 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: MGG 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following MGG 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in MGG 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Anatomy and Cell Biology

Office: 8374 Scott Hall; 313-577-1061
Chairperson: Linda D. Hazlett
E-mail: lhazlett@med.wayne.edu

Website: <http://www.med.wayne.edu/anatomy/>

Professors Emeritus

David B. Meyer, Roberta G. Pourcho

Distinguished Professors

Linda D. Hazlett

Professors

D. Randall. Armant, Bruce A. Berkowitz, Maria Bykhovskaia, Robert N. Frank, Harry G. Goshgarian, Renu A. Kowluru, Harry Maisel, Zhuo-Hua Pan, Jose A. Rafols, Robert P. Skoff, Jena Steinle, Paul D. Walker, Fu-Shin Yu

Associate Professors

Joshua E. Adler, Mihir Bagchi, Rodney D. Braun, Markus Friedrich, Dennis J. Goebel, A. Genene Holt, Mark E. Ireland, Kwaku D. Nantwi, Jean D. Peduzzi-Nelson, Gabriel Sosne, Susmit Suvas, Shunbin Xu

Assistant Professors

Elizabeth Berger, Tomomi Ichinose, Ashok Kumar, Lalit S. Pukhrambam, Ryan Thummel, Jessie I. Wood

Adjunct Professors

Anna C. Ettinger, Jerry Slightom

Adjunct Associate Professors

Clifford Les, Saul I. Weingarden

Adjunct Assistant Professor

Joseph Failla

Associates

Eishi Asano, Ghassan Saed, Frank Yelian

Graduate Degrees

MASTER OF SCIENCE with a major in anatomy and cell biology

DOCTOR OF PHILOSOPHY with a major in anatomy and cell biology

Anatomy and Cell Biology (M.S. and Ph.D. Programs)

The Department of Anatomy and Cell Biology offers training for the investigation of biological and biomedical problems using molecular, cellular, and morphological approaches. Faculty members are active in a diversity of research areas, including cell and developmental biology, neuroscience, vision research, and immunology. Study for the Ph.D. degree includes dissertation research in the laboratory of a faculty member and can generally be completed in four to five years. Students who have also been admitted as medical students can typically complete both M.D. and Ph.D. degrees in six to seven years. Admission to the master's degree program is very limited and based on special circumstances.

During their first year, Ph.D. students typically enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum. The IBS curriculum includes:

IBS 7015 – Interdisciplinary Molecular and Cellular Biology: Cr. 7

It also includes selection by the student in conjunction with the program Graduate Officer of courses within the IBS Systems curriculum.

IBS Systems Curriculum:

IBS 7030 – Functional Genomics and systems Biology: Cr. 2

IBS 7050 – Biomedical Neurobiology: Cr. 2

IBS 7090 – Biomedical Immunology: Cr. 2

IBS 7100 – Biomedical Neuropharmacology: Cr. 2.

IBS 7110 – Introduction to the Business of Biotechnology: Cr. 3

IBS 7115 – Special Topics in Biotechnology Commercialization Cr. 1

IBS 7120 – Fundamentals of Cancer Biology: Cr. 3.

IBS 7130 – Systems Neuroscience: Cr. 2

IBS 7140 – Foundations of Computational Biology Cr. 3

Opportunities are provided for the student to become acquainted with the diverse research interests of the faculty and to obtain hands-on experience in selected techniques. Seminars and elective courses broaden the exposure to clinically-relevant areas of research. In the second year, students may select advanced courses in several areas of Anatomy and Cell Biology and choose an advisor to assist in development and implementation of a dissertation research project. The graduate program is flexible and allows for continuing interdisciplinary training; emphasis is placed on designing a program which is tailored to the student's particular goals. In addition to developing research competence, individuals interested in pursuing teaching as part of a career will be able to achieve competence in neuroscience, embryology, and microscopic or gross anatomy.

Admission to these programs is contingent upon admission to the Graduate School and the graduate programs of the School of Medicine; for requirements, see Admission, Graduate School, p. 17 and Admission, p. 462, respectively. Applicants must have an undergraduate degree. A minimum grade point average of 3.0 is required for admission to the Ph.D. program. An interview with the Graduate Committee Chairperson or designated representative is desirable. The Graduate Record Examination is required for admission. Foreign students must be proficient in English as determined by satisfactory performance on the standardized TOEFL English proficiency examination.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

The general requirements for the Master of Science and Doctor of Philosophy degrees may be found in the Graduate School section of this bulletin. The master's degree is offered as Plan A only, which includes a manuscript based on original research. Candidates for the Ph.D. are required to select at least two subdiscipline courses in anatomy and cell biology from the following: ANA 7010, 7030, 7080, 7130; they also complete written and oral qualifying examinations. The major component of the Ph.D. program is preparation of a dissertation which details the results of original research.

The thirty credit dissertation registration requirement is fulfilled by registering for the courses ANA 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Vision Science Program

Students interested in developing independent careers in the area of vision science may obtain specialty training in this research field. Through course work and clinical interactions, students receive

broad based training which integrates basic science and clinical approaches to the understanding of eye function and ocular disease. Three courses (ANA 7055, 7065, and 7075) provide the background for individually directed research projects. Faculty from both the Department of Anatomy and Cell Biology and the Department of Ophthalmology participate as mentors in this unique program.

Assistantships and Research, Anatomy

The Department has graduate research assistantships available for a number of qualified students. All students accepted into the doctoral degree program are considered for financial assistance, and no application forms are necessary for this purpose. Students on assistantships are advised to elect no more than twelve credits in a given semester. All students, whether or not they hold a fellowship or assistantship, are required to assist the graduate faculty in research activities as a component of their educational experience. For more information on financial assistance, students should contact the Graduate Committee Chairperson, Department of Anatomy and Cell Biology, Wayne State University School of Medicine, 540 East Canfield, Detroit, Michigan 48201.

Anatomy Courses (ANA)

The following courses are offered for graduate credit to graduate students as indicated by individual course limitations. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Human Gross Anatomy. Cr. 8

Prereq: acceptance in departmental graduate program. Lectures and dissection of limbs, back, thorax, abdomen, head and neck, pelvis and perineum. Written and practical examinations. (F)

7030 Human Microscopic Anatomy. Cr. 4

Prereq: acceptance in Anatomy and Cell Biology graduate programs. The microscopic structure of tissues and organs. Lectures and laboratory study. (F)

7055 Biology of the Eye. (BIO 7055) (PYC 7050) Cr. 3

Integrated introduction to basic biological structure/function of the eye; causes and clinical treatments of eye-related disorders and diseases. (F)

7065 Mechanisms of Ocular Disease I. Cr. 2

Prereq: ANA 7055. Lectures and readings on mechanisms and current treatments for diseases of the anterior segment of the eye. (W)

7075 Mechanisms of Ocular Disease II. Cr. 2

Prereq: ANA 7055. Lectures and readings on mechanisms and current treatments for diseases of the posterior segment of the eye. (F)

7080 Human Embryology. Cr. 3

Prereq: acceptance in Anatomy and Cell Biology graduate program. Study of experimental and human embryology; developmental processes, with particular reference to human embryology. (F)

7130 Neuroanatomy. Cr. 4

Prereq: acceptance in Anatomy and Cell Biology graduate program. Lecture and laboratory study of the nervous system. (W,S)

7260 Special Dissection. Cr. 2-10 (Max. 20)

Prereq: acceptance in Anatomy and Cell Biology graduate program. (T)

7270 Special Projects in Anatomy. Cr. 2-10

Prereq: acceptance in Anatomy and Cell Biology graduate program. Research rotations leading to selection of permanent advisor. (T)

7890 Seminar. Cr. 1 (Max. 4)

Prereq: acceptance in Anatomy and Cell Biology graduate program. Biweekly departmental seminar. (T)

7996 Research. Cr. 1-15 (Max. 30)

Prereq: acceptance in Anatomy and Cell Biology graduate program. Research under direction of permanent advisor. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: acceptance in Anatomy and Cell Biology graduate program. Original research leading to M.S. degree under Plan A. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: ANA 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ANA 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ANA 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ANA 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ANA 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ANA 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ANA 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Anesthesiology

Office: St. Joseph Mercy Oakland, Medical Office Building, 44555 Woodward Avenue, Suite 306, Pontiac, MI 48341 (248) 858-2259
Chairperson: Terry A. Ellis, II

Professors

Marc Basson, H. Michael Marsh

Adjunct Professors

Matthew Galloway

Associate Professor, Full-Time Affiliate

Gaylord D. Alexander, Maria M. Zestos

Assistant Professor, Full-Time Affiliate

Daniel Applefield, Elie J. Chidiac, John Dooley, Terry A. Ellis II, Robin Delaney, Sharon Kemper

Clinical Professor

Samuel Perov, Raymond Cooper, Samir Fuleihan

Clinical Professor - Full-Time Affiliate

Hong Wang

Clinical Associate Professors

William Alarcon, Jeffrey Clark, Halim Haber, Pramod Kerkar, Henry Kroll, Konstantin Rusin, Vitaly D. Soskin, Stephen Tennenberg

Clinical Assistant Professors

Bruce Adelman, Zulfiqar Ahmed, Yasser Al-Baghdadi, Mohammad Al-Nouri, Ala Alosman, Mohamed-Rida Alasaden, Beata Bardecka-Skrzyppek, Kathryn Bennett, Aaron P. Betel, Debashish Bhattacharya, Robert A. Blumberg, Baher Boctor, Mark Bruni, Julie Buch, Shushovan Chakraborty, Hao Cheng, Lisa T. Cooper, Eric Davies, Krassimir Denchev, Janice Dorsten, Nasser Durgham, Julie Dutton, Christina W. Fidkowski, Joel Frederick, Margaret C. Gall, Dragos Galusca, Naveen S. Gandreti, Deepak Gupta, John Hadda, Joffer Hakim, Hassan Hammoud, Daniel Hass, Jennifer Henderson, Aurelia Jamerson, Romeo Kaddoum, Nabil Kadi, Edward R. Kaminski, Sujatha Kotamraju, Hishan Krish, John Kurtz, Tosanth Leepuengtham, Todd E. Lininger, Joe Liu, Milos Marjanovic, Avijit Mookerjee, Cheryl Mordis, Rudram Muppuri, Ananthamurthy Nagabhushana, Walid Osta, Robert Padilla, Vinay Pallekonda, Padmavathi Patel, Pranav S. Patel, Sanker Rajan, Sruthi Rudraraju, Vikas Shah, Nabil, Sibai, Lori Stricker, Arina A. Monica Talpesh, Imani Thornton, An Chi Wu, Mohammed Zaman

Clinical Instructors

Bassam Jwaida

This department offers medical students a program in anesthesiology comprised of individual instruction in the operating room and a series of regularly scheduled seminars. The major objectives of study in this field include the acquisition of skills and knowledge related to: airway management, including endotracheal intubation; lumbar puncture and spinal anesthesia; monitoring of anesthetized patients; pharmacology of anesthetic agents and other drugs related to anesthesia; preoperative evaluation and preparation of a patient for anesthesia and surgery; physiology of the perioperative period; respiratory therapy including management of patients who require prolonged ventilator care; management of acute drug intoxication; and the management of pain. A one-month elective in anesthesiology is offered to medical students during their junior or senior year.

Biochemistry and Molecular Biology

Office: 4374 Scott Hall; 313-577-1511

Chairperson: Bharati Mitra

Website: <http://www.med.wayne.edu/biochem/>

Professors

Robert A. Akins, William S. Brusilow, Brian F.P. Edwards, David R. Evans, Russell Finley, Ye-Shih Ho, Ladislau C. Kovari, Richard B. Needleman, Jianjun Wang

Associate Professors

Sharon Ackerman, Domenico Gatti, Malik Huttemann, QianQian Li (Research), Zhe Yang

Assistant Professors

Chunying Li

Graduate Degrees

MASTER OF SCIENCE with a major in Biochemistry and Molecular Biology

DOCTOR OF PHILOSOPHY with a major in Biochemistry and Molecular Biology

Students electing to study in the Department of Biochemistry and Molecular Biology will find faculty with a broad range of research interests, including structural studies of macromolecules by x-ray, role of metals in biology and disease, bioenergetics, enzymology, the molecular basis of drug resistance, and new approaches to therapy in cancer and cardiovascular disease. The variety of coursework available within the Department, elsewhere in the School of Medicine, and in various other University departments, allow the student to acquire a deep and appropriate contemporary scientific background for experimental research. The Department encourages the development of an individually designed thesis project in collaboration with a student's research mentor.

The Department of Biochemistry and Molecular Biology offers programs leading to the Master of Science and Doctor of Philosophy degrees. The master's degree is recommended for students who wish to enhance their academic and practical research training above the undergraduate level without committing to a complete Ph.D. program. This program is geared for students who wish to do research in the biotechnology or pharmaceutical industries, who seek admission to Ph.D. or M.D. programs, and those who wish to do technical or regulatory writing. The Ph.D. degree is standard in the Department for students planning teaching or research careers in this field. The department attempts to pattern students' programs according to their interests and at the same time, to provide them with diverse experiences in the major areas of biochemistry. An M.D.-Ph.D. program with a major in biochemistry is also available, see Joint M.D. - Ph.D. Program, p. 463.

Biochemistry and Molecular Biology (M.S. Program)

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Programs of the School of Medicine (see Admission, p. 462). The degree is offered under Plan A only, in which eight of the thirty required credits must be from thesis research requiring the completion of an approved experimental research project. Students must have an undergraduate degree with preferred majors being

chemistry or biology, although students with other majors such as mathematics or physics are welcome to apply. A minimum grade point average of 2.6 is required. The results of a Test of English as a Foreign Language (TOEFL) exam should also be presented by those applicants coming from countries where English is not the mother tongue.

DEGREE REQUIREMENTS

Applicants for the Master of Science degree must complete thirty credits, including at least eight credits of master's research. Required coursework includes the following:

- BIO 6000 – Molecular Cell Biology I: Cr. 3
- BMB 7010 – General Biochemistry Lecture: Cr. 4
- BMB 7030 – Core Cpts. in Technologies in Biochem. and Molec. Biol.: Cr. 4
- BMB 7320 – Protein Structure and Function: Cr. 3
- BMB 7330 or 7360
 - Advanced Molecular Biology: Cr. 2
 - Advanced Structural Biology: Cr. 2
- BMB 7890 – Journal Club (First Year): Cr. 1
- BMB 7890 – Journal Club (Second Year): Cr. 1
- BMB 7996 – Research (First Year): Cr. 2
- BMB 7996 – Research (Second Year): Cr. 6
- BMB 8999 – Master's Research: Cr. 8

The completion of an original research project and the preparation and presentation of a thesis are the primary activities of the second year.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

Biochemistry and Molecular Biology (Ph.D. Program)

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Programs of the School of Medicine (see Admission, p. 462). Additionally, applicants are expected to meet the following departmental requirements: students must have an undergraduate degree. Preferred majors include chemistry, biology, or physics, although students with other majors are encouraged to apply. A minimum grade point average of 3.0 for the Ph.D. program is required; and an interview with the Graduate Officer or designated representative should be arranged if possible. The Graduate Record Examination is required for admission. International students must be proficient in English as determined by satisfactory performance on the standardized TOEFL English proficiency examination.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

Applicants for the Doctor of Philosophy degree must complete ninety credits, including at least thirty credits in research and dissertation, at least six credits in a minor and the remaining credits distributed between the major and required cognate courses and electives. The thirty credit dissertation registration requirement is fulfilled by registering for the courses BMB 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. During their first year, students undertake rotations, each of ten weeks duration, in two laboratories of their choice. The intention of rotations is to allow the student to make an informed decision about his or her ultimate area of

research specialization. Coursework requirements include one course in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum and one course offered by the department or a research elective:

IBS 7015 – Interdisciplinary Molecular and Cellular Biology: Cr. 7

In addition three credit hours of research (BMB 7996) or an elective should be taken for a total of 10 credit hours during the first semester.

Additional courses (four credits) may be selected from:

- IBS 7030 – Functional Genomics and systems Biology: Cr. 2
- IBS 7050 – Biomedical Neurobiology: Cr. 2
- IBS 7090 – Biomedical Immunology: Cr. 2
- IBS 7100 – Biomedical Neuropharmacology: Cr. 2
- IBS 7110 – Introduction to the Business of Biotechnology: Cr. 3
- IBS 7115 – Special Topics in Biotechnology Commercialization: Cr. 1
- IBS 7120 – Fundamentals of Cancer Biology: Cr. 3
- IBS 7130 – Systems Neuroscience: Cr. 2
- IBS 7140 – Foundations of Computational Biology: Cr. 3

Required Departmental courses include:

- BMB 7320 – Protein Structure and Function: Cr. 3
- BMB 7330 – Advanced Molecular Biology: Cr. 2
- BMB 7890 – Journal Club: Cr. 1 (Max 6, one credit per academic year. Students participate in Journal Club every semester while in the BMB program.)

Each student must arrange a program in an area of minor concentration with a representative of the department in which he/she plans to minor and preferably with the representative on the doctoral committee. Concentrations in the following are among the acceptable minors: organic chemistry, physical chemistry, physical-organic chemistry, microbiology or immunology, pharmacology, physiology, biology and computer science.

Assistantships and Research, Biochemistry and Molecular Biology

The Department has graduate assistantships and graduate research positions available for a number of qualified students. All students accepted into the Ph.D. program are considered for financial assistance and no application forms are necessary for this purpose. Students on assistantships are advised to elect no more than ten credits in a given semester. All Ph.D. students, even those who do not hold a fellowship or an assistantship, are required to assist the graduate faculty in teaching and research activities as a component of their educational experience. For more complete information on financial assistance, students should consult or write to the Graduate Officer, Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, 540 East Canfield, Detroit, Michigan 48201. M.S. students are not financially supported by the program, but may be hired as research assistants and can apply for the Graduate Professional Scholarship.

Biochemistry and Molecular Biology Courses (BMB)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 General Biochemistry Lecture. Cr. 4

Prereq: organic chemistry. Introduction to biochemistry: structure of biological molecules, enzymes, bioenergetics, intermediary metabolism. Biosynthesis of DNA, RNA, and proteins. (F)

7020 Biochemistry Laboratory Rotation. Cr. 0

Research projects with various faculty. (T)

7030 Core Concepts in Technologies in Biochemistry and Molecular Biology. Cr. 4

Open only to BMB master's students. Coreq: BMB 7010. Methods-based approach to understanding core concepts in biochemistry and biotechnology. Students acquire competence enabling them to explain and implement these approaches. (F)

7140 Foundations of Computational Biology. (IBS 7140) Cr. 3

Introduction to basic concepts of linear algebra and their application to biomedical research data analysis. MATLAB programs are introduced and employed as the tool for practical implementation of computational methods. (F)

7320 Protein Structure and Function. Cr. 3

Prereq: BMB 7010 or equiv. Structure, function, and design of proteins: architecture, function, regulation, assembly and evolution of proteins and protein complexes; theory and techniques of kinetic analysis; newer techniques of protein design and engineering. (W)

7330 Advanced Molecular Biology. Cr. 2

Prereq. or coreq: BMB 7010. Modern topics in biochemistry, including nucleic acid dynamics, genomic structure, DNA replication and repair, transcription, RNA processing, translation and protein synthesis. (W)

7360 Advanced Structural Biology. Cr. 2

Prereq: IBS 7010 or equiv. Determination of structure and dynamics of biological molecules by NMR and crystallography; emphasis on protein structure and function. (W)

7670 Advanced Biochemistry Laboratory. Cr. 2-10

Advanced laboratory techniques as applied to investigations of biological materials. (T)

7890 Journal Club. Cr. 1 (Max. 6)

Prereq: BMB 7010 or equiv. Student presentations of papers from recent biochemistry literature; recommended for graduate students in biochemistry only. (F,W)

7996 Research. Cr. 1-15 (Max. 30)

(T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

(T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: BMB 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following BMB 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: BMB 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following BMB 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: BMB 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following BMB 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in BMB 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Dermatology

Office: 18100 Oakwood Blvd., Suite 300; Dearborn; MI 313 429-7843

Chairperson: Darius R. Mehregan

Associate Chairperson: David A. Mehregan

Website: <http://www.med.wayne.edu/dermatology>

Professors

Darius R. Mehregan, David A. Mehregan

Assistant Professors

Peter J. Aronson, Steve Daveluy, Leonard Y. Kerwin, Karli Rosner, L. Boyd Savoy,

Clinical Professors

Thomas A. Chapel, Syed L. Husain Hamzavi

Clinical Associate Professors

Thomas F. Downham II, Ali Moiin

Clinical Assistant Professors

James Brown, Lori Federonko, Alan Fligiel, Mohammad Ghaemi, Viktor Goncharuk, Fasahat Hamzavi, Iltefat Hamzavi, Karen Heidelberg, David Iacobelli, Jessica Kado, Danita Peoples

Clinical Instructors

David Blum, Michael Dorman, S. Jean Kegler, Ann A. LaFond, Judith T. Lipinski, Jeffrey M. Shuster

The instructional and research activities of this department focus on the skin as a distinct organ of the body. Specific diagnostic procedures developed in recent years such as immunopathology, and various modalities of treatment such as PUVA, UVA, Narrow band UVB, lasers and Mohs micrographic surgery, are taught in the department.

A comprehensive clinical dermatology elective is offered to third and fourth year medical students. A research elective is also available to qualified students, offering both basic and clinical research in the fields of immunobiology, molecular biology, ultrastructural analysis, photobiology and dermatopathology. The laboratory of molecular dermatology specializes in the molecular biology of malignant melanoma. The department offers a three-year, fully accredited residency training program to candidates at the second postgraduate year level.

Emergency Medicine

Office: 6G University Health Center; 313-993-2530

Fax: 313-993-7703

Chairperson: Brian J. O'Neil

Web: <http://www.med.wayne.edu/em/index.asp>

Professors

Cynthia Aaron, Brooks F. Bock (Emeritus), Gary S. Krause (Emeritus), Gloria J. Kuhn, Phillip D. Levy, Brian J. O'Neil, Karin Przyklenk, Robert D. Welch, Blaine C. White (Emeritus), Peter Whittaker, Robert J. Zalenski

Associate Professors

William Berk, Robert Dunne, Kerin A. Jones, Thomas Sanderson, Robert Sherwin, Jonathon Sullivan, Robert P. Wahl

Assistant Professors

Erin Brennan, Aaron Brody, Trifun Dimitrijevi, Bram Dolcourt, Elizabeth Dubey, Mark Favot, John Z. Gallien, Matthew Griffin, Matthew Hedge, Andrew King, Sarkis Kouyoumjian, Rita Kumar, Arun Kumar, Anthony Lagina, Philip Lewalski, Anne Messman, Erik Olsen, James Paxton, Claire Pearson, Marc Rosenthal, Tolulope Sonuyi, Marc-Anthony Velilla

Professors, Full-Time Affiliate

Suzanne R. White

Clinical Professors

Nirmala B. Bhaya, Mark Brautigam, Stephen R. Knazik, Christopher lewandowski, Robert T. Malinowski, Richard Nowak, Emanuel Rivers, Robert A. Swor, Helene Tigchelaar, Michael Tomlanovich

Clinical Associate Professors

Jenny G. Atas, Lydia L. Baltarowich, Don M. Benson, Antonio J. Bonfiglio, Jacek R. Brudzewski, Pamela J. Claps, Jerrold R. Fisher, James M. Fox, Scott B. Freeman, Earl R. Hartwig, Charlene B. Irvin, Raymond E. Jackson, Howard Klausner, William J. Lusk, Gerard Martin, Regina T. Noack, Patricia P. Nouhan, Anthony C. Southall, Kalavathy Srinivasan, Padraic J. Sweeny, Ross E. Tabbey, Marc Upfal, Phyllis Vallee, Nancy Z. Walter, Douglas J. Wheaton, Collette M. Wyte, Hashim M. Yar

Clinical Assistant Professors

Victor Abuel, David Amponsa, William T. Anderson, Crystal Arthur, Doru Bali, Sudhir BaligaHafez Bazzi, David Bedol, Rebecca Behrends, Gregory Berger, Keenn Bora, Vincent Borla, Rhett Franklin, Lisa A. Braun, Justin Bright, Leonard Bunting, Brandon Cheppa, James W. Collins, Matthew Compton, Susan Corrion, Duane Corsik, Alvan R. Cruz, Minh Cruz, Alice M. Dea, Fadi Daouk, Katie Dobratz, Maria Dorsch, Reginald J. Eadie, Nathanael Egger, Roy C. Elrod, Michael Falzon, Jason Folt, Raymond Fowkes, Jr, Audwin Garcia, Nikhil Goyal, Sudershan K. Grover, Angela Groves, Bradley Gutierrez, Christopher Guyer, Demetris Haritos, Ali Hassan, Gregory Hays, Julia Hays, Christopher Heberer, Katherine Hebert, Kimberly Heller, Daniel Helzer, Marion Hoelzer, Kathleen Hosmer, Henry Huitsing, Jeffrey Janowicz, Bradley Jaskulka, Pamela Jostock, Edward Kakish, Belinda Kakos, Simon Katrib, Charles Keersmaekers, Robert Kelman, Brian Kern, Nabil Khoury, Robert Klever, Sanford Koltonow, Ilya Kott, Chad Kovala, Cynthia Lepak-Hitch, Patrick C. Loeckner, Christopher Loewe, Charlotte Logan, Alexander Madgy, Manu K. Malhotra, Jacob Manteuffel, Shazia Maqbool, Jennifer Martin, Wesley Martus, Veronica M. Miks, Joseph Miller, Laura Moody, Jason Moore, Marcus Moore, Daniel Morris, Usamah Mossallam, Romajit A. Multani, Christian Mustill, Jumana Nagarwala, Kamal Nangia, Mark Neavyn, Jeffery Nigl, Jessica Normile, Katherine Ohlendorf, Teresa Oxholm, Daniel E. Paling, Dilnaz Panjwani, Maheshkumar Patel, Margarita E. Pena, Ryan Phillips, Katherine Pitus, Angela Pugliese, Daniel Ridelman-Monzon, Michelle Rivera, Vito Rocco, Laurie Rolland, Leland Ropp, Ronald Ruffing, D'Ann Ruiz, Lawrence R. Schwartz, Tomothy Scott, Dawn Scruggs, Phawanjit Sekhon, Denise Shutti,

Robert Sills, Kristine Sizemore, Kristy Smith, Christine Stankovic, Stephanie Stokes-Buzzelli, Vijaya Surapaneni, Robert Takla, Daniel Taylor, Ronald L. Thies, Jr., Marius Tijunelis, Anne Tintinalli, Glenn Tokarski, Danielle Turner-Lawrence, Farah Ubaid, Peter Vajda, Taher Vohra, Catherine Vretta, Bradford L. Walters, Brandon Warrick, John Wilburn, Patricia Wilkerson-Uddyback, Keith C. Wilkinson, Andrew G. Wilson, Jr., Curt Wimmer, Stefanie Wise, Deniese Worthy, Erin Zimny

Clinical Instructors

Paul Chrobak, Victor Coba, Kevin Cranmer, Nisrine ElChami, Shaun Gray, Michael Kramer, Seth Krupp, Anoop Majhoo, Varsha Mendiratta, Vanessa Moraza, Michelle Slezak, Alakj Varma, Claudia Whitaker

Adjunct Professors

Cheri McGowan, Richard Raspa

Adjunct Assistant Professors

Scott Compton, Andrea Page

The Department of Emergency Medicine provides basic life support training and physical diagnosis instruction to M.D. Year 2 students. M.D. Year 3 students receive advanced cardiac life support training and participate in a suture laboratory to learn suture techniques. A mandatory rotation in emergency medicine for all senior students takes place at Detroit Medical Center hospitals or other affiliated hospitals. The fourth year rotation is designed to familiarize the student with: (1) the evaluation, assessment and stabilization of patients with urgent medical problems; (2) invasive and noninvasive procedures routinely used in the emergency department; and (3) management of acutely-ill patients in a timely manner.

Graduate medical education includes two three-year emergency medicine residency programs, based at the Detroit Medical Center (Detroit Receiving Hospital and Sinai-Grace Hospital). Both programs are fully accredited.

Financial Aid

The John Skjaerlund, M.D., Endowed Fellowship was established to support emergency medicine research by Wayne State medical students and emergency medicine residents. To apply for funding, contact: Brian O'Neil, M.D. (basic science research) or Robert Welch, M.D. (clinical research).

Family Medicine and Public Health Sciences

Office: 3939 Woodward Avenue, 313-577-1421
Chairperson: Tsveti Markova, M.D., F.A.A.F.P.

Professors

David Bassett (Emeritus), Richard E. Gallagher (Emeritus), Hikmet Jamil (Emeritus), Tsveti Markova, Dawn Misra, Anne Victoria Neale, John Porcerelli, Maryjean Schenk, Kendra L. Schwartz, Richard Severson (Emeritus)

Associate Professors

Patrick D. Bridge, Todd Lucas, Robert Podolsky, Jinping Xu

Assistant Professors

Juliann Binienda, James E. Blessman, Jr., Jason Booza, Kimberly Campbell-Voytal, Margit Chadwell, Samiran Ghosh, Julie Gleason-Comstock, Erin Hendriks, Samson Jamesdaniel, James Janisse, John Otrema, Frederick C. Rosin, Dennis Tsilimingras

Assistant Professors, Full-Time Affiliate

Melody Eide, Rachel Klamo, James Meza

Clinical Professors

Adnan Hammad, Paula Kim, Paul Misch, Karen Mitchell, George Mogill, Gary Otsuji, Susan Schooley, Paul T. Werner

Clinical Associate Professors

Thomas Anan, Denise Balon, Patricia Barber, William Bowman, Ray Breitenbach, George Costea, George A. Dean, Bruce Deschere, Cynthia Fisher, George Hill, Thomas Palmer, David Rodgers, Martha Sumschlag, Gary Sarafa, Jean Sinkoff, Cherolee Trembath, Anthony Vettraino, Karen Weater-Granata, Michael J. Worzniak, Scott Yackle

Clinical Assistant Professors

Antonio Aguirre, Halima Alli Adil Arabbo, Carol Baker, Lauren Barton, Adnan Beg, Andrew Berry, Pamela Berry-Williams, Yemirach Beyene, Michael Blain, James Boal, Raymond Bohrer, Kenneth Bollin, Richard Brown, Robert Brummeler, Joseph Bruno, Michael Carroll, John Chahbazi, Vickie Collins, Giner Connor, John Connors, David Cooley, Seid Cosovic, Talat Danish, Braswell Deen, Keith Defever, Kevin Deighton, Jeffrey Deitch, Anna Demos, Michelle Diebold, Phillip Durocher, Aaron Ellis, Mohamed Elmenini, Gary Falkenberg, Rafeek Farah, Diana Ferrans-Silver, Don Fitch, Sumit Fogla, Evan Fonger, James Fortune, Kwame Francis, Fabian Fregoli, Steven Fried, Kathleen Fulgenzi, Joseph Giannola, Erika Giordano, Gina Gora, Miquel Granados, Thomas Graves, Richard Gruz, Imran Hafeez, Jamie Hall, Mark Halonen, Robert Hasbany, Homa Hasnain, Fawaz Hasso, Jessiva Haveman, Nikhil Hemady, Naira Henein, Frances Hewitt, Cecelia F. Hissong, David Hollett, Eileen Hopman, James Hubbard, Ronald Hunt, Nejla Israel, Chandrikka Iyer, Sarah Jacob, Neil Jaddou, Harsha Jayatalike, Reynold John, Dennis Joy, Algridas Juocys, Steven Karageanes, Dana Kerges, Sander Kushner, John Lamacchia, Edward Kushner, Rachel Lambert, Sanford Lax, Paul Lazar, Yves Leblanc, Robert Lechy, John L. Lehtinen, Mark Leider, Richard Lessens, Robert Levine, Barbara Levine-Blasé, David Lick, Robert Mackie, Abdel-Wahab Meri, Margaret Meyers, Nevena Mihailoff, Christopher Milback, Elie Mulhem, Mary Murphy, Alberto Nacif, Sunitha Nambiar, Farzin Namei, Idu Nwapa, Stacy O'Dowd, Rachel O'Byrne, Natalie Okerson, Christopher J. Pabian, Michael Paletta, Paul Paoonessa, Veena Panthangi, Jeffrey Parcels, Mark Paschall, Sumanchandra Patel, Angelo Patsalis, Thomas Pinson, Jatin Pithadia, Matthew Ptaszkiewicz, Kristine Rudolf, Rainer Rudolf, Dennis

Ramus, Jaclyn Randel, Jenese Reynolds, Kathleen Rheume, Nabil Rizk, Peter Rodin, Kathleen Rollinger, Al Romero, James Rosbolt, Leonard Rosen, Greg Roswell, Marla Rowe-Gorosh, Promita Roychoudhury, Ida Rubino-Ricci, Mary Rupp, Sushma Sadasivan, Jagneswar Saha, GERALYN Sarti, Barbara Saul, David Schinder, Tamara Schmidt, Jill Schneiderhan, Paul Schultz, Barry Scofield, Amy Segar, Raouf Seifeldin, Theodore Shively, Maria Shreve Saima Siddiqui, Shalini Singh, Rebecca Steele, Susan Stevens, James Stewart, Zakari Tata, Yue Teng, Larry C. Thompson, Rodrigo Tobar, Jr., Imelda Toledo-Neely, Jennifer Tucciarone, Peter Tucker, Eshel Turk, Dona Uncheselu, Robert J. Urban, Nicholas Urbanczyk, Felix Valbuena, Raghavendra Vemulapalli, Douglas Villa, Kevin Wang, David Wash, Denise White-Perkins, Ralph Williams, Kimberly Winston Matthews, Gary A. Wozniak, Tenisha Wright-Jones, Srikala Yedavally, Chin Yi, Louinda V. Zahdeh, Jonathan Zaidan, Salieha Zaheer, Kamran Zakaria, Susan Zeltzer

Clinical Instructors

Dean Carpenter, Gayla N. Zoghlin

Adjunct Associate Professors

Paul Kilgore, Suzanne Mellon, Douglas Peters

Adjunct Associate Professor, Full-Time Affiliate

Sharon Milberger

Adjunct Assistant Professors

Patricia Armstrong, Jodie Eckleberry-Hunt, Lawrence Fischetti, Jessica Hauser-Harrington, Nadia R. Juzych, Todd Myers, Lois Lamerato, Laila Poisson, Dana Rice, Jane R. Thomas, Anne Van Dyke

Graduate Programs

MASTER OF PUBLIC HEALTH with concentrations in Public Health Practice and Biostatistics

GRADUATE CERTIFICATE in Public Health Practice

Public health is the academic discipline that deals with the identification and solution of health problems of communities and human populations. It is a population-based study that addresses health promotion, disease prevention, restoration of health, relief of suffering, and the maintenance of health. The range and scope of the sciences and skills required in public health include epidemiology, biostatistics, research methodology, health services research, behavioral sciences, and biomedical sciences. Central to the approach of public health is a focus on community-level factors that influence health including social, economic, cultural, ethnic, and environmental factors. Public health research methods involve defining selected community problems, proposing studies and solutions, maintaining surveillance, evaluating progress, and monitoring the use of resources.

The MPH Program at WSU is accredited by the Council for Education for Public Health (CEPH). The CEPH is an independent agency recognized by the US Department of Education to accredit public health educational programs.

There is a strong community and public health focus in the Department, and an emphasis on research and applications of socio-behavioral and medical sciences to health problems in the community. Collaboration with other schools in the University allows for an interdisciplinary approach to study of the health care system.

M.D. Medical Education

The Department of Family Medicine and Public Health Services provides a significant amount of teaching in the Medical School curriculum. Many of the faculty, including adjunct faculty, are instructors in the Clinical Medicine Course (MS1 and MS2). Much of the instruction in this course is case-based and occurs in small groups led by physi-

cians. Several of the sessions include interviews with 'standardized patients,' actors who have been trained to respond to student interviewers, as would a 'real' patient. Family Medicine faculty also provide primary instruction and curriculum design for the Translational Medicine course.

A required four-week third year clerkship/preceptorship is conducted by the Department. Most students are placed with private physicians or residencies in family practice located throughout the Detroit metropolitan area. Alternative placements locate students in physicians' offices in out-state Michigan, including the Upper Peninsula. This course stresses ambulatory family practice with an emphasis on skill building based in a continuity of care experience.

A required six-month Continuity Clinic Clerkship during the year three primary care block is administered through the Department. All students are placed individually with a primary care physician in the Detroit metropolitan area. Students spend one-half day per week in the clinic of their assigned preceptor. This course introduces students to the basic principles of outpatient practice in the context of a continuity of care model.

A number of electives are offered in the fourth year, including: additional preceptorship experiences with practicing family physicians, specially-designed experiences with family practice residency programs, geriatrics, occupational health, community medicine, and research.

Students can fulfill a required four-week sub-internship in Family Medicine. During the sub-internship, students function as would a first year resident, taking night call and assisting in the care of hospitalized patients while under the supervision of attending physicians.

Graduate Medical Education

Graduate education includes three residency programs; the WSU-Family Medicine Residency at Crittenton Hospital Medical Center (CHMC), the WSU Transitional Year residency program at CHMC and the DMC-WSU Family Medicine Residency Program at Sinai Grace Hospital. These programs integrate academic resources, competency-based curricula, a web-based evaluation system and state of the art technology. Education is focused on patient-centered care and integration of biological, clinical, and behavioral sciences. The scope of practice includes outpatient and inpatient care and encompasses all ages, both sexes, every organ system and every disease entity.

Our Family Medicine residents are trained to provide comprehensive medical care to each member of the family throughout the life cycle from birth to end of life care. During their training, Family Medicine residents master more than 20 different clinical procedures. Transitional Year residents complete one year of intensive clinical training prior to completing their training in a specialty residency such as Dermatology, Ophthalmology, Anesthesiology, and Radiation Oncology.

COMMUNITY SERVICE: In order to carry out clinical and public health education, faculty and residents of the Department offer services to the community through the Family Medicine Centers and related institutions. Patient care functions are performed in collaboration with other health professionals such as clinical nurse specialists, clinical pharmacists, and social workers and their students. Public health students are required to complete a public health practicum, which is often service oriented and involves working with underserved populations through such entities as the local public health department or other public service agencies.

RESEARCH: Departmental research interests include studies designed to improve delivery of primary care health services at the individual, family, and community levels and to provide health promotion services which recognize the important role of the family and community in maintaining health and coping with illness. Examples of specific research projects include increasing influenza vaccine acceptance in the elderly, antibiotic use and the incidence of vulvovaginal candidiasis, patient use of the internet to identify health

resources, and the learning environment in ambulatory residency clinics. Our faculty also have substantial research interests in public health including studies of the psychological and social determinants of health, disparities in women's and children's health, and the biostatistical methods employed to analyze these studies. The Department also has strong research ties with the Eugene Applebaum College of Pharmacy and Health Sciences, the Institute for Environmental Health Sciences, Center for Urban Responses to Environmental Stressors, the Karmanos Cancer Institute, the Institute of Gerontology, and the CS Mott Center for Human Growth and Development.

Public Health Education Programs

MASTER OF PUBLIC HEALTH with specializations in Public Health Practice and Biostatistics

Admission to the Master of Public Health (M.P.H.) Program is contingent upon admission to the Graduate School; see Admission, Graduate School, p. 17 and Admission, p. 462, respectively. Candidates must also complete undergraduate work in mathematics, natural science, and social science, and have experience in a health-related position. Applicants to the MPH biostatistics concentration must provide additional evidence of advanced mathematical coursework. Contact the M.P.H. Program or view the webpage (<http://www.med.wayne.edu/fam/mph/>) for specific admissions requirements. Applications for the M.P.H. program are only considered for fall semester admission. All admissions materials must be received by March 1, for a student to be considered for the following fall semester.

DEGREE REQUIREMENTS

Candidates for the MPH degree (all concentrations) must complete forty-two credits in course work. Required core courses (seventeen credits) for the M.P.H. degree include: FPH 7010, 7015, 7100, 7240, 7320, and 7420. Additionally students complete courses required for their specialty track (ten to sixteen credits). All M.P.H. students must complete, a practicum (three credits), and a final project (three credits). Finally, students may have the opportunity to select approved elective courses depending on their concentration to complete the forty-two credit requirement. All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively. All work must be completed within six years.

Required courses in the MPH Biostatistics concentration include: FPH 7150, 7160 (meet the Biostatistics core requirement), 7340, 7350, 7460, 7480, and 7500. Academic Scholarship: A grade of 'B-minus' or lower is considered unacceptable work at the graduate level and graduate students must maintain a grade point average (g.p.a.) of 3.00 or better. Students who receive a 'B-minus' or lower grade in any required course must repeat the course and receive a 'B' or better grade. The student is not eligible to take advanced courses or earn credits toward the final project until the course deficiency is satisfied. If a student receives lower than a 'B' upon their second attempt, the student will be dismissed from the program. Students will be allowed to balance a 'B-minus' or lower grade in an elective course with an 'A-minus' or higher grade in another elective course, thus maintaining a 3.00 or higher overall G.P.A. However, any student who receives a 'B-minus' or lower in a course will be asked to meet with their advisor to insure that they are aware of Graduate School requirements and to determine if any remedial aid is necessary. Failure to maintain a G.P.A. of at least 3.00 after such counseling will result in dismissal from the M.P.H. program.

All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under

Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

GRADUATE CERTIFICATE in Public Health Practice

The Department offers a graduate certificate program in public health practice, which provides specialized training for individuals of varying backgrounds and experience who are committed to working in a public health related field. The course of study is designed to develop the student's capacity to apply public health theory and practice in analyzing community health problems.

Admission to this program is contingent upon admission to the Graduate School and the School of Medicine; see Admission, Graduate School, p. 17 and Admission, p. 462, respectively. Applications for the Graduate Certificate are considered on the same schedule as those for the M.P.H. Program (refer to the program webpage: <http://www.med.wayne.edu/fam/ MPH/>). In addition, a background of course work or experience in the areas of mathematics, social science, and natural science is recommended. Students may enroll in the certificate program concurrently with a regular graduate degree program (M.S., M.A., or Ph.D.).

CERTIFICATE REQUIREMENTS

Candidates must complete a minimum of fifteen credits of course work. FPH 7010, 7015, 7240, and 7420 (eleven credits) are required courses and additional electives (a minimum of four credits) in the student's area of interest are to be taken to complete the requirements. Electives from an approved list may be taken within or outside the department. A grade point average of 3.00 in certificate coursework must be maintained. All work must be completed within three years.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

Financial Aid

The University offers a limited number of Graduate Professional Scholarships available to students in public health programs; for information, contact the Graduate School: 313-577-2170, or see, Financial Assistance, Graduate, p. 26.

"The John B. Waller, Jr. and Menthele (Mikki) Waller Endowed Scholarship For Mph Students" **was created to offset costs of one MPH course. The selected students must have completed 20 credits in the MPH program, have a cumulative GPA of >3.0, and demonstrate a commitment to the field of public health.**

Family Medicine and Public Health Courses (FPH)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Seminar in Public Health. Cr. 1

Required of all MPH students. Introduction to basic public health concepts, functions, and activities. (F)

7015 Biostatistics I. Cr. 4

Required of all MPH students in the Public Health Practice concentration. Descriptive statistics; elementary probability; measures of central tendency and of dispersion; random samples; probability distributions including the binomial, the Poisson, the normal, the t, the chi-square, and the F; introduction to estimation and hypothesis testing; rates and vital statistics. Computer laboratory included. Online version is offered for non-M.P.H. students only during winter semesters. (F)

7020 Biostatistics II. Cr. 3

Prereq: FPH 7015. Statistical models for health-related fields. Analysis of variance, experimental design, linear regression, logistic regression and proportional hazards models. Topics include simple and multivariable models, model fitting procedures, model diagnostics and multiple comparisons procedures. Application of these methods to health-related data. (W)

7100 Health Care Organization and Administration. Cr. 3

Required of all MPH students. General overview of the U.S. health care system; social and organizational aspects of the delivery, financing, utilization, planning, and development of health care systems. (S)

7150 Probability and Inference. Cr. 4

Prereq: Admission to MPH Biostatistics concentration or approval of instructor. Mathematical foundation of statistics based on principle of probability. It covers notions of probability, conditional probability, Bayes' theorem, random variables discrete/continuous, expectation and standard deviation, moment generating function, bivariate distribution, special sampling distribution (e.g. chi-square, t, F-distribution etc.), CLT, sufficiency, completeness, point estimation, MLE, unbiased and UMVUE, testing of hypothesis, UMP test, LRT, confidence interval, etc. (F)

7160 Linear Regression and ANOVA. Cr. 3

Prereq: admission to MPH Biostatistics Concentration or approval of instructor. Statistical methods utilized in linear regression and analysis of variance (ANOVA). Theoretical underpinnings of linear model techniques are emphasized with a focus on gaining practical knowledge in linear model data analysis in public health. Topics will include model building strategies, assumption checking and the theoretical aspects of general hypothesis testing. (F)

7200 Health Planning. Cr. 3

Understanding the mechanics of health planning, implementation, and evaluation; techniques used in the planning process, role in organizational decision making, political aspects and governmental involvement. (B:F)

7210 Research Methods for Health Professionals. Cr. 4

Coreq: FPH 7015 or equiv. Required of all MPH students in the Public Health Practice concentration. Logic of research design; formulation of research problems and objectives; development of hypotheses, specification of variables; sampling; random assign-

ment; issues in measurement; data collection; sources of error; analyses. Computer laboratory included. (F)

7230 Health Program Evaluation. Cr. 3

Required of all MPH students in the Public Health Practice concentration. Principles and application of program evaluation in health care fields. Design, implementation, and management of evaluations in health environments. (F)

7240 Epidemiology. Cr. 3

Required of all M.P.H. students. Epidemiologist's task list; research of problems without known etiology; infectious and non-infectious models; examination of current problems. (F)

7250 Applied Epidemiology. Cr. 3

Prereq: FPH 7240 and FPH 7015 or equiv. Required of all MPH students in the Public Health Practice concentration. Epidemiological principles, practice, and methodology as applied to researchable health delivery or health questions. Emphasis on design, conduct and analysis of non-experimental studies; student design of epidemiological study. (W)

7260 Epidemiologic Methods. Cr. 2

Prereq: FPH 7015 and FPH 7240. Required of all students in the biostatistics concentration. Methodologic concepts underlying the science of epidemiology; conduct and interpretation of epidemiologic studies. Emphasis on elements of observational study design, data analysis, and inference, including issues related to causation, bias, and confounding. (I)

7300 Health Care Policy. Cr. 3

Concepts, issues, and problems in health care policy; substantive information regarding policy formulation and content. (B:F)

7320 The Social Basis of Health and Health Care. Cr. 3

Required of all MPH students. Social, cultural, and psychological aspects of health and health-related behavior. Topics include: health prevention and promotion, relationship between stress and illness, health services utilization, patient-practitioner interactions, and coping with chronic illness. (W)

7340 Generalized Linear Models and Categorical Data. Cr. 4

Prereq: FPH 7150 and FPH 7160. Statistical analysis of categorical and non-normal data, with an emphasis on the cohesive approach of generalized linear models. Specific types of models to be examined include logistic regression, probit regression, and log-linear models. (W)

7350 Statistical Programming for Public Health Practice. Cr. 2-3

Prereq: Admission to M.P.H. biostatistics concentration. Statistical programming using R and SAS in public health. SAS topics include error checking, reading datasets, coding and formatting variables, writing reports, tables, and graphs. R topics include data visualization and analysis, numeric optimization and bootstrapping. (W)

7370 Health, Disease, and Aging. Cr. 3

Prereq: acceptance into M.P.H. degree program or certificate in gerontology program. Study of health, health problems, and medical care of aging populations. Biomedical, psychosocial and public health aspects of later life illness; family, community, and societal response to health problems; hospital and longterm care; disparities in health and medical care. (S)

7390 Biostatistical Methods in Epidemiology. Cr. 4

Prereq: FPH 7020 and FPH 7260. Required of all students in the biostatistics concentration. Application and interpretation of biostatistical methods used in epidemiologic studies. Topics include: approaches to missing data, sensitivity analysis, bootstrap methods, statistical power, sample size estimation, and analysis of ordinal exposures and outcomes. (I)

7415 Principles of Health Care Management. Cr. 3

Management of goals, strategy and structure in health care organizations. Managerial theory and practice; core concepts. (B:W)

7420 Principles of Environmental Health. Cr. 3

Required of all M.P.H. students. Current environmental health issues that affect individuals at work and in their communities. Sources of chemical, physical, and biological agents; their associated health effects. Air pollution, exposure prevention, water and solid waste management, and occupational health and safety. Impact of environmental exposures on human health; case studies. (W)

7440 Practicum in Public Health. Cr. 3

Open only to MPH students. Required of all MPH students. Offered for S and U grades only. Individual field experience in public health setting. Integration and synthesis of content and experiences of the public health courses; direct hands-on experience, with appropriate reporting mechanism. (T)

7460 Linear Mixed Models. Cr. 3

Prereq: FPH 7150 and FPH 7160. Statistical modeling to incorporate random effects. Topics will include clustered-data analysis, longitudinal data analysis, hierarchical linear models, correlated data, and covariance structure. (S)

7480 Design of Experiments and Clinical Trials. Cr. 3

Introduction to five different types of experimental designs and design and analytic issues that arise in each of the study designs. Extension of the designs to clinical trials and microarray experiments are discussed. (S)

7500 Survival Analysis. Cr. 3

Prereq: FPH 7150 and FPH 7160. Statistical methods for analyzing survival data, including parametric and nonparametric approaches. Topics include Kaplan-Meier estimation, log rank test, and proportional hazards regression analysis. (S)

7510 Community Health: Detroit Initiatives. Cr. 2-3

Current urban health initiatives examined using a range of social science frames; focus on field work skills, perspectives, and methodologies useful for working with ongoing community-based initiatives and grass-roots organizations. Includes optional field experience for 1 credit. (I)

7760 Community Health Education. Cr. 3

Analysis of community health problems and change strategies for health promotion; application of principles and techniques of community health education to multiple ethnic groups and diverse health problems. (B:W)

7860 Principles of Occupational Health. Cr. 3

Prereq: graduate standing. Current occupational health issues; interplay between work environment and worker health. Through case studies, students employ integrative approaches to ensure worker safety and to optimize worker health, well-being and performance. (F)

7870 Occupational Health Psychology. Cr. 3

Prereq: admission to the Graduate School. Theory and research on relationships between the work environment and employee health and well-being; development and maintenance of health people within healthy organizations and the prevention of illness and injuries. (W)

7880 Organizational Determinants of Employee Health and Productivity. Cr. 3

Prereq: admission to Graduate School. Organizational and leadership theories, research and practical applications of practices and processes contributing to employee health and productivity; emphasis on service and knowledge workers, that make up 80 percent of the workforce. (S)

7990 Directed Studies in Community Health Services. Cr. 1-6

Prereq: written consent of faculty member. Studies dealing with the public health practice and research to supplement regular course offerings. An approved directed study proposal is required prior to registration. (T)

8090 Interdisciplinary Perspectives on Addictions. Cr. 3

Prereq: written consent of instructor. This course is designed for students in the alcohol and drug studies certificate program, but is available to other students with consent of instructor. Capstone course designed to integrate content from other substance abuse courses in a multidisciplinary context. (S)

8990 Master's Project. Cr. 1-3 (3 req.)

Prereq: written consent of department; completion of all core and concentration course work; written consent of advisor; all MPH students must complete either three credits of FPH 8990 or eight credits in FPH 8999. (T)

8999 Master's Thesis Research and Direction. Cr. 2-8 (8 req.)

Prereq: written consent of department; completion of all core and concentration course work; written consent of advisor; all MPH students must complete either three credits of FPH 8990 or eight credits in FPH 8999. (T)

Immunology and Microbiology

Office: 7374 Scott Hall; 313-577-1591

Chairperson: Philip E. Pelett

Deputy Chairperson: Harley Y. Tse

Website: <http://www.immunomicro.med.wayne.edu>

Professors

Paul C. Montgomery, Philip E. Pellett, Harley Y. Tse,

Associate Professors

Thomas C. Holland, Matthew P. Jackson, Raghavendar Thipparthi, Jeffrey Withey

Assistant Professors

Kevin R. Theis

Professors - Joint Appointment

Linda D. Hazlett (Anatomy and Cell Biology), Robert Lisak (Neurology), Jack D. Sobel (Internal Medicine), Wei-Zen Wei (Karmanos Cancer Institute), Ashok S. Bhagwat (Chemistry)

Associate Professor - Joint Appointment

Susmit Suvas (Ophthalmology/Anatomy and Cell Biology), Kezhong Zhang (Center for Molecular Medicine and Genetics)

Assistant Professor - Joint Appointment

Nardhy Gomez-Lopez (Obstetrics and Gynecology), Kang Chen (Obstetrics and Gynecology)

Research Assistant Professor

Nancy O'Sullivan

Emeriti Faculty

Richard S. Berk, Dov L. Boros, Alan P. Hudson, Charles D. Jeffries, Yi-chi Kong, Maurice G. Lefford, Seymour A. Levine, Vera Fay Righthand, Robert H. Swanborg, Judith Whittum-Hudson, Fayth K. Yoshimura

Adjunct Appointments

Jeffery C. Flynn (Providence Hospital and Medical Centers), Rachael K. Kado, Eric S. Krukonis (University of Detroit-Mercy), Qing-Sheng Mi (Henry Ford Health System), Ronald P. Pelley, Michael K. Shaw (St. John Health System), Li Zhou (Henry Ford Health System)

Associate Appointments

Joyce Benjamins (Neurology), Lawrence N. Diebel (Surgery), Paula Dore-Duffy (Neurology), Scott A. Gruber (Surgery), Gloria Heppner (Division of Research), Gilda Hillman (Oncology), Stephen A. Lerner (Internal Medicine), Michael Long (Pathology), Lawrence G. Lum (Karmanos Cancer Institute), Jeffrey L. Ram (Physiology), Hossam M. Ashour (Pharmacy), Ramesh B. Batchu (Surgery)

Graduate Degrees

MASTER OF SCIENCE

with a major in Immunology and Microbiology

DOCTOR OF PHILOSOPHY

with a major in Immunology and Microbiology

The Department of Immunology and Microbiology offers diversified programs leading to the Doctor of Philosophy degree. Faculty members are actively engaged in individual and collaborative research in

the areas of immunology, virology, and bacteriology. Current faculty research in immunology includes autoimmune diseases, cancer immunology, infectious diseases, lymphocyte biology, neuroimmunology, mucosal immunology, and immune regulation. Faculty research in virology includes regulation of viral gene expression at the transcriptional and translational levels, virus assembly, and innate immunity to viral infections. Bacteriological research includes investigation of the molecular mechanisms of bacterial pathogenesis, regulation of bacterial gene expression during infection of eukaryotic hosts, ocular infections, drug delivery systems, structure-function properties of bacterial toxins, and mechanisms by which microbiomes affect animal behavior, human reproduction, and holobiont phenotypes. The Department consists of eight faculty members with primary appointments in the Department, as well as graduate students and post-doctoral fellows and administrative and technical staff. In addition, affiliated faculty in other School of Medicine departments as well as Detroit Medical Center, Henry Ford Health System, Providence Hospital, St. John Health System and the Karmanos Cancer Institute participate in departmental activities.

Immunology and Microbiology (M.S. and Ph.D. Programs)

Admission to these programs is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Programs of the School of Medicine (see Admission, p. 462). Additionally, applicants are expected to meet the requirements of the Department: students must have an undergraduate degree and a minimum grade point average of 3.0 to apply. An interview with the Graduate Officer or designated representative is desirable. The Graduate Record Examination aptitude test is required. Foreign students must be proficient in English as determined by satisfactory performance on the standardized TOEFL English proficiency examination.

Academic Scholarship: All course work in the programs must be completed in accordance with the regulations of the Graduate School, the School of Medicine, and the Department of Immunology and Microbiology governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

MASTER OF SCIENCE REQUIREMENTS

Candidates must complete a minimum of thirty-three credits in course work and research in accordance with Plan A, as outlined in this bulletin; see Master's Degrees, p. 37. Required courses include BMB 7010 (General Biochemistry) or MGG 7010 (Molecular Biology and Genetics), IM 7040 (Fundamentals of Research), IM 7010 (Fundamentals of Immunology), IM 7030 (Molecular Biology of Viruses), IM 7520 (Molecular Mechanisms of Bacterial Pathogenesis), IM 7060 (Lab Research), IM 7850 (Research conference), and IM 7890 (Seminar). Additional information on the Immunology and Microbiology Master of Science program is available on the department website: <http://www.immunomicro.med.wayne.edu>.

DOCTOR OF PHILOSOPHY REQUIREMENTS

Students in the Immunology and Microbiology Department enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum during their first year. The IBS curriculum includes IBS 7010, Biomedical Molecular Biology (five credits) and IBS 7020, Biomedical Cell Biology (five credits). It also includes selection by the student in conjunction with the Departmental Graduate Officer of courses within the IBS Systems curriculum, including IBS 7090, Fundamentals of Immunology (two credits) and selections from other IBS Systems courses. In addition, students enroll in IM 7040, Fundamentals of Research (two credits), IM 7030, Molecular Biology of Viruses (two credits) and IM 7520, Mechanisms of Bacterial Pathogenesis (two credits), and IM 7996, Laboratory Research. Candidates for the doctoral degree must complete ninety credits beyond the bachelor's

degree, including thirty credits in doctoral dissertation direction. The thirty-credit dissertation requirement is fulfilled by registering for IM 9991, 9992, 9993 and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. For information regarding distribution of credits among major and minor requirements, consult the department.

Assistantships and Research, Immunology and Microbiology

Assistantships for Ph.D. students are available through the IBS program on a competitive basis. All students accepted into the Doctor of Philosophy degree program are considered for financial assistance and no application forms are necessary for this purpose. All students, whether or not they hold a fellowship or an assistantship, are encouraged to assist the graduate faculty in teaching and research activities as a component of their educational experience. Departmental assistantships and fellowships are not available for M.S. students. M.S. applicants should consult the Graduate School website for information on funding their education. For more information on financial assistance, students interested in the Ph.D. program should consult or write the Graduate Officer, Department of Immunology and Microbiology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201.

Immunology and Microbiology Courses (IM)

The following courses, numbered 7000-9995, are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Fundamentals of Immunology. Cr. 2

Prereq: BMB 7010 or equiv.; written consent of instructor. Basic concepts and current developments in immunology, including cellular and molecular aspects, regulation, and immunopathological mechanisms. (W)

7020 Fundamentals of Microbiology. Cr. 2

Prereq: CHM 2260 and BIO 2200, or equivalents. Basic aspects of bacteriology, genetics and mycology. (F)

7030 Molecular Biology of Viruses. Cr. 2

Prereq: graduate-level (or upper-level undergraduate level) course in molecular and/or cell biology and/or biochemistry. Basic principles of virology including virus host interactions and the molecular biology of virus multiplication and genetics. (W)

7040 Fundamentals of Research. Cr. 2

Open to M.S. and Ph.D. students. Lecture/discussion of practical aspects of professional scientific research. (F)

7060 Laboratory Research. Cr. 2

Open only to students in the M.S. in immunology and microbiology program. Offered for S and U grades only. Coreq: IM 7040. Preparation for doing Master's thesis research in a laboratory. Students complete 3-4 week rotations in three different research laboratories prior to choosing a thesis research lab. (F)

7410 Cancer Immunology and Immunotherapy. (CB 7410) Cr. 3

Prereq: IBS 7090 or equiv; written consent of coordinator. Cancer immunotherapy based on the molecular mechanisms of T cell development, tolerance and activation. Topics include T cell receptor and co-stimulatory signal-mediated regulation of T cell activation, transcriptional regulation of T cell differentiation, T cell effector function and regulatory mechanisms. Each week will consist of a one-hour lecture and a two-hour discussion for 11 weeks. (B:W)

7450 Current Trends in Immunology, Microbiology and Virology. Cr. 1-5

Prereq: written consent of instructor. Offered for S and U grades only. Lectures and discussions on current literature and research problems. (I)

7520 Molecular Mechanisms of Bacterial Pathogenesis. Cr. 2

Open to departmental graduate students. The roles of bacterial virulence factors such as tissue colonization, invasion, and exotoxins in pathogenesis. The genetic regulation of bacterial virulence factors will be discussed. (W)

7850 Research Conferences in Immunology and Microbiology. Cr. 1-5 (Max. 20)

Offered for S and U grades only. Open only to Immunology and Microbiology students. Seminars and discussions in selected areas. (T)

7890 Seminar. Cr. 1

Offered for S and U grades only. Open only to Immunology and Microbiology students. (T)

7996 Research. Cr. 1-8 (Max. 25)

Open only to graduate students in the Immunology and Microbiology program. Offered for S and U grades only. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

(T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: IM 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following IM 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: IM 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following IM 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: IM 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following IM 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in IM 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Internal Medicine

Office: 2E University Health Center; 745-8244
Interim Chairperson: Basim Dubaybo

Professors

Judith Abrams-KCI, Luis Afonso, George Alangaden, Ayad M. Al-Katib, Judith Andersen, Lois Ayash, M. Safwan Badr, Carter R. Bishop, Robert C. Burack, Murray N. Ehrinpreis, Pranatharthi H. Chandrasekar, Ben Dien-Ming Chen, Lawrence R. Crane, Felix R. Fernandez-Madrid, Lawrence E. Flaherty, Eugene A. Gelzayd, Lance K. Heilbrun-KCI, Glenn W. Kaatz, Nicholas Kerin, Omer Kucuk, Stephen A. Lerner, Donald P. Levine, Patricia M. LoRusso, Lawrence Lum, Rodger D. MacArthur, Michael Maddens Adhip N. Majumdar, Stephen D. Migdal, Ramzi M. Mohammad, Milton G. Mutchnick, Philip A. Philip, Voravit Ratanatharathorn, Milagros P. Reyes, Noreen F. Rossi, James Rowley, Melissa Runge-Morris, Charles A. Schiffer, Anthony F. Shields-KCI, Michael S. Simon, Ayman Soubani, Jack D. Sobel, David Wayne Stockton, Paul S. Swerdlow, Joseph Uberti, Vainutis K. Vaitkevicius, Manuel Valdivieso, Antoinette J. Wozniak

Clinical Professors

Elle Aboulafia, Leonard C. Alexander, Muhyi Al-Sarraf, A. Robert Arnstein, Jeffrey Band, Joseph J. Bander, Neil A. Basmaji, Anatole Besarab, Gary G. Bill, Timothy A. Brennan, Charles P. Craig, Stephen P. D'Addario, David Decker, Vilma Drelichman, Michael C. Duffy, Francis Dumler, Wolf F. Duvernoy, Marc Feldman, James J. Glazier, Gerald I. Gohen, Kevin J. Grady, George Grunberger, John Haapaniemi, Michael Harbut, David Hudgel, Christopher Hughes, Franklin E. Hull, Samuel D. Indenbaum, Riad Khatib, Konstantinos Kpordelis, Thomas LaFonte, Carl B. Lauter, Robert Leonard, Giuseppe Leone, A. Martin Lerner, Melvin Lester, Robert Levine, Joseph Levy, Charles P. Lucas, Luis Maas, Norman Markowski, Sami Mounayer, John O'Brien, Thomas Pisko, Steven Portney, Pritpal S. Puri, Korembeth Ravikrishnan, Michael Romanelli, Hershel Sandberg, Joel Seidman, Mohamed Siddique, Michael R. Simon (Emeritus), Manuel Sklar, Laurence Stanick, Clarence B. Vaughan, Francis M. Wilson, Jerry Yee

Adjunct Professor

Michael J. Rybak

Associate Professors

Daoud K. Abu-Hamdan, Patricia D. Brown, Pravit Cadnapahornchai, Antonio P. Carrillo, Jonathan A. Cohn, Elisabeth I. Heath, Dana G. Kissner, Willane S. Krell, Diane Levine, Li Li, Sanjay Revankar, James Rowley, Linea L. Rydstedt, James H. Sondheimer, Ayman Soubani, Joel Steinberg, Ulka N. Vaishampayan, Jeffrey Zonder.

Clinical Associate Professors

Ali A. Abbasi, Charles G. Artinian, Pierre Atallah, Lal G. Banerji, Muhammed Beeai, Surjit S. Bhasin, Edmund M. Barbour, Bernard A. Bercu, John G. Bielawski, Leslie Joel Bricker, James C. Brown, Frank E. Check, James Crawl, Shukri W. David, David A. Decker, Ramon del Busto, Sudhir G. Desai, Peter Dews, Gary Edelson, Leopoldo Eisenberg, Mark Faber, Michael J. Federman, Richard S. Fine, John M. Formolo, Henry L. Green, Stuart C. Gordon, Abraham Grant, Henry L. Green, Walid A. Harb, Mohamad Ammar Hatahet, John A. Hopper, Robert L. Iverson, Bruce L. Kaplan, William Keimig, Raphael J. Kiel, Richard S. Kiernan, George S. Kipa, Arthur Klass, Jay H. Kozlowski, Jesse C. Krakauer, Lawrence L. Lackey, Jr, Michael H. Lehmann, Lyla J. Leipzig, Nicholas J. Lekas, Melvin A. Lester, Gerald N. Loomus, Christian Machado, Louis C. Maas, Richard S. McCaughey, Frederick Michael, John W. Moynihan, Rajika Munasinghe, Kenneth K. Newton, Daniel Quелlette, Donald C. Overy, Reviprasenna Parasuraman, Anita Patel, Lloyd J. Paul, Robert Provenzano, Paul A. Ragatzki, Ramegowda Rajagopal, Leslie L. Rocher, Arthur Rose, Lewis H. Rosenbaum, Everett N. Rottenberg, John R. Schneider, Ila Shah-Reddy, Paul S. Siefert, Anil Sil, Sephen T. Smith, Eric I. Soher, Young Ho Sohn, Susan P. Steigerwalt, James C. Sunstrum, Lawrence C. Sweet, Efstathios Tapazoglou, Kirit K. Tolia, K.K. Venkat, Lyle D. Victor, Ignatios J.

Voudoukis, Brian Dale Williamson, Freeman M. Wilner, Max Wisgerhof, Clyde Y. Wu, Jeffrey M. Zaks, Marcus Zervos, Eldred G. Zobl.

Adjunct Associate Professor

Randal W. Rowland

Associate Professor Emeritus

Saul Rosenzweig

Assistant Professors

Elizabeth B. Arnold, Eric W. Ayers, Jill S. Barnholtz-Sloan, Bibban Bant Deol, Mona Doshi, Melanie Hanna-Johnson, Mohammad Kang, Ashok K. Kondur, Suganthini Krishnan, Xuefeng Liu, Madhumita Mohanty-Jena, Pragnesh Patel, Trinatha Penumetcha, Graciela E. Conley, Renato Roxas, Lobelia Samavati, Ghulam Saydain, Berhane Seyoum, Atul Singh, Neelima Thati, Gerald E. Turlo

Clinical Assistant Professors

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Professors, Full-Time Affiliate

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Associate Professors, Full-Time Affiliate

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Assistant Professors, Full-Time Affiliate

Arshad Ali, Fadi Antaki, Joel Appel, Jack E. Belen, Martin A. Bermann, Alan D. Betensley, Joseph Blount, Kelly Caverzagie, Vidya Chalasani, Amin A. Charania, Lawrence P. Davis, Sudhir G. Desai, Raminder S. Dhadi, Marc M. Dunn, Mohamad Fakhri, Stephen L. Farrow, Marc A. Feldman, Brenda E. Field, Saib Gappy, Mark J. Goldberg, Adam B. Greenbaum, Mayae Guglin, Cheryl L. Harris, Julie A. Hendrix, Raymond Hilu, Philip Kuriakose, David Ethan Lanfear, Amardeep K. Mann, Patricia A. Martin, David H. McAree, James McCord, Angelia D. Mosley-Williams, Varsha Moudgal, Vijayalakshmi Nagappan, Mona Z. Obeidy, Irfan Omar, M. Akram Paracha, Bhaumik Patel, Shilpa M. Patel, Alan J. Pawlow, Bohdan M. Pichurko, Jambunathan Ramanathan, Donald J. Salberg, Mamta Sharma, Barbara J. Siepierski, Michael James Simoff, Gina G. Sleilati, In Young Soh, Russell T. Steinman, Ronaldo B. Supena, David M. Vandenberg, Richard VanderHeide, George Varghese, Peter Y. Watson, Richard Weber, Sheryl A. Wissman, Michael Yacoub, Abbas Zagnoon, Edward M. Zoratti.

Instructors, Full-Time Affiliate

Anthony Clarke, Doris Fleming, Cheryl K. Nordstrom, Ramesh Padiyar, Mochanid Talia

The major objective of the educational program in internal medicine is to establish a firm conceptual basis for clinical diagnosis and treatment of disease. The exposure to clinical disciplines is graduated throughout each M.D. four year curriculum. During the early years in the M.D. program emphasis is placed on the application of knowledge gained in the basic science courses to an understanding of the biological disorders which accompany human disease. In M.D. Year I, students work with the Department of Internal Medicine through participation in several clinical conferences. During M.D. Year II, the student's attention is directed toward the study of pathophysiologic mechanisms of disease, the principles of clinical diagnosis and the scientific basis of therapeutics. An internal medicine forum is available for students interested in internal medicine as a career. In M.D. Year III and IV emphasis is placed on the student's direct participation in patient care as a member of the health-care team. In Year III the student gains clinical experience through assignment to Wayne State University teaching hospitals; this insures acquaintance with several members of the faculty and to a wide spectrum of medical problems. During Year IV, the student spends a month as an acting intern and a month in an outpatient clinic to gain experience with ambulatory medicine. Elective courses in subspecialties are offered. Students may also choose to pursue laboratory investigative programs under the tutelage of members of the faculty. In addition to formal course work, the student may elect more intensive study as a student-fellow in either clinical or laboratory medicine during the summer recesses. With the expansion of the Internal Medicine faculty, a number of research experiences supported by a variety of national funding agencies are available.

Neurological Surgery

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Website: <http://neurosurgery.med.wayne.edu>

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Assistant Professors

Steven D. Ham, Abilash Haridas, Carolyn Harris, Qinghang Li, Saroj Mathupala, Assad Mazhari, Greg Norris, Prahlad Parajuli, Rahul Vaidya

The goal of the Department of Neurological Surgery is to acquaint the undergraduate medical student with the problems, both diagnostic and therapeutic, in the field of neurological surgery. This is accomplished by close affiliation with and participation in the neurosciences core curriculum of the freshman and sophomore years. Lectures, conferences and ward rounds are included in this teaching program. In the third year neurosurgical teaching program, the Department curriculum emphasizes the surgical aspects of cerebral and spinal disease and problems. Third year students are made aware of problems best handled by neurosurgical techniques during their trauma and emergency surgery rotation. Fourth year students seeking further study of neurosurgical techniques may elect programs in clinical neurological surgery and neuroscience research. Detroit Receiving Hospital, Harper University Hospital, Sinai-Grace Hospital, and Children's Hospital of Michigan are the primary clinical facilities for undergraduate instruction by this department.

A seven-year residency training program, (includes one year of research in the laboratory or an enfolded clinical fellowship) in neurological surgery is conducted by the Department and based at the following University-affiliated hospitals: Detroit Receiving, Harper University, Sinai-Grace, and Children's. The research interests of the department are concentrated primarily in the neurological mechanisms involved in ischemic stroke, brain tumors, stereotactic and computer-assisted surgery, neuro-oncology, skull base surgery, aneurysms and AVM clinical studies, traumatic brain injury, and hydrocephalus. The Department of Neurological Surgery operates a microsurgical laboratory for residents and participates in ongoing research projects requiring training in microsurgical techniques and microsurgical anatomy. The residents also participate actively in tumor research at Karmanos Cancer Institute.

Neurology

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Bradley N. Axelrod

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Adjunct Assistant Professor

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Clinical Instructors

David Lustig, Saleem Tahir

Associates

Leon Carlock (Molecular Medicine and Genetics), Diane Chugani (Pediatrics), Nora Fritz, Mohammadreza Nasiriavanaki, Jose Rafols (Anatomy), Robert Skoff (Anatomy), Harley Y. Tse (Immunology and Microbiology)

M.D. Program Education

The Department of Neurology provides instruction in the first, second, third and fourth years of the medical curriculum. Members participate in the first year basic neuroscience course. In the second year the department is responsible for the clinical neuroscience-neurology course, which emphasizes pathophysiology. During the third year, all students rotate for four weeks through the neurology unit at one of the University-affiliated hospitals, at which time the students receive bedside and outpatient teaching and are given responsibili-

ties in patient management. Clinical electives for students who have completed the required courses are available for interested students.

Post-Graduate Education

The Wayne State University Neurology Residency Training Program is a fully-accredited program located at the Detroit Medical Center and the Veterans Administration Hospital. The department offers a three-year training program for candidates applying for second year post-graduate level of training. Post-residency fellowships are also available in neuromuscular diseases/EMG, epilepsy/EEG, neurocritical care, multiple sclerosis/neuroimmunology, stroke, clinical neurophysiology, movement disorders and sleep disorders.

Research Electives

Research electives for medical students are available, either in brief summer rotations or for longer periods taken during elective time. Interested students are encouraged to contact the Department of Neurology.

Obstetrics and Gynecology

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Professors

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Clinical Professors

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Clinical Associate Professors

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Clinical Instructors

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Fellows

Mazen Abdallah, Zeynep Alpay-Savasan, Awoniyi Awongua, Christopher Bryant, Tinnakorn Chaiworapongsa, Neil Hamill, Cristiano Jodicke, Ichchha Madan, Shali Mazaki-Tovi, Chia-Ling Nhan-Chang, Assad Semaan, Shelly Seward, Jay P. Shah, Agnieszka Vay, Terri Woodard

The discipline of obstetrics and gynecology is concerned with the reproductive health of women. This concept implies knowledge that extends from embryology through gerontology. A prime objective of the Department of Obstetrics and Gynecology is to present, and to add to, the current knowledge of the normal physiology and pathology of reproduction.

Major teaching and research efforts in the Department focus on several subspecialty areas including maternal-fetal medicine, gynecologic oncology, reproductive endocrinology/infertility, and reproductive genetics. In addition, emphasis is placed on family planning and contraceptive technology, sonographic imaging, psychosexual issues, and computer applications in treatment, diagnosis, and research. The faculty integrates basic science and clinical research into clinical practice.

Medical students gain clinical experience in obstetrics and gynecology in Detroit Medical Center Hospitals: Hutzel Women's Hospital and Sinai-Grace, in addition to other affiliated hospitals: William Beaumont, Oakwood, Providence, St. John's, and Henry Ford. The third year clerkship includes an extensive didactic course, as well as in-depth clinical experience. Further, clinical and research opportunities are available in all subspecialty areas during senior elective periods. Summer student research fellowships are available, both in clinical research within the Department, and in basic research at the C.S. Mott Center for Human Growth and Development, where the Department's basic science laboratories are located.

Physiology and Reproductive Sciences (Ph.D. Concentration)

The Department of Obstetrics and Gynecology collaborates with the Department of Physiology in offering the Reproductive Sciences concentration within the Ph.D. program of the Department of Physiology and, in conjunction with that department, offers broad and interdisciplinary training in the reproductive sciences. Students pursuing this concentration are accepted into the Department of Physiology graduate program, but their curriculum is oriented around courses in the reproductive sciences taught primarily by Obstetrics and Gynecology graduate teaching faculty. Students taking the Reproductive Sciences concentration will select dissertation mentors from the Obstetrics and Gynecology graduate teaching faculty and perform their dissertation research in the basic science facilities of the Department of Obstetrics and Gynecology.

The goal of the program is to educate students to become well-qualified, knowledgeable reproductive scientists who will make substantial contributions to strengthen and advance the field of reproductive medicine and health. This is a unique program, regionally and nationally, that exposes the trainee to both basic science and clinical research, and emphasizes major topics within the reproductive field including fertilization, developmental biology, genetics, molecular biology, endocrinology, toxicology, teratology, pregnancy and infectious disease. The curriculum, while emphasizing both formal lecture and seminar style courses, also takes advantage of numerous other educational activities occurring within the Departments of Obstetrics/Gynecology and Physiology such as guest lecturers, journal clubs, workshops and symposia. The Department of Obstetrics and Gynecology and the Department of Physiology attempt to pattern each student's program according to their particular area of interest and research requirements while at the same time exposing them to the diversity within this discipline.

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Programs of the School of Medicine (see Admission, p. 462). Applicants must have an undergraduate degree from an accredited college or university, a strong background in the biological or chemical sciences and a minimum grade point average of 3.0. Three letters of recommendation from professionals able to judge the student's scientific potential, a personal statement and results from the Graduate Record Examination are required. An interview with the

Graduate Officer or designated representative is also required, if feasible. International students must be proficient in English as determined by satisfactory performance on the standardized TOEFL English proficiency examination.

Academic Scholarship: All course work in the program must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

Applicants for the Doctor of Philosophy degree must complete a minimum of ninety credits beyond the bachelor's degree, of which at least thirty credits must be in doctoral research and dissertation direction. For the remaining sixty credits, ten must be from courses within the Reproductive Sciences concentration and six from multidisciplinary courses other than Physiology (minor). Ph.D. students holding School of Medicine IBS (Interdisciplinary Biomedical Sciences). Fellowships are required to take fourteen of these credits from courses in the IBS curriculum. Remaining credits to obtain the required total are taken as electives in subjects pertinent to the student's chosen field of research. Requirements of the Department of Physiology Graduate Program must also be satisfied.

Assistantships and Research, Physiology

Assistantships are available through the School of Medicine and the department of Physiology on a competitive basis. All students accepted into the graduate degree program are considered for financial assistance and no application forms are necessary for this purpose. Students on assistantships are advised to elect no more than ten credits in a given semester. All students, whether or not they hold a fellowship or an assistantship, must assist the graduate faculty in teaching and research activities as a component of their educational experience.

For additional information on this Graduate Program concentrating in the Reproductive Sciences, students should contact either:

1) the Department of Obstetrics and Gynecology, Wayne State University School of Medicine, Graduate Program, C.S. Mott Center for Human Growth and Development, 275 E. Hancock Avenue, Detroit, MI 48201 (e-mail: RPSgradprogram@med.wayne.edu) or visit the departmental website at <http://obgyn.med.wayne.edu/>; or <http://reprosciencesatwayne.com>; or

2) the Department of Physiology website at <http://physiology.med.wayne.edu/phd-physiology-rs/>.

Obstetrics and Gynecology Courses (OBG)

The following course is offered for graduate credit only. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7500 Statistics, Epidemiology, and Study Design. Cr. 3

Prereq: written consent of instructor, postgraduate medical education. Knowledge of epidemiology and statistical methods used to design and interpret research. (Y)

Oncology

Cancer Biology Program

Office: KCI Prentis Building, 110 E. Warren Avenue, Room 2215;
313-578-4302

Program Director: Larry H. Matherly

Website: <http://cancerbiologyprogram.med.wayne.edu/>

Medical Physics Program

Office: 4201 St. Antoine Boulevard, 1D-UHC: (313)-576-9624:

Program Director: Jay Burmeister

Website: <http://medicalphysics.med.wayne.edu/>

Professors

Judith Abrams, Gerold Bepler, Jay Burmeister, Fei Chen, Michael Cher, Indrin Chetty, Q. Ping Dou, Rafael Fridman, David Gorski, Ahmad Heydari, Gilda Gali Hillman, Ken Honn, Michael Joiner, David Kessel, Hyeong-Reh Kim, Adhip Majumdar, Larry Matherly, Raymond Mattingly, Ramzi Mohammad, Manohar Ratnam, Avraham Raz, John Reiners, Arun Rishi, Ann Schwartz, Malathy Shekar, Shijie Sheng, Anthony Shields, Bonnie Sloane, Michael Tainsky, Jeffrey Taub, Wei-Zen Wei, Gen Sheng Wu

Associate Professors

R. Daniel Bonfil, Jennifer Beebe-Dimmer, George Brush, Wei Chen, Sreenivasa Chinni, Michele Cote, Yubin Ge, Carri Glide-Hurst, Maik Huttemann, Harold Kim, Jing Li, Karen List, Sandeep Mittal, Stephan Patrick, Lori Pile, Izabela Podgorski, Debra Skafar, Sokol Todi, Guojun Wu, Youming Xie, Zeng-Quan Yang

Assistant Professors

Julie Boerner, Aliccia Bollig-Fischer, Kang Chen, Michael Dominello, Rodrigo Fernandez-Valdivia, Kimberly Hart, Jyung Kim, Seong Ho Kim, Chunying Li, Haipeng Liu, Jordan Maier, Saroj Mathupala, Steven Miller, Peter Paximadis, Kristen Purrington, Joseph Rakowski, Michael Snyder, Keqin Tang, Nitin Vaishampayan, Nerissa Viola-Villegas, Jian Wang, Ling Zhuang

Cancer Biology (M.S. and Ph.D. Programs)

Historically, researchers involved in cancer biology research have focused on a particular field in biology or medicine relating to alterations in fundamental biological processes that result in malignancy, progression to fatal metastatic disease, or success or failure of therapy. However, continued advances in cancer diagnosis and treatment require scientists to have a greater specialization in the biology of cancer while, at the same time, exposure to a host of disciplines, ranging from biochemistry to cell biology and immunology, and to state-of-the-art cell biology and molecular biology methods. The Cancer Biology Graduate Program at the Wayne State University School of Medicine and the Barbara Ann Karmanos Cancer Institute is dedicated to providing an outstanding training experience in the rapidly evolving field of cancer research. Our philosophy is that to train the next generation of cancer researchers requires a strong interdisciplinary graduate curriculum with a major focus on the biology of cancer, and opportunities to regularly interact with clinicians engaged in cancer diagnosis and treatment. The goal is to develop scientists with capacities for critical scientific thinking needed to conduct original research as independent cancer investigators. The Ph.D. program consists of formal course work which provides a comprehensive education in the basic concepts, along with solid training in the core disciplines that serve contemporary cancer research. Graduates gain a broad understanding of the fundamental principles that underlie this diverse and dynamic field with in-depth knowledge in their dissertation discipline. An integral part of the training experience involves opportunities to develop written and oral communication skills essential to future success as a cancer researcher.

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the graduate programs in the School of Medicine (see Graduate Programs of the School of Medicine, p. 462). Applicants to this program should have a background in one of the chemical or biological sciences; applicants with other backgrounds will be considered for admission depending on their competence related to specific areas of interest within the program. Admission is based on previous academic accomplishments, as documented by a transcript of a degree in-progress or a posted official transcript of a completed degree. A minimum 3.0 grade point average is required although students typically have averages well in excess of this minimum. Graduate Record Examination scores, a statement of purpose, recommendations and a personal interview are required for admission. Applicants with previous research experience are strongly encouraged to apply and a description of their research experience should be provided. International students must be proficient in English, as determined by satisfactory performance on the TOEFL English proficiency examination.

DOCTOR OF PHILOSOPHY REQUIREMENTS

An applicant for the Doctor of Philosophy degree must satisfactorily complete at least ninety credits, including thirty dissertation research credits in CB 9991, 9992, 9993, and 9994 during consecutive semesters. All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Graduate Programs of the School of Medicine, p. 462, respectively. For information regarding distribution of credits among major and minor requirements, consult the department.

MASTER OF SCIENCE REQUIREMENTS

The Master of Science with a major in Cancer Biology is intended to award a degree to students who enter the Ph.D. Program, and complete a sufficient amount of coursework and research, but who decide to leave the program prior to completion of the doctorate. In addition, under special circumstances, it may be appropriate to admit graduate students for a terminal Master's Degree in Cancer Biology.

Curriculum: Students in the Cancer Biology Graduate Program enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum during their first year. The IBS curriculum includes IBS 7015, Interdisciplinary Molecular and Cellular Biology (seven credits). It also includes selection by the student in conjunction with the Departmental Graduate Officer of courses within the IBS curriculum. In addition, students enroll in CB 7210, Fundamentals of Cancer Biology (3 credits), and CB 7990, Research Technologies in Cancer Biology (1 credit).

The graduate education of each cancer biology student is tailored to his/her specific interests and research requirements. Previous educational experience is recognized so as to permit the student to progress as rapidly as possible. Since the program requires a broad understanding of cancer biology, a core curriculum is required including thirty-four credits from the following:

Required Core Courses and Research

BMS 6010 - Responsible Conduct in Biomedical Research: Cr. 1

CB 7130 - Clinical Aspects of Cancer Biology: Cr. 1

CB 7210 - Fundamentals of Cancer Biology: Cr. 3

CB 7700 - Recent Developments in Cancer Biology (Journal Club): Cr. 1 (6 req.)

CB 7710 - Individual Studies in Cancer Biology (rotation): Cr. 1-2 (3 req.)

CB 7890 - Seminar: Cr. 1 (6 req.)

CB 7990 - Research Technologies in Cancer Biology: Cr. 1

IBS 7015 - Interdisciplinary Molecular and Cellular Biology: Cr. 7

Two Biomedical Electives: Cr. 2 (each)

Elective Courses

In addition to the required courses, a number of advanced cancer biology courses are offered from which students choose up to thirteen credits providing the sufficient total in required coursework. A number of other courses are available to allow students to specialize in a specific research discipline.

- CB 7220 – Molecular Biology of Cancer Development: Cr. 3
- CB 7240 – Principles of Cancer Therapy: Cr. 2
- CB 7300 – Special Topics in Cancer Biology: Cr. 1-3
- CB 7410 – Cancer Immunology and Immunotherapy: Cr. 3
- CB 7430 – Cancer Epidemiology: Cr. 2
- CB 7460 – Mechanisms of Neoplasia-Signaling: Cr. 3
- CB 7600 – Applied Cancer Biostatistics: Cr. 2

During the second year of study, students submit a "Plan of Work" which documents the academic curriculum leading to the Ph.D. It is expected that the majority of the didactic course work will be completed during the first and second years of Ph.D. study. A written comprehensive qualifying exam is administered in the late spring of the first year of study, followed by an oral comprehensive exam of the proposed dissertation research in the spring of the second year. Ph.D. candidacy is conferred upon successful completion of the oral comprehensive exam. During the summer of the first year, a month-long clinical rotation is required (CB 7130) during which graduate students "round" with oncologists treating cancer patients in the Karmanos Cancer Hospital. The third and subsequent years are primarily devoted to dissertation research. Up to forty-five credits of general research, including thirty credits of dissertation research during consecutive semesters (see below) will complete the Graduate School requirements for the Ph.D. degree.

Dissertation Research

To complete the Ph.D., students must successfully defend the dissertation research and complete a publishable research project under the guidance of a faculty mentor. The courses required for dissertation matriculation are:

- CB 9991 – Doctoral Candidate Status I: Cr. 7.5
- CB 9992 – Doctoral Candidate Status II: Cr. 7.5
- CB 9993 – Doctoral Candidate Status III: Cr. 7.5
- CB 9994 – Doctoral Candidate Status IV: Cr. 7.5

In addition to traditional classroom learning, there are many additional educational opportunities available to our students including seminars by nationally/internationally renowned scientists both within and outside the cancer center, special non-credit courses, fellowship and grant writing, and research workshops and symposia.

RESEARCH: Outside of the required coursework and written and oral comprehensive exams, the bulk of Ph.D. study involves independent laboratory- or population-based research leading to results of publishable caliber. The Cancer Biology Graduate Program offers research opportunities with outstanding faculty in many areas of contemporary cancer biology including cancer therapeutics, metastasis, tumor microenvironment, breast cancer biology, carcinogenesis, cancer genetics, population studies, and cancer immunology. Typically, students complete up to three laboratory research rotations in the laboratories of prospective Ph.D. mentors during the first year of study (two in the fall and one in the winter semester), after which he/she chooses a dissertation mentor. Dissertation research mentors are selected based on students' research interests and the research rotation experiences. Since scientific research is open-ended, the amount of time required for completion of a defensible dissertation leading to the Ph.D. cannot be predicted, although typically the Ph.D. degree is conferred within four to five years. A written dissertation and a final oral defense of the dissertation research by the Dissertation Research Committee are requirements for conferring the Ph.D. degree in Cancer Biology. There is a requirement of first-author status on a publication based on the dissertation research for the Ph.D. degree.

FINANCIAL SUPPORT: All students accepted into the program are considered for financial assistance; a specific application is not necessary. Students receiving assistantships are advised to take no more than ten credits per semester. Financial support for the training program in Cancer Biology is derived from University fellowships, traineeships supported by training grants from the National Cancer Institute and the Susan G. Komen Foundation, faculty grants, and individual graduate fellowships. For complete information on the Ph.D. program in Cancer Biology, students should contact the Cancer Biology Graduate Program, Department of Oncology, Karmanos Cancer Institute, 110 East Warren Ave., Suite 2215, Detroit, Michigan 48201.

Medical Physics (M.S., Ph.D., Doctorate, and Graduate Certificate Programs)

Medical Physics is an applied branch of physics concerned with the application of the concepts and methods of physics to the diagnosis and treatment of human disease. Medical Physicists participate in clinical service and consultation, research and development, and education in the areas of radiation oncology, diagnostic radiology, nuclear medicine, and health physics. The Department of Oncology offers courses of study leading to a Master of Science degree, a Doctor of Philosophy degree, a Professional Doctorate degree, or a Graduate Certificate in Medical Physics. Through courses, seminars, laboratories, research experiences, and clinical internships, the Medical Physics programs provide education and clinical training in the physics of Diagnostic Radiology, Nuclear Medicine, and Radiation Oncology.

Admission to these programs is contingent upon admission to the Graduate School and the Graduate Programs of the School of Medicine; for requirements, see Admission, Graduate School and Admission, p. 462, respectively. A bachelor's degree in physics or a physical science is the preferred background for students entering these programs, although candidates with degrees in other scientific or technological specialties may be accepted provided they have an adequate education in physics and mathematics. Applicants with incomplete physics and/or mathematics backgrounds will be required to complete their preparation in these areas before acceptance into a program. Applicants for the Graduate Certificate are required to have a Ph.D. in physics or related discipline prior to admission.

Course subjects appropriate to graduate work in medical and radiological physics include human anatomy and physiology, electronics, mechanics, nuclear physics, modern physics, radiological physics (applicable to all areas of radiology), radiobiology, radiation safety, computer science, and statistics.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

The Master of Science with a major in Medical Physics is offered under Plan B as defined by the Graduate School under Master's Degrees. Course requirements are listed at <http://medicalphysics.med.wayne.edu/mastersprogram.php>.

The Ph.D. requires ninety credits beyond the baccalaureate including thirty credits of dissertation direction. The thirty credit dissertation registration requirement is fulfilled by registering for the courses ROC 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. The dissertation must be based on original research under the direction of a graduate faculty advisor. Course requirements are listed at <http://medicalphysics.med.wayne.edu/phdprogram.php>.

The Graduate Certificate requires a PhD in Physics or related science to be eligible for application and requires completion of 19 graduate credits of didactic coursework. Course requirements are listed at <http://medicalphysics.med.wayne.edu/certificateprogram.php>.

The Professional Doctorate (DMP) program requires ninety credits beyond the baccalaureate including thirty credits of clinical residency in Radiation Oncology Physics. The thirty credit clinical requirement is fulfilled by registering for the courses ROC 9996, 9997, 9998, and 9999 (Radiation Oncology Physics Clinical Rotation I, II, III, and IV, respectively), in consecutive academic year semesters. Course requirements are listed at <http://medicalphysics.med.wayne.edu/mastersprogram.php>.

Assistantships and Research: The Department has graduate assistantships and graduate research positions available for a number of qualified full-time students. All students accepted into the graduate degree program are considered for financial assistance and no application forms are necessary for that purpose. Students on assistantships are advised to elect no more than twelve credits in a given semester. All students, whether or not they hold a fellowship or an assistantship, are required to assist the graduate faculty in teaching and research activities as a component of their educational experience.

Cancer Biology Courses (CB)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7130 Clinical Aspects of Cancer Biology. Cr. 1

Open only to Ph.D. students in Cancer Biology. Cancer Biology Ph.D. students accompany clinicians during rounds in hospital and outpatient clinics, as well as attend clinical conferences and related sessions. Offered for S and U grades only. (S)

7210 (PHC 7210) Fundamentals of Cancer Biology. (IBS 7210) Cr. 3

Prereq: IBS 7015. The lectures are organized into three thematic blocks including cancer development and pathology, mechanisms of cancer development and progression, and principles of cancer prevention and therapy. (W)

7220 (PHC 7220) Molecular Biology of Cancer Development. Cr. 3

Open only to Ph.D. students in Cancer Biology; others by departmental permission. Prereq: IBS 7015 and CB 7210. Topics covered include: genetics and molecular basis of normal cell transformation into malignant cancer cells; and molecular mechanisms that are fundamental to the regulation of cell growth, development, differentiation and cancer progression. The students are expected to present and participate in discussions of one or more key recent papers that are relevant to the lectures. Students with a strong background in biology/molecular biology are encouraged to apply. (B:F)

7240 (PHC 7240) Principles of Cancer Therapy. Cr. 2

Open only to Ph.D. students in Cancer Biology; others by departmental permission. Prereq: IBS 7015 and CB 7210. Continuation of the principles of cancer therapy taught in CB7210. Concepts relating to tumor biology and the biochemistry and pharmacology of both classic and targeted agents are covered. (B:W)

7300 Special Topics in Cancer Biology. Cr. 1-3

Open only to Ph.D. students in Cancer Biology; others by departmental permission. Prereq: CB 7210. Designed to provide students exposure to emerging themes and technologies in the cancer field as well as to cancer related topics that are not covered in detail in other courses. (T)

7410 (IM 7410) Cancer Immunology and Immunotherapy. Cr. 3

Prereq: IBS 7015 or equiv. Open only to Ph.D. students in Cancer Biology; others by departmental permission. Cancer immunotherapy based on the molecular mechanisms of T cell development, tolerance and activation. Topics include T cell receptor and co-stimulatory signal-mediated regulation of T cell activation, transcriptional regulation of T cell differentiation, and T cell effector function and regulatory mechanisms. Each week will consist of a one-hour lecture and a two-hour discussion. (B:W)

7430 Cancer Epidemiology. Cr. 2

Open to M.P.H. or Ph.D. Public Health or Cancer Biology majors. Prereq: FPH 7240 recommended. Introduction to the principal concepts and methods used in cancer epidemiology. Important evaluations of cancer burden in the United States and worldwide, as well as the major causes of human cancer. Students will be required to review and provide critical appraisal of selected literature in innovative areas of cancer epidemiologic research. (B:W)

7460 Mechanisms of Neoplasia: Alterations to Cellular Signaling. Cr. 3

Open only to Ph.D. students in Cancer Biology; others by departmental permission. Prereq: IBS 7015 and CB 7210. Course covers cellu-

lar regulatory signal-transduction networks that are often activated inappropriately in malignant cells. Focus on the major principles of cancer cell biology including survival, apoptosis, adhesion, and cell cycle deregulation. (B:F)

7600 Applied Cancer Biostatistics. Cr. 3

Open only to Ph.D. students in Cancer Biology; others by departmental permission. Concepts and applications of statistical methods and data analysis as related to cancer research. Students will have hands-on experience in statistical thinking, analyzing, and interpreting through the interactive teaching modules. The course provides an opportunity for students to understand statistical analyses in the medical literature, as well as provide guidance for planning and analyzing their own research. (B:F)

7700 Recent Developments in Cancer Biology. Cr. 1 (6 req.)

Open only to Cancer Biology Ph.D. students. This course is a journal club designed to develop proficiency in critically evaluating original scientific literature, to broaden knowledge of current cancer biology research, and to provide insights into different research strategies. Each student is expected to participate in class discussions. (F,W)

7710 Individual Studies in Cancer Biology. Cr. 1-2 (3 req.)

Open only to Ph.D. students in Cancer Biology; others by departmental permission. Prereq: enrollment in graduate program in Cancer Biology. Offered for S and U grades only. Cancer Biology graduate students pursue experimental research under the guidance of selected faculty. This is the research rotation through which students select their Ph.D. dissertation mentor. (T)

7890 Seminar in Cancer Biology. Cr. 1 (6 req.)

Offered for S and U grades only. Open only to Ph.D. students in Cancer Biology. This course provides second year and above students with the opportunity to present their dissertation work to their peers. This class not only provides students with the opportunity to develop their oral presentation skills, but also gives the students a chance to critically evaluate their peers. (F,W)

7990 Research Technologies in Cancer Biology. Cr. 1

Offered for S and U grades only. Course designed to expose students to core research technologies at Karmanos Cancer Institute and Wayne State University to enable their inclusion in the dissertation research project. The animal, genomics, pharmacology, proteomics, biostatistics, and microscopy, imaging and cytometry research cores are presented, including theoretical and practical aspects and instrumentation whenever appropriate. (W)

7996 Research. Cr. 1-15

Open only to Ph.D. students in Cancer Biology. Directed study and pre-dissertation research with faculty in the program. (T)

7999 Master's Essay. Cr. 1-4 (Max. 4)

Open only to Ph.D. students in Cancer Biology. Research in the research literature, and writing of an essay on a topic area in contemporary cancer biology. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Open only to Ph.D. students in Cancer Biology. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: CB 9991 and approval by the Ph.D. Officer of the Graduate School. Required course in academic-year semester following CB 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: CB 9992 and approval by the Ph.D. officer of the Graduate School. Required course in academic-year semester following CB 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: CB 9993 and approval by the Ph.D. officer of the Graduate School. Required course in academic-year semester following CB 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. officer of the Graduate School; course is taken upon completion of 30 credits in CB 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Radiation Oncology Courses (ROC)

Effective Winter Term 2013 all RAD courses will be changed to ROC courses and all of the former RAD prerequisites changed to ROC equivalents as listed below. The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Introduction to Radiological Physics. Cr. 4

Prereq: PHY 2180, PHY 3300 or equiv. Offered for graduate credit only. Nature of radiation and its interaction with matter. Theory of dosimetry and instrumentation for detection of radiation. Principles of radiation protection. Applications of radiation in radiology and related problems. (F)

5990 Directed Study in Medical Sciences. Cr. 1-4

Prereq: written consent of instructor arranged in semester preceding election of course. Offered for graduate credit only. Introduction to modern methodology of cancer research. Students of the Division of Cancer Biology of the Department of Radiation Oncology conduct research projects under direction of research scientists. Areas of research include: molecular biology, enzyme purification, tumor biology, cellular biochemistry. (T)

6710 Physics in Medicine. (PHY 6710) Cr. 3

Required for B.S. in Biomedical Physics. Offered for graduate credit only. Applications of physics in medicine including radioactivity; interaction of radiation in matter; x-ray, CT, MRI, ultrasound, and PET imaging; nuclear medicine; radiation oncology; nerve electrophysiology, electrocardiogram, pacemakers, and defibrillators. (W)

7000 Imaging Physics I. Cr. 4

Prereq. or coreq: ROC 5010. Basic theory of medical imaging. Introduction to magnetic resonance imaging and spectroscopy, ultrasound; diagnostic radiology: radiography, fluoroscopy, CT, digital radiography, and mammography. (F)

7010 Imaging Physics II: Nuclear Medicine. Cr. 2

Prereq: ROC 5010. Physics of nuclear medicine, with emphasis on imaging. (W)

7020 Physics of Radiation Therapy. Cr. 3

Prereq: ROC 5010. Lecture and demonstration in physics of radiation therapy. (W)

7040 Radiation Dosimetry. Cr. 2

Prereq: ROC 5010. Lecture and demonstration on principles of radiation dosimetry. Dosimetry of photons, electrons, neutrons and dose from radioactive materials. (W)

7050 Diagnostic Imaging Laboratory. Cr. 2

Prereq: ROC 7000. Open only to students in the M.S. program with a major in radiological physics. Practical laboratory exercises in ionometric and solid-state dosimetry techniques, quality assurance, and radiation safety for selected diagnostic imaging techniques. (W)

7060 Applied Radiobiology in Radiological Science. Cr. 2

Prereq: PHY 2180. Fractionation, oxygen enhancement ratio, characterization of neutron beams and heavy particles for radiation therapy, radiosensitivity within cell division. (F)

7070 Radiation Safety. Cr. 2

Prereq: ROC 5010. Lectures on radiation safety procedures and practices; governmental regulations on radiation safety. (S)

7080 Radiotherapy Physics Laboratory. Cr. 2

Prereq: ROC 7020 and 7040. Practical laboratory exercises in ionometric and solid-state dosimetry techniques, quality assurance pro-

cedures for selected radiation therapy and diagnostic radiological equipment. (S)

7090 Biomedical Nuclear Magnetic Resonance. Cr. 2

Prereq: PHY 2180, PHY 3300 or equiv. Principles of nuclear magnetism, absorption spectroscopy and NMR relaxation applied to NMR spectroscopy and imaging in biology and medicine. Instrumental design, operation and maintenance; cryogen management. (F)

7110 Treatment Planning. Cr. 2

Prereq: ROC 7020. Practical aspects of radiotherapy treatment planning. Lectures and exercises in patient data acquisition and computerized treatment planning for a variety of sites with both teletherapy and brachytherapy. (F)

7120 Radionuclide Therapy. Cr. 2

Prereq: ROC 5010, 7020, and 7040. Development of radionuclide technology and its practical peaceful use from its discovery to the latest developments. (F)

7130 Nuclear Medicine Physics Laboratory. Cr. 2

Prereq: ROC 7010. Laboratory experiments calibration, Q.A., etc., on isotope generators, isotope calibrators, counting systems, spectrometers, cameras, spect and PET systems, Counting statistics, spectrum analysis. (S)

7150 Radiation Oncology Anatomy. Cr. 2

Independent study course covering radiological (CT/MRI) anatomy and basic anatomy and medical terminology pertinent to radiation oncology. (Y)

7160 Advanced Topics in Medical Physics. Cr. 2

Prereq: ROC5010 and ROC 7000. Advanced imaging principles for students pursuing careers in medical physics or any other profession related to diagnostic imaging. (W)

7170 Professional Aspects of Medical Physics. Cr. 2

Provide an overview of the professional aspects of clinical radiation oncology physics. Involvement in practical aspects of clinical radiation oncology physics including analysis of quality assurance and practice quality improvement initiatives, review of regulatory and external certification requirements, etc. (T)

7890 Seminar. Cr. 1 (Max. 3)

Presentations by graduate students, staff, visitors with emphasis on topics relevant to radiation biophysics and radiological health. (T)

7990 Directed Study. Cr. 1-5 (Max. 5)

Independent study in the uses of new technologies in clinical radiology. (T)

7999 Essay Direction. Cr. 3

Preparation of an in-depth paper on a subject in radiological physics. (T)

8990 Special Problems in Radiation Biophysics. Cr. 1-3 (Max. 6)

Independent study in advanced topics to be selected by the student in consultation with instructor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: RAD 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following ROC 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: ROC 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following ROC 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: ROC 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following ROC 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in ROC 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

9996 Radiation Oncology Physics Clinical Rotation I. Cr. 7.5

Prereq: DMP candidate in department and written consent of the program director. Required in Fall term of Year 3 of Professional Doctorate program. Offered for S and U grades only. (T)

9997 Radiation Oncology Physics Clinical Rotation II. Cr. 7.5

Prereq: Satisfactory completion of ROC 9996 and written consent of the program director. Required in Winter term of Year 3 of Professional Doctorate program. Offered for S and U grades only. (T)

9998 Radiation Oncology Physics Clinical Rotation III. Cr. 7.5

Prereq: Satisfactory completion of ROC 9997 and written consent of the program director. Required in Fall term of Year 4 of Professional Doctorate program. Offered for S and U grades only. (T)

9999 Radiation Oncology Physics Clinical Rotation IV. Cr. 7.5

Prereq: Satisfactory completion of ROC 9998 and written consent of the program director. Required in Winter term of Year 4 of Professional Doctorate program. Offered for S and U grades only. (T)

Ophthalmology

Office: K-220 Kresge Eye Institute; 313-577-1355

Chairperson: Mark S. Juzych, M.D., M.H.S.A.

Professors

Gary W. Abrams, Robert N. Frank, Bret Hughes, Mark S. Juzych, Renu Kowluru, Mark L. McDermott, Zhuo, Hua Pan, Robert Tomsak, Fu-Shin Yu

Associate Professors

Patrick Murphy, John M. Ramocki, Gabriel Sosne, Asheesh Tewari, Shubin Xu, Frederick Zwas

Assistant Professors

Reecha Bahl, Anju Goyal, Frank Hwang, Johnstone Kim, Ashok Kumar, William Lucas, Anu Patel, Rajiv Shah, Aman Shukairy, Victoria Stover, Gabriel Sosne, John Suchomel, Justin Tannir

Clinical Professors

John Baker, David Barsky, Conrad L. Giles

Clinical Associate Professors

Evan Black, Jo D. Isaacson, John Roarty, Sidney L. Stone, Michael T. Trese

Clinical Assistant Professors

Robert Blau, Lisa Bohra, Ruth Boyman, John Burchfield, Christopher Cheyer, Michael Clune, Edward Cohn, Michael Coleman, David Crandell, Deborah Darnley-Fisch, Jason Dilly, Anna DiLorenzo, Raymond Dixon, Steven Dunn, Aldo Fantin, Christian George, Geoffrey Gladstone, Howard Joondeph, Jon Koh, Neal Krasnick, Robert Levine, Susan Malinowski, Donald Muenk, Shoib Myint, Howard Neff, Frak Nesi, Alan Parent, Rajesh Rao, Leemor Rotberg, Samir Shah, Les Siegel, Marc Siegel, Michael Siegel, Tina Turner,

Clinical Instructors

E. Michael Balok, Kamal Fahim, Joel Miller, Shirley Sherrod

Adjunct Professors

Inna Glybina, John Ubels, Nalin Unakar

The Ophthalmology Department is committed to education, research, and patient care. These activities are conducted primarily in the central campus of the Detroit Medical Center, in the Kresge Eye Institute, under the direction of the Department Chairperson. The close association of medical practice, research and teaching makes the Kresge Eye Institute an ideal teaching facility. Whether correcting common eye disorders such as cataracts, glaucoma and strabismus, or performing highly technical operations such as vitrectomy, corneal transplants or lens implantations, the medical staff uses the most advanced diagnostic treatment, and surgical methods. The Institute is ideally suited for clinical instruction because it attracts a large number of patients with rare eye diseases, engages in advanced diagnostic techniques, performs a wide range of delicate eye operations and is a center for eye research. Through its affiliation with the University and the Detroit Medical Center, the Institute provides a stimulating learning environment for graduate physicians and medical students.

Each year the Institute selects seven outstanding medical graduates for a three-year residency training program in eye diseases and surgery. The residency program is structured to provide appropriate didactic and clinical teaching and resident support services to exceed all ACGME requirements for resident education. Clinical and research fellowships in vitreoretinal diseases and surgery, glaucoma and ocular trauma are available on a selective basis upon completion of the residency program. The Institute's faculty also provides lectures and clinical training for third and fourth year medical students. The teaching encompasses courses in ophthalmology for residents in family practice and emergency medicine through an elective rotation.

Orthopaedic Surgery

Office: 18100 Oakwood Blvd, Suite 300, Dearborn, MI 48124;
313-429-7970, Fax: 313-429-7975
Chairperson: Lawrence G. Morawa

Professors

Michael Church (Associate), James Coticchia, Dennis G. Drescher, John R. Jacobs, Mark Marunick, Robert H. Mathog, Edwin Monsell, George H. Yoo

Clinical Professors

Ned I. Chalat, Glendon Gardner, Jack Kartush, Vanessa Schweitzer, Michael Seidman, Kathleen Yaremchuk

Associate Professors

Marian J. Drescher, Andrew Fribley (Associate), Ho-Sheng Lin, Lawrence Lum (Associate), Jinsheng Zhang

Clinical Associate Professors

Richard Arden, Dennis Bojrab, Michael Hauptert, Michael LaRouere, Eric Sargent, Robert Stachler

Assistant Professors

Michael Carron, Paul Finlayson, Adam Folbe, Zhengqing Hu, Walter Salwen (Associate), Mahdi Shkoukani, Giancarlo Zuliani,

Clinical Assistant Professors

Han-Soo Bae, Seilesh Babu, Samer Bahu, Tamer Ghanem, Edward G. Jankowski, Lamont Jones, Jeffrey S. Leider, Daniel D. Megler, Shreepad Naik, Pavan Reddy, Werner Roennecke, David A. Scapini, Mark Simpson, John Zappia

Adjunct Associate Professor

Maria C. Jackson-Menaldi

Adjunct Assistant Professor

Susan Fleming

Clinical Instructor

John Jacquart

The M.D. program in orthopaedic instruction is integrated and designed to introduce the medical student to the entire field of musculoskeletal diseases and injuries. By means of demonstrations, lectures, conferences, clinics and clerkships, the student learns the important specifics of the orthopaedic examination and is exposed to many groups of musculoskeletal problems related to trauma in adults and children. By study of the factual content of common problems in each field, the student's attention is directed to general principles of diagnosis and treatment.

Otolaryngology, Head and Neck Surgery

Office: 5E University Health Center, 4201 St. Antoine; 313-577-0804
Chairperson: Ho-Sheng Lin

Professors

Dennis G. Drescher, John R. Jacobs, Ho-Sheng Lin, Lawrence Lum (Associate), Mark, Marunick, Edwin Monsell, George H. Yoo, Jinsheng Zhang

Clinical Professors

Ned I. Chalat, Glendon Gardner, Jack Kartush, Vanessa Schweitzer, Michael Seidman, Kathleen Yaremchuk,

Associate Professors

Michael Carron, Marian J. Drescher, Adam Folbe, Zhengqing Hu, Giancarlo Zuliani

Clinical Associate Professors

Richard Arden, Michael Hauptert, Michael LaRouere, Frank Nesi, Eric Sargent, Robert Stachler, John Zappia

Assistant Professors

Andrew Fribley (Associate), Robert Hong, Ross Mayerhoff, Syed Raza, Mahdi Shkoukani

FTA Clinical Educator - Assistant Professors

Nathan Gonik, Bianca Siegel

Clinical Assistant Professors

Syed Ahsan, Seilesh Babu, Samer Bahu, Dennis Bojrab, Eleanor Chan, Steven Chang, Robert Deeb, Tamer Ghanem, Francis Hall, John Hilu, Edward G. Jankowski, Lamont Jones, Alvin Ko, Jeffrey S. Leider, Daniel D. Megler, Pavan Reddy, Werner Roennecke, David A. Scapini, Joseph Seymour, Mark Simpson

Adjunct Professor

Maria C. Jackson-Menaldi

Adjunct Assistant Professor

Susan Fleming

The M.D. program instruction of the Department of Otolaryngology, Head and Neck Surgery is designed to acquaint students with all diseases treated by the modern otolaryngologist. Instruction is given in the methods of examining the ear, nose and throat in the outpatient department. Audiology is included so that the student may properly classify deafness in prescribing appropriate therapy.

Head and neck, and plastic and reconstructive surgery as related to otolaryngology are included in the instructional program. Observation and, at times, assistance at surgical operations offer additional learning opportunities to students. In general, the program stresses the correlation of ear, nose and throat problems to the entire curriculum in medicine and surgery.

Pathology

Office: 9374 Scott Hall; 313-577-1102

Chairperson: Wael Sakr

Website: <http://www.med.wayne.edu/Pathology/>

Distinguished Professors

John D. Crissman (Emeritus), Kenneth V. Honn, Fazlul Sarkar

Professors

Michael Cher, Q. Ping Dou, Rafael Fridman, James Granneman, Henry Heng, Ikuko Kato, Hyeong-Reh Kim, Tuan H. Kuo, (Emeritus), Markku Kurkinen, Avraham Raz, Kaladhar Reddy, Malathy Shekhar, Shijie Sheng, Michael Tainsky, Maria Worsham, Gen Sheng Wu

Clinical Professors

Rouba Ali, Martin Bluth, Gerald Feldman, William Kupsy, Henry Lim, Fulvio Lonardo, Frederick Meier, Anwar Mohamed, G. Prem Reddy, Wael Sakr, Husain Saleh, Vinod Shidham, Gen Sheng Wu, Richard Zarbo,

Associate Professors

Basim M. Al-Khafaji, Barbara J. Anderson, Joseph D. Artiss, R. Daniel Bonfil, Barbara Bosch, Sreenivasa Chinni, Meng Jer Lee, Todd Leff, Krishna Maddipati, Kenneth C. Palmer

Clinical Associate Professors

Sudeshna Bandyopadhyay, Chung-Ho Chang, Doina David, Omar Fagoaga, Marilyn Fairfax, Ali Gabali, Barry Hershman, Suzanne Jacques, Min Lee, Norman Lehman, Edi Levi, Ileana Lopez-Plaza, Bruce Newman, Adrian Ormsby, Jason Pimentel, Janet Poulik, Faisal Qureshi, Hossein Salimnia, Dongping Shi, Richard Wesley, Youming Xie

Assistant Professors

Rodrigo Fernandez Valdivia, Mustapha Kandouz, Jian Wang,

Clinical Assistant Professors

Osama, Alassi, Michael Aulicino, Rafic Beydoun, Michelle Bonnett, Milena Cankovic, Rucy Chen, Dhananjay Chitale, Adrian J. Christie, Saleh Ebrahim, Wendy Frauchiger, Arthur Gaba, Luzette Habib, Bradford Hepler, Leigh Hlavaty, Kristen Hunt, Kedar Inamdar, Daniel Isenschmid, Hayan Jaratli, Bo Jin, Bruce Jones, Christian Keller, Nabiha Khoury, Mark D. Kolins George Kucy, Cheryl Loewe, Patrick M. Long, Veronica Luzzi, Shashi Madan, Theodore Mayer, Fatima Nahhas, Tammon Nash, Donald Peven, Michael Schaldenbrand, Carl J. Schmidt, Daniel Schultz, Mala Sengupta, Veena Shah, Gaurav Sharma, Paula Sochacki, Chad Stone, David Sturtz, Elizabeth Sykes, Andrew Thompson, Frank Torres, Paul Tranchida, J. Mark Tuthill, Eve VanEgmond, Sean Williamson, Syed Zaidi, Ziyang Zhang

Graduate Degree

DOCTOR OF PHILOSOPHY with a major in pathology

The department offers a Ph.D. in Pathology, with an emphasis on the molecular and cellular mechanisms of cancer and metabolic diseases. The goal of the program is to train students to be creative and successful scientists with a solid understanding of clinically relevant disease processes.

Ph.D. students in the program enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum during their first year. Together with all the first year Ph.D. students at the medical school, pathology students take IBS 7015 – Interdisciplinary Molecular and Cellular Biology (7 credits) during the first semester.

Students also choose elective courses from within the IBS 'systems' curriculum. These courses are tailored to specific biological systems.

Topics include the neurosciences, immunology, functional genomics, and cancer biology, among others. The choice of elective courses is made in together with the graduate officer and depends on the student's specific research interests.

Pathology (Ph.D. Program)

Admission is contingent upon admission to the Graduate School and the graduate programs of the School of Medicine; see Admission, Graduate School, p. 17 and Admission, p. 462, respectively. The Department admits students with superior records of academic achievement holding either a bachelor's or master's degree. Applicants must have an undergraduate g.p.a. above a 3.0 and international students must show proficiency in English with a minimum TOEFL score of 100. Although there are no specific requirements, significant consideration will also be given to an applicant's area of undergraduate study, the amount of research experience, and Graduate Record Examination (GRE) scores.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

In addition to the general degree requirements described under Doctor of Philosophy Degrees (Ph.D.), p. 38 and Doctor of Philosophy Degrees, p. 463, and the IBS curriculum described above, students are required to take thirty credits of Doctoral Dissertation Research (PTH 9991, 9992, 9993, and 9994) in consecutive academic year semesters. Other courses are arranged to meet the specific needs and interests of each student. At the end of the second year of study, students are required to take a qualifying exam to demonstrate a basic understanding of basic molecular and cellular biology, pathology, and their chosen specific area of research. Doctoral thesis research is conducted in the laboratory of one of the Pathology faculty members.

Assistantships and Research, Pathology

All students admitted to the Pathology Graduate Program are awarded IBS graduate research assistantships. For more complete information on financial assistance, students should contact the graduate program officer, Todd Leff: tleft@med.wayne.edu.

Pathology Courses (PTH)

The following courses, numbered 7000-9999, are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7000 General Pathology. Cr. 5

Open only to Ph.D. students. The structural and functional manifestations of disease. Concepts of biochemistry, physiology and cell biology are utilized in developing a dynamic approach to the study of the abnormal cell and its constituents. Basic mechanisms are stressed. (F)

7080 Special Topics in Pathology. Cr. 1-15 (Max. 20)

Prereq: written consent of instructor. Open only to Ph.D. candidates in pathology. Frontier areas in experimental pathology and clinical laboratory sciences. Format may be lecture, laboratory, or discussion; topics to be announced in Schedule of Classes. (T)

7085 Critical Review of Scientific Publications. Cr. 1 (Min. 3, max. 5)

Open only to students admitted to Ph.D. program in medicine with a major in pathology; others by written consent of program. For Ph.D. students in biomedical fields. Current experimental approaches in medical research. (T)

7090 Signal Transduction and Cell Growth Regulation. Cr. 3

Open only to master's and Ph.D. students. Prereq: IBS 7010, 7020, or equiv. Signal transduction pathways, both cellular and molecular, and their alterations in cancer. Journal articles and instructor handouts used; emphasis on relationship to disease process. (B:W)

7130 Neuropathology. Cr. 2

Prereq: PTH 7000, written consent of instructor. Open only to Ph.D. candidates. (Y)

7150 Pathology of Respiratory Tract. Cr. 2

Prereq: PTH 7000 and written consent of instructor. Open only to Ph.D. candidates. (Y)

7180 Cardiovascular Pathology. Cr. 2

Prereq: PTH 7000; written consent of instructor. Open only to Ph.D. candidates. Gross, microscopic and submicroscopic anatomy and pathophysiology of cardiovascular disease, both human and experimental. (Y)

7330 Pathology of the Kidney. Cr. 2

Prereq: PTH 7000, written consent of instructor. Open only to Ph.D. candidates. Techniques of preparing renal biopsies for light and electron microscopy and immunofluorescent studies; ultrastructure of normal kidney; physiology of kidney - acute and chronic renal failure; glomerular disease; pyelonephritis; vascular disease; and acute tubular necrosis and renal transplantation. (Y)

7500 Systemic Pathophysiology. Cr. 3

Prereq: BCH 7010 and PSL 7010, or equivalents. Offered for graduate credit only. Pathology and pathogenesis underlying abnormal physiologic function of major organ systems in humans. Material Fee As Indicated In The Schedule of Classes (Y)

7890 Seminar. Cr. 1

Offered for S and U grades only. Open only to Ph.D. candidates in pathology. (Y)

7990 Directed Study in Clinical Pathology and Pathologic Anatomy. Cr. 2 (Max. 12)

Open only to Ph.D. candidates in medicine with a pathology major. (Y)

8000 Current Topics in Tumor Metastasis. Cr. 3

Open only to master's and Ph.D. students. Prereq: IBS 7010, 7020, or equiv. Advances in research on key aspects of tumor metastasis; emphasis on molecular mechanisms, tumor invasion, angiogenesis, and organ-specific tumor metastasis. (F)

8010 Molecular Biology of Diabetes and Obesity. Cr. 2

Open only to master's and Ph.D. students. Prereq: IBS 7010, 7020, or equiv. Basic principles and current research topics in the etiology and pathology of diabetes; diabetic complications and obesity. (B:F)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (Y)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (Y)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PTH 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PTH 9991. Offered for S and U grades only. (Y)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PTH 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PTH 9992. Offered for S and U grades only. (Y)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PTH 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PTH 9993. Offered for S and U grades only. (Y)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PTH 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (Y)

Pediatrics

Office: 1K40 Children's Hospital; 745-5870

Chairperson: Steven E. Lipschultz

Professors

Eishi Asano, Basim Asmar, Kanta Bhambhani, Diane Chugani, Harry Chugani, Deborah Ellis, Gerald Feldman, Thomas Forbes, Paul Giblin, Sabrina Heidemann, A.H.M. Mahbulul Huq, Richard Humes, Csaba Juhasz, Deepak Kamat, Peter Karpawich, S. Nadya Kazzi, Prashant Mahajan, Kathleen Meert, Tej Mattoo, Otto Muzik, Sylvie Naar-King, Enrique Ostrea, Yaddanapudi Ravindranath, Chokechai Rongkavilit, Robert Ross, Sureyya Savasan, Ashok Sarnaik, Sharada Sarnaik, Elizabeth Secord, Seetha Shankaran David Stockton, Jeff Taub, Rudolph Valentini, Suzanne White, James Wilkinson

Clinical Professors

Paul Barach, Daniel Batton, Nirmala Bhaya, James Collins, Maria Duenas, Chandra Edwin, Sudhakar Ezhuthachan, Zia Farooki, Bishara Freij, John Hopper Anne-Mare Ice, Stephen Knazik, Ernst Krug, Ruben Kurnetz, Mary Lieh-Lai, Jeffrey Maisels, Thomas Riggs, Michael Simon, Natalia Tanner, Helene Tigchelaar, Nestor Truccone, Elliott Weinhouse,

Associate Professors

Nahed Abdel-Haq, Ibrahim Abdulhamid, Sanjeev Aggarwal, Ahdi Amer, Jocelyn Ang, Mary Lu Angellili, Meera Chitlur, Jeff Clark, Wei Du, Mohammad El-Baba, Nirupama Kannikeswaran, Jorge Lua, Sharon Marshall, Girija Natarajan, Angulique Outlaw, Madhvi Rajpurkar, Usha Sethuraman, Beena Sood, Senthil Sundaram, Doris Taha, Ron Thomas, Daniel Turner, Joanne Wang

Clinical Associate Professors

John Adams, Iqbal Allarakhia, David Aughton, Alcesa Backos, Charles Barone III, Bassem Bashour, George Blum, David DaCosta, Nicholas Doss, Bassem Gebara, Herman Gray, Melissa Gregory, Demetris Haritos, Earl Hartwig, Eileen Hug, Bharati Hukku, Charles Inness, Sujatha Kannan, Gerald Katzman, Adonis Lorenzo, Hernando Lyons, Thomas Malone, Anita Moncrease, Chukwuma Nwaesei, Anuradha Prabhu, Ali Rabbani, Kalavathy Srinivasan, M. Thirumoorthi, Seetha Uthappa, Steven Waskerwitz, Gary Weiner, Hashim Yar

Assistant Professors

Valerie Abbott, Flommy Abraham, Karen Alton, Premchad Anne, Leland Babitch, Abdul Bahrainwala, Derek Bair, Arsala Bakhtyar, Usha Batra, Michelle Behrendt, Susan Bellefleur, Christopher Bergsman, Vijay Bhardwaj, Earl Black, Robert Blum, Pamela Britto-Williams, Mary Brooks, Rahul Burde, Renato Casabar, Avinash Chawla, Jasmin Cherian, Sage Ryna Church, William Clark, Minh Cruz, Nancy Cutler, Lilia DeJesus, Marcus Degraw, Bernard Degnam, Bassem Dekelbab, Lani Devaney, Sherida DuBose Parsons, Jay Eastman, Lobna Elhasan-Fakih, Joshua Evans, Rand Farjo, Paul Finkel, Michelle Foster, Alison Fox, Peter Francis, Joy Friedman, Souheil Gebara, Elimelech Goldberg, P. Seymour Gordon, Sudershan Grover, Nimisha Gupta, Ceres Guzman-Morales, Lorette Haddad, Basel Hamzeh, Katherine Hebert, Ronald Hertz, Karen Hufnagle, Clarita Hughes, Samir Jamil, Kamal Khalid, Irvin Kappy, Shahida Khan, Susan Kessler, Lisa Klein, Natalie Kontos, Pamela Kratkoczki, Steven Kreshover, Shiny S. Kunjummen, Camille Kureth, Alan Kwaselow, Stacy Leatherwood, Hon Kai Lee, Martin Levinson, Keh-Chyang Liang, Sander Lipman, Denise Lippit, Beth Lowe, Frederick Luder, Baqir Malik, Kathleen Mammel, Nancy Mannisto, Shazia Maqbool, Angela Mata, Bridget McArdle, Jay Mitchell, Van Momon, Jacqueline Moore, Sara Moussa, Christian Nageotte, David Obudzinski, Silvia Operti, Narasingrao Pampati, Deepak Patel, Christy Petroff, Chaya Pitman-Hunt, Leonard Pollack, Ligia Pop, Cynthia Pryce, Jerald Purifoy, Kalyanai Raghavan, Kanthi Rajan, Sowkya Rangarajan, Jayashree Rao, Abdur Rasheed, Saleem Raza, Michelle Rivera, Beth Robinson-Swartz, Sybil Rodrigues, Robert Roman, Jorge Rose, Adel Roshdi, William Rubinoff, Beata Ruprecht, Homer Ryan,

Mohammad Saberi, Carol Sanders, Elliott Samet, Hadi Sawaf, Tor Shwayder, Stanford Singer, Mary Smyth, Ruma Srivastava, Christine Stankovic, Curt Stankovic, Natalie Stefan, Kenneth Strzelecki, Harvey Stein, Julie Surhigh, Mary Sylwestrzak, Kim Tekkanat, Sharon Tice, Gerald Timmis, Tonya Touchstone, David Transue, Anne Vandenberg, Bhavana Vyas, Wanda Whitten-Shurney, Daniel Wilhelm, Nakia Williams, Alina Witkowski, Joyce Wolf, Douglas Ziegler.

Adjunct Professor

Xianguang Jim Chen

Adjunct Assistant Professors

Kathryn Brogan, Hancheng Cai, Barbara Cash, Thomas Koepke, Stephen Spector

Clinical Instructors

Paolo Aquina, Bhawana Arora, Laura Clark, David Dinger, Brett Ferguson, Vipul Garg, Ameer Hassoun, Katrina Iverson, Rahul Kaila, Adeeba Khan, Seymour Krevsky, Melissa Mueller, Daniel Schnaar, Kelli Udelhofen, Salvatore Ventimiglia

Formal teaching by the Department of Pediatrics takes place in the patient units and clinics at Children's Hospital of Michigan during the third year of the medical school program. The aim of the student clerkship is to acquaint the student with the course of normal development, the common variations from normal patterns, and the reaction of the immature to illness. An effort is made to incorporate all aspects of childhood in the allotted time of study in order to have full participation by members of the surgical, orthopedic, and psychiatric staff. An inpatient and outpatient experience is offered that affords the student an opportunity to be exposed to a broad array of pediatric illness. The Department of Pediatrics maintains contact with the student before the clerkship through contribution to the curriculum of basic science courses. The Department also provides an optional program of study during the fourth year.

The Fourth Year Elective Program offers the senior student an opportunity to gain experience in general pediatrics at a greater level of responsibility in patient care. The student assumes an increasing role as a primary caretaker under the supervision of the resident staff in advanced years of pediatric training. Experience in the pediatric subspecialties is also available to senior students. Thus, they are able to improve the level of their clinical skills and to obtain familiarity with the application of clinical and laboratory research techniques to the investigation of pathophysiology in a wide variety of children. Further information regarding programs may be obtained by writing to the office of the Chairperson of the Department.

Pediatrics Courses (PED)

The following courses, numbered 7000-9999, are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7120 Advanced Quantitative Research Methods. Cr. 3

Introduction to bivariate analysis and essential multivariate analysis as well as data entry and manipulation. (Y)

7130 Advanced Research Methods I: Assessment, Measurement, and Descriptive Epidemiological Designs. Cr. 3

Concepts, principles, methods and practices in health behavioral research, with emphasis on measurement, research design, and basic analytical skills. (Y)

7140 Advanced Research Methods II: Intervention Study Design and Evaluation. Cr. 3

Prereq: PED 7130 and PED 7120. Methodology for design and evaluation of behavioral intervention programs. (Y)

7160 Advanced Qualitative Research Methods. Cr. 3

Use of qualitative and mixed methods in relation to current and emerging global public health issues; how qualitative methods contribute to the development and implementation of interventions. (Y)

7210 Foundations of Health Behavior and Health Education I. Cr. 3

Introduction to health behavior and health education using social ecological theories. (Y)

7220 Foundations of Health Behavior and Health Education II. Cr. 3

Prereq: PED 7210. Advanced examination of health behavior theories, including in-depth analyses of health behavior theories and their application. (Y)

7230 Adolescent Health and Development. Cr. 3

Exploration of a variety of aspects of adolescent development and adolescent health behaviors/risk behaviors. (Y)

8210 Planning and Funding Research in Health Behavior and Health Education. Cr. 3

Introduction to the process of developing and submitting a research proposal. (Y)

8240 Disseminating Research Findings to Multiple Audiences. Cr. 3

Introduction to the research dissemination process, including formats and venues for the dissemination of research findings and the tailoring of research findings to different audiences. (Y)

8320 Intervention Development and Design. Cr. 3

Prereq: PED 7130. Introduction to the process of designing and testing effective clinical health interventions. (Y)

8330 Implementation Science. Cr. 3

Prereq: PED 8320. Theoretical frameworks and methodologies in implementation science, including effectiveness, efficiency, and fidelity of health program implementation. (Y)

Pharmacology

Office: 6374 Scott Hall; 313-577-1580

Chairperson: Ray Mattingly

E-mail: ae8291@wayne.edu

Associate Chairperson: Lawrence H. Lash

E-mail: l.h.lash@wayne.edu

Website: <http://www.med.wayne.edu/pharmacology>

Professors

Gordon F. Anderson (Emeritus), Rodrigo Andrade, Michael J. Bannon, Q. Ping Dou, Nicholas G. Davis, Harold Goldman (Emeritus), Gregory Kapatos, David Kessel, Thomas Kocarek, Lawrence H. Lash, Stephen Lanier, Steffen E. Lipshulz, Kenneth Massey, Larry H. Matherly, Raymond R. Mattingly, Roy B. McCauley, Kamiar Moin (Research), Melissa Runge-Morris, John Reiners, Eugene P. Schoener, Bonnie F. Sloane

Associate Professors

Cristina Artalejo, George Brush, Xiangyi Lu, Karin List, Izabela Podgorski, Douglas Ruden, Stanley R. Terlecky, Ellen Tisdale, Sokol Todi, Gan Wang, Hai-Young Wu

Assistant Professors

Samson Jamesdaniel

Adjunct Faculty

Chaya Brodie, Dora Cavallo-Medved, Ana deCarvalho, Alope Dutta

Graduate Degrees

MASTER OF SCIENCE with a major in pharmacology

DOCTOR OF PHILOSOPHY with a major in pharmacology and concentrations in molecular and environmental toxicology, and molecular neuropharmacology

The discipline of pharmacology is concerned with all aspects of the effects of drugs and chemicals on living systems. The field ranges from investigations at the molecular level to population studies on a global level. Drug development and evaluation make up an important part of pharmacology, but the field also includes the use of drugs as tools to probe the functions of macromolecules, cells, organs and even whole animals, and investigation of the harmful effects of chemicals on cells, organs and animals (toxicology). The breadth of interests encompassed by pharmacology provides excellent opportunities for individuals with strong interests and training in biology or chemistry to apply their knowledge to the understanding of fundamental biological processes.

Pharmacology (M.S. and Ph.D. Programs)

The Department of Pharmacology offers programs leading to the Master of Science degree and to the Doctor of Philosophy degree. In general, it is not recommended that students elect to register for a master's degree program, except under unusual circumstances. A joint Ph.D.-M.D. program is also available.

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Program of the School of Medicine (see Admission, p. 462). Applicants to the graduate program of the Department of Pharmacology should have a background in one of the chemical or biological sciences. Students with diverse backgrounds will be considered individually if they have special competence related to one of the departmental areas of interest. Applicants are expected to provide scores from the Graduate Record Examination. A subject test is not required, but is helpful in making the admission decision. Personal interviews are recommended. Letters of inquiry should be

directed to the Chair, Graduate Admissions Committee of the Department.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

Requirements for students enrolled in graduate degree programs are described in this bulletin beginning under Academic Regulations, Graduate, p. 32. Ph.D. students in the graduate program in pharmacology enroll in the School of Medicine's Interdisciplinary Biomedical Sciences (IBS) curriculum during their first year. The IBS curriculum includes:

IBS 7015 – Interdisciplinary Molecular and Cellular Biology: Cr. 7

It also includes selection by the student in conjunction with the departmental Graduate Officer of courses within the IBS Systems curriculum:

IBS 7030 – Functional Genomics and Systems Biology: Cr. 2

IBS 7050 – Biomedical Neurobiology: Cr. 2

IBS 7090 – Biomedical Immunology: Cr. 2

IBS 7100 – Biomedical Neuropharmacology: Cr. 2.

IBS 7110 – Introduction to the Business of Biotechnology: Cr. 3

IBS 7115 – Special Topics in Biotechnology Commercialization: Cr. 1

IBS 7120 – Fundamentals of Cancer Biology: Cr. 3.

IBS 7130 – Systems Neuroscience: Structure and Function of the Nervous System: Cr. 2

IBS 7140 – Foundations of Computational Biology: Cr. 3

Pharmacology course requirements include: Pharmacology lecture (PHC 7010) (successful completion of this course will provide a waiver of two credits of Systems Biology coursework), participation in the journal club (PHC 7700) and seminar series (PHC 7890), and the selection of six advanced pharmacology minicourses (PHC 7650).

For each student in the program a unique plan is constructed to allow utilization of previous educational experience and individual interests, permitting the student to progress as rapidly as possible. The program consists of a small number of required courses, several research rotation projects, a qualifying examination, and a doctoral dissertation based on new and significant research findings. The research opportunities available for graduate students include the areas of biochemical, cellular, and renal pharmacology; neuropharmacology; cancer biology, including therapeutic approaches; drug metabolism; and environmental toxicology. Major expertise is available in cell biology of protein trafficking and signal transduction, in protein chemistry, proteases and molecular biology, cellular aging, and in functional imaging technology. A concentration in molecular neuropharmacology is available for specialized training in pharmacology as applied to neuroscience. The master's degree requires successful completion of a thesis based on original laboratory research. The thirty-credit Ph.D. dissertation registration requirement is fulfilled by registration in the courses PHC 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Molecular and Environmental Toxicology (Ph.D. Concentration)

The MET concentration fulfills the basic requirements for a Ph.D. in Pharmacology but also entails additional toxicology-related classroom and research experience. The disciplines of pharmacology and toxicology are highly intertwined. They require the same basic knowledge set; involve the study of the same biochemical, molecular and genetic processes; and use a similar vocabulary. However, the focus of the two disciplines is different, with pharmacology being concerned with the therapeutic effects of drugs and toxicology being

concerned with the detrimental effects of chemicals and agents on biological processes. The term "environmental" is used in the concentration's title to convey the concentration's attention to the effects of environmental exposure on human health, as opposed to ecological/terrestrial effects. The overall goals of the MET concentration are to provide comprehensive instruction in modern-era molecular and cellular toxicology, and an appreciation of how such expertise can be used not only to study the mechanism of an agent's toxic effects, but also in an inter-disciplinary fashion to study environmentally-linked disease. To achieve this goal, the MET concentration will offer inter-disciplinary research opportunities and access to mentors who are dedicated to understanding the toxic effects of specific toxicants (environmental and therapeutic), as well as probing the complex effects of exposure to environmental stressors. Available research projects in the MET concentration will feature investigations examining the effects of environmental agents (e.g., urban air pollution, cigarette smoke, PCBs, lead, dioxin, and phthalates) on cellular and molecular processes involved in disease susceptibility, and initiation and progression. MET scientists are studying intracellular signaling pathways, transcriptional regulation of gene expression, apoptosis, oxidative stress, DNA repair, epigenetic and genetic perturbations, and complex mechanisms in cell growth and differentiation that determine the environmental contribution to diseases with a rising incidence in the urban setting such as metabolic disease, cancer, immune system disturbances and mental health disorders.

The MET concentration in the Department of Pharmacology Graduate Program emphasizes the use of contemporary approaches, such as advanced techniques in biochemistry, cell biology, molecular biology, molecular genomics, epigenetics, bioinformatics, proteomics, and epidemiology, in problems aimed at dissecting the mechanisms of environmentally-induced disease. In order to prepare for challenging careers in academics, industry and government, students in the MET concentration are expected to seek access to research laboratories that conform to standards of excellence and are recognized by peers to be competitive in the environmental health sciences/molecular and cellular toxicology field. It is the goal of the MET concentration to prepare our students of today to serve as the leaders of tomorrow.

Molecular Neuropharmacology (Ph.D. Concentration)

The doctoral program in Pharmacology includes a concentration in molecular neuropharmacology. The focus of this concentration is to provide training in the molecular aspects of neuropharmacology, with an emphasis in molecular signaling and functional genomics. The Department recruits competitive, highly motivated graduate students for training in this unique and topical discipline.

Pharmacologists, by the very nature of their discipline, determine the response of individual cells, tissues and/or organisms to changes in the internal and external environment (including therapeutic agents) and are thus in increasing demand in the 'post-genomic' era. Neuropharmacologists are especially in demand, given both the need for current therapeutic drugs for CNS disorders and the rapid pace of discovery about basic neural mechanisms that shows much promise for therapeutic purposes. Biomedical scientists are now acutely aware that there is, in fact, not a single human genome but myriad genomes comprised of countless DNA deletions, insertions, and single nucleotide polymorphisms which change the substrate upon which environmental factors act and also modify human response to therapeutic drugs. Neuropharmacology, in the post-genome era, thus encompasses both the effects of drugs on neural cell function as well as the influence of genetic variations (from SNPs to gene knockouts) on drug responses at the cellular and organismic level. In this context, application of molecular and genetic tools provides critical insights into brain function and facilitate the development of novel therapeutics for brain dysfunction and tumors.

Assistantships and Research, Pharmacology

The Department has graduate assistantships and graduate research positions available for a number of qualified students. All students accepted into the graduate degree program are considered for financial assistance and no application forms are necessary for this purpose. Students on assistantships are advised to elect no more than twelve credits in a given semester. All students, whether or not they hold a fellowship or assistantship, are required to assist the graduate faculty in research activities as a component of their educational experience. For more complete information, students should consult or write the Chair, Graduate Admissions Committee, Department of Pharmacology, Wayne State University School of Medicine, 540 East Canfield, Detroit, Michigan 48201.

Pharmacology Courses (PHC)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5030 Individual Research in Pharmacology. Cr. 2-5

Prereq: written consent of instructor. Offered for graduate credit only. Direct participation in laboratory research into the ways drugs affect cell processes, under the supervision of a departmental faculty advisor. Introduction to experimental protocol and current related scientific literature. (T)

6500 Drugs and the Addictive Process. Cr. 3

Offered for graduate credit only. Introduction to general principles of drug action; specific pharmacologic, toxicologic, and pathologic effects of abused drugs; bio-psycho-social bases for addiction. (Y)

7010 Pharmacology Lecture. Cr. 4

Recommended prereq: background in organic chemistry, biochemistry and physiology. Introductory presentation of drug actions on living tissue. (W)

7210 Fundamentals of Cancer Biology. (CB 7210) (IBS 7120) Cr. 3

Prereq: IBS 7015. Introduction to the basic principles of neoplastic development and progression. The lectures are organized into three thematic blocks including cancer development and pathology, mechanisms of cancer development and progression, and principles of cancer prevention and therapy. (Y)

7220 Molecular Biology of Cancer Development. (CB 7220) Cr. 3

Prereq: IBS 7015 and CB 7210. Genetics and molecular basis of normal cell transformation into malignant cancer cells. Molecular mechanisms that are fundamental to the regulation of cell growth, development, and differentiation will be discussed. The students are expected to present and participate in discussions of one or more key recent papers that are relevant to the lectures. Students with a strong background in biology/molecular biology are encouraged to apply. (B:F)

7240 Principles of Cancer Chemotherapy. (CB 7240) Cr. 2

Prereq: IBS 7015 and CB 7210. Continuation of the principles of cancer therapy taught in C B 7210. Concepts relating to tumor biology and the biochemistry and pharmacology of both classic and targeted agents are covered. (Y)

7410 Principles of Toxicology. (BIO 7011) Cr. 3

Prereq: CHM 2220 and 2230 and BIO 1510 or equiv. Basic concepts and principles of toxicology, including toxicity of major classes of chemicals (pesticides, solvents, metals) and organ systems (renal, immune, digestive, neuro and respiratory) affected. (F)

7505 Cellular Electrophysiology of CNS Neurons. Cr. 3

Prereq: written consent of instructor; IBS 7020 recommended. Molecular mechanisms underlying electrical activity of CNS neurons. Lectures and student presentations: one hour lecture followed by two hours of student-led discussion. (B:F)

7650 Advanced Topics in Pharmacology. Cr. 1-6 (Max. 6)

Prereq: PHC 7010. Modules of instruction in sharply-defined areas of current research in pharmacology and related disciplines. Each module will cover fundamental concepts, essential knowledge base, research protocols and techniques, and future issues. (T)

7700 Recent Developments in Pharmacology. Cr. 1-4 (Max. 12)

Prereq: written consent of instructor. Selected topics and readings in pharmacology. (T)

7710 Individual Studies in Pharmacology. Cr. 1-8 (Max. 8)

Prereq: written consent of instructor. Offered for S and U grades only. Open only to pharmacology M.S. and Ph.D. students. (T)

7890 Seminar. Cr. 1 (Max. 12)

Prereq: written consent of instructor. Offered for S and U grades only. Open only to pharmacology M.S. and Ph.D. students. Assigned readings and student presentation; faculty and outside speakers. (T)

7996 Research. Cr. 1-20 (Max. 30)

Prereq: written consent of instructor. Special research topics in specified areas arranged with individual faculty members. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

(T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PHC 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PHC 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PHC 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PHC 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PHC 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PHC 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PHC 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Physical Medicine and Rehabilitation - DMC

RIM Office: 840 Rehabilitation Institute of Michigan;

Tel: 313-745-1218; Fax: 313-745-1063

Chairperson: Lawrence Horn, MD

Professors

Robin Hanks, Lawrence Horn, Scott Millis

Clinical Professors

Maury Ellenberg, Steve Geringer, Geoffrey Seidel

Clinical Associate Professors

Gary Chodoroff, Kenneth Richter, Paola Seidel

Associate Professors, Full-Time Affiliate

Kertia Black

Assistant Professors, Full-Time Affiliate

Colette Duggan, Steve Vangel

Clinical Assistant Professors

Ahmed Ayoub, Steven Arbit, Peter Biglin, Ali Bitar, James Chinarian, Edward Dabrowski, Nathan Gross, M. David Jackson, Sung Jin Lim, David McElroy, Jeffrey Middledorf, Charles Pelshaw, Bhagyalakshmi Policherla, William Restum, Mark Rottenberg, Brigid Waldron-Perrine

Assistant Professors, Clinical, Full-Time Affiliate

Syed Ahmed, Michael Ajluni, Lourdes Alfonso, Thomas Gola, Maria Humayun, Edward Nieshoff, Tanya Sherman, Jennifer Villacorta

Adjunct Assistant Professors

Kim Dunleavy, Nancy McNevin, Lisa Rapport

Rehabilitation Sciences Administration (Graduate Certificate)

An admissions moratorium is currently in effect for this program.

The Department of Physical Medicine and Rehabilitation encourages students to acquire knowledge of the patient as a person, not merely of his/her disease. The student is taught to assess the neuromuscular and musculoskeletal systems and to manage the disorders of these systems. In addition, a concept of rehabilitation is presented which considers not only the disease or injury that leads to chronic disability, but emphasizes the coordination of effective therapies and forces which will ameliorate the social, psychological and vocational problems created by the impairment. Teaching is conducted through lectures, demonstrations, staff conferences and seminars, with the major emphasis upon office practice instruction. Clinical instruction is provided at the Rehabilitation Institute of Michigan, the principal teaching facility of the Department for the PM&R DMC program and at the following institutions: DMC Children's Hospital, Detroit Receiving Hospital, Harper Hospital, Karmanos Cancer Hospital, and Veterans' Administration Hospital.

Physical Medicine and Rehabilitation - Oakwood

Oakwood Office: 18181 Oakwood Blvd. Suite 411:
Dearborn, MI 48124; Tel.: 313-438-7373 Fax: 313-438-7375
Chairperson: Jay M. Meythaler, J.D., M.D.

Professors

Jay Meythaler

Professor, Full-Time Affiliate

Michael Yoshida

Clinical Professor

Michael Geheb

Associate Professors

Steven Hinderer, Jean Peduzzi-Nelson

Associate Professors, Full-Time Affiliate

Parmod Mukhi, P. Tyler Roskos

Clinical Associate Professors

Ken Casey

Assistant Professors, Full-Time Affiliate

Asshish, Desphande, Johnathan Ho, Yongmin Liu, Heidi Martin, Riley Smith

Clinical Assistant Professors

Annette Desantis, Eileen Donovan, Razmig Halaldjian, Jai Liem, Richard Nadjarian, Falgun Patel, Ateeq Rehman, Hi Song, Ike Yoon, Susan Youngs, Ann Zaccagnini

Rehabilitation Sciences Administration (Graduate Certificate)

An admissions moratorium is currently in effect for this program.

The Department of Physical Medicine and Rehabilitation Oakwood encourages students to acquire knowledge of the patient as a person, not merely of his/her disease. The student is taught to assess the neuromuscular and musculoskeletal systems and to manage the disorders of these systems. In addition, a concept of rehabilitation is presented which considers not only the disease or injury that leads to chronic disability, but emphasizes the coordination of effective therapies and forces which will ameliorate the social, psychological and vocational problems created by the impairment. Teaching is conducted through lectures, demonstrations, staff conferences and seminars, with the major emphasis upon office practice instruction. Clinical instruction is provided at the Beaumont Oakwood Hospitals, primarily in Dearborn and Taylor, the principal teaching facilities of the Department for the PM&R Oakwood.

Physiology

Office: 5374 Scott Hall; 313-577-1520

Chairperson: Jian-Ping Jin

Website: <http://physiology.med.wayne.edu>

Professors

Donald DeGracia, Stephen E. DiCarlo, Joseph C. Dunbar, Jr., Bhanu P. Jena, Jian-Ping Jin, Robert Lasley, Jason H. Mateika, Donal S. O'Leary, Karin Przyklenk, Jeffrey L. Ram, James A. Rillema, Noreen F. Rossi, Assia C. Shisheva, Daniel A. Walz

Associate Professors

Steven E. Cala, Patrick J. Mueller, Debra F. Skafar, Douglas R. Yingst

Assistant Professors

Xuequn Chen, Charles Chung, Fei Sun, Robert Wessells

Emeriti Faculty

Felix T. Hong, David Lawson, John W. Phillis

ASSOCIATE APPOINTMENTS

Professors

Safwan Badr (Internal Medicine-Pulmonary Critical Care), Phillip Levy (Emergency Medicine), Robert Sokol (Emeritus, Obstetrics & Gynecology), Jinsheng Zhang (Otolaryngology)

Associate Professors

Takeshi Sakamoto (Physics), Thomas Sanderson (Emergency Medicine)

Assistant Professors

Colleen Buggs-Saxon (Pediatrics), Patrick Hines (Pediatrics), Rita Kumar (Emergency Medicine)

ADJUNCT APPOINTMENTS

Professors

William H. Beierwaltes (Henry Ford Hospital), Walter F. Boron (Case Western Reserve University), Barry A. Franklin (Beaumont Hospital), Steven K. Keteyian (Henry Ford Hospital), Margot C. LaPointe (Henry Ford Hospital), David R. Pieper (SEMCME), Ida Llewellyn-Smith (Flinders University), Allen Silbergleit (St. Joseph Mercy Hospital), David York

Associate Professors

Pamela Harding (Henry Ford Hospital), Pablo Ortiz (Henry Ford Hospital), Nour-Eddine Rhaleb (Henry Ford Hospital)

Assistant Professors

Suresh Palaniyandi (Henry Ford Hospital), Javier Sala-Mercado (Universidad Catolica de Cordoba), Janice A. Schwartz (MSU), Michael D. Wider

Instructor

Cheryl A. Jagoda

Graduate Degrees

MASTER OF SCIENCE with a major in Physiology

DOCTOR OF PHILOSOPHY with a major in Physiology and an optional concentration in Reproductive Sciences

Physiologists study the functions of living organisms, tissues and/or isolated cells. The emphasis in physiology is on the functional interrelationships between healthy, as opposed to diseased tissues, cells and sub-cellular components. Increasingly, the discipline focuses on the properties of single cells and their sub-cellular components with the availability and application of molecular biology techniques. However, whether at the level of the single cell or the whole organism, the aim of the physiologist is to understand complex functional interrelationships between body tissues.

Physiology (M.S. and Ph.D. Programs)

The Department of Physiology offers programs leading to the Master of Science and Doctor of Philosophy degrees. Students planning a career in teaching or research in physiology are advised to complete the requirements for the Doctor of Philosophy degree. The degree of Master of Science is frequently the first step toward the Ph.D. degree.

Reproductive Sciences Concentration: The Doctor of Philosophy concentration in reproductive science is an integrated program. It incorporates the teaching, research and physical resources of both the Physiology and the Obstetrics and Gynecology Departments, offering interdisciplinary doctoral training in the reproductive sciences with the degree earned through the Department of Physiology. This program allows students the unique opportunity to obtain a Ph.D. degree in a clinical environment. The curriculum represents an academic focus directed toward graduate education and research training in reproduction and development, with an emphasis in the following areas: developmental biology, perinatal biology, reproductive endocrinology, reproductive genetics, toxicology/teratology and molecular biology including genomics, proteomics, and bioinformatics. Dissertation research is typically performed under the mentorship of Obstetrics and Gynecology basic science graduate faculty.

Admission to these programs is contingent upon satisfying the requirements of the Graduate School (see Admission, Graduate School, p. 17) and the Graduate Programs of the School of Medicine (see Admission, p. 462). In addition, applicants for the Doctor of Philosophy degree are normally expected to have a personal interview with one or more members of the Departmental Graduate Committee.

Academic Scholarship: All course work must be completed in accordance with the regulations of the Graduate School and the School of Medicine governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations Governing Master's and Doctoral Degrees, p. 462, respectively.

DEGREE REQUIREMENTS

The overall requirements for the Master of Science and Doctor of Philosophy degrees are set forth in the Graduate School section of this bulletin (see Degree and Certificate Requirements, Graduate, p. 36). The master's degree is offered under Plan A only (as defined under Master's Degrees, p. 37), for which the student must submit a thesis based on original research. Ph.D. students holding School of Medicine IBS (Interdisciplinary Biomedical Sciences) Fellowships typically complete the required IBS course requirements during their first two years of graduate study. The available IBS curriculum includes:

IBS Curriculum:

- IBS 7015 – Interdisciplinary Molecular and Cellular Biology: Cr. 7
- IBS 7030 – Functional Genomics and systems Biology: Cr. 2
- IBS 7050 – Biomedical Neurobiology: Cr. 2
- IBS 7090 – Biomedical Immunology: Cr. 2
- IBS 7100 – Biomedical Neuropharmacology: Cr. 2.
- IBS 7110 – Introduction to the Business of Biotechnology: Cr. 3
- IBS 7115 – Special Topics in Biotechnology Commercialization: Cr. 1
- IBS 7120 – Fundamentals of Cancer Biology: Cr. 3.

IBS 7130 – Systems Neuroscience: Cr. 2

IBS 7140 – Fundamentals of Computational Biology: Cr. 3

Candidates for the Ph.D. are expected to conduct original research and prepare a dissertation commensurate with thirty credits of dissertation direction. The research supporting the dissertation generally is suitable for publication in one of the current scientific journals.

The thirty credit dissertation registration requirement is fulfilled by registering for the courses PSL 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. (Spring/summer semester registration is optional).

Assistantships and Research, Physiology

The Department has graduate assistantships and graduate research positions available for a limited number of qualified students. All doctoral students accepted into the program are considered for financial assistance and no application forms are necessary for this purpose. Students on assistantships typically take no more than ten credits in a given semester. Financial support for the training program in Physiology is derived from University fellowships, faculty grants, individual graduate fellowships, and limited cardiovascular traineeships supported by a training grant from the National Institute of Health-National Heart, Lung, and Blood Institute.

All students, whether or not they hold a fellowship or an assistantship, are required to assist the graduate faculty in research and teaching activities as a component of their educational experience. For more complete information on fellowships, students should consult or write the Graduate Officer, Department of Physiology, Wayne State University School of Medicine, Gordon H. Scott Hall of Basic Medical Sciences, 540 East Canfield, Detroit, Michigan 48201.

Physiology Courses (PSL)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-5999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-5999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Individual Research I. Cr. 2-5

Prereq: upper-division undergraduate in good standing as basic science major; or graduate standing in physiology. Direct participation in laboratory research in the physiological sciences under the supervision of a departmental faculty advisor. Introduction to experimental protocol and current related scientific literature. (T)

5020 Individual Research II. Cr. 3

Open only to physiology graduate students. Offered for S and U grades only. Prereq: PSL 5010. Offered for graduate credit only. Continuation of laboratory research in physiology under supervision of departmental faculty: learning experimental protocols and related scientific literature. (W)

5030 Individual Research III. Cr. 3

Open only to physiology graduate students. Offered for S and U grades only. Prereq: PSL 5020. Offered for graduate credit only. Continuation of laboratory research in physiology under supervision of departmental faculty: learning experimental protocols and related scientific literature. (S)

5680 Basic Endocrinology. (BIO 5680) Cr. 3

Prereq: BIO 3200 and written consent of instructor. Basic description of the human endocrine system, the endocrine control of several physiologic processes (growth, development, metabolism and reproduction), and a description of common endocrine disorders. (F)

6010 Physiology of Exercise II. (KIN 6310) (PT 6310) Cr. 3

Prereq: KIN 3570 and written consent of instructor. Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. (F)

6300 Biotechnology: Techniques and Applications. Cr. 2

Open only to science and engineering majors. Prereq: minimum of two years of college-level courses in both biology and chemistry. Various biotechnical methodologies currently used in research and industry; application of these methodologies in scientific inquiries. (F)

6310 Biotechnology: Techniques and Applications Lab. Cr. 2-5

Open only to graduate students. Prereq: PSL 6300. Students choose one of the biotechnology techniques discussed in PSL 6300 and spend the semester in an active research laboratory learning the practice of the technique through hands-on experience. (W)

7010 Basic Graduate Physiology Lecture I. Cr. 4

Prereq: organic chemistry, introductory biology and physics, graduate program enrollment. Introduction to basic human physiology. (F)

7011 Basic Integrative Graduate Physiology I. Cr. 4

Open only to physiology and IBS majors. (F)

7020 Basic Graduate Physiology Laboratory I. Cr. 2

Prereq: enrollment in the graduate program in physiology. Introductory laboratory exercises to measure cell and membrane function; neuronal activity; electrophysiology; and hormonal actions. (F)

7030 Basic Graduate Physiology Lecture II. Cr. 4

Prereq: organic chemistry, introductory physics, biology background; current enrollment in graduate degree program. Functional mechanisms of the human body. (W)

7031 Basic Integrative Graduate Physiology II. Cr. 4

Open only to physiology and IBS majors. (W)

7040 Basic Graduate Physiology Laboratory II. Cr. 2 (Max. 4)

Prereq: enrollment in the graduate program in physiology. Experimental physiology of organ systems. (W)

7060 Current Literature in Physiology. Cr. 1

Open only to physiology graduate students. Students are required to present published papers at least once each semester, and must attend all class meetings. (F,W)

7215 Nanobioscience. (CHE 7215) (CHM 7215) (PHY 7215) Cr. 3

Prereq: first year calculus, general chemistry. Introduction to interdisciplinary research field of nanobioscience, at the interphase of biology, chemistry, and physics; specific properties of nanoscale objects. (F)

7400 Advanced Respiratory Physiology. Cr. 2

Advanced topics in respiratory physiology; guidance in critical reading and discussion of the literature. (B:W)

7550 Advanced Renal Physiology. Cr. 2

Prereq: PSL 7030. A detailed study of the physiological mechanisms promoting homeostasis of the body fluid volumes and ionic composition in the mammal. (B:F)

7600 Advanced Cardiovascular Physiology. Cr. 2

Prereq: PSL 7030. Basic principles of heart dynamics and control techniques in measurement of cardiac function. (F)

7610 Biological Basis of Sleep. Cr. 2

Prereq: PSL 7030. Basic physiology of human sleep; role of sleep in cognitive and physical performance; sleep disorders (such as sleep apnea, narcolepsy). (B:W)

7640 Cell and Molecular Physiology. Cr. 3

Prereq: written consent of instructor; and PSL 7010. Lecture and discussion. Research in atomic force microscopy, molecular structure, exocytosis, insulin signal transduction, glucose transport, estrogen receptors, ion channels, Na, K-ATPase, Na/Ca exchanger, hormonal regulation of ion transport. (B:W)

7660 Neurophysiology. Cr. 3

Prereq: PSL 7010. Anatomy and physiology of the neuron and the mammalian nervous system. Correlations of central nervous system functions and electrophysiology. (B:F)

7680 Endocrinology. Cr. 4

Prereq: PSL 7010. A detailed emphasis on current research. Student participation encouraged; each student required to present a one hour lecture. (W)

7690 Principles and Techniques of Reproductive Biology. Cr. 3

Prereq: some knowledge of biology, genetics, embryology and molecular biology recommended. Principles and techniques in reproduction including endocrinology, gametogenesis, fertilization, implantation, embryogenesis, stem cell determination, pregnancy and parturition. (B:F)

7700 Embryonic Stem Cell Biology. Cr. 3

Prereq: PSL 7690 and written consent of instructor. Methods involved in production and utilization of embryonic stem cells. Lectures supplemented with text, reviews, and recent papers. (B:W)

7710 Disease States and Reproductive Processes. Cr. 1

Open only to reproductive sciences students. Diseases and areas in reproductive medicine where additional research is required. Students accompany clinicians during rounds in hospital and out-patient clinics. (S)

7730 Reproductive Sciences: Teratology. Cr. 3

Principles of the science of birth defects; focus on impact of environmental poisons, medicines, and drugs of abuse on developing germ cells, embryos and fetuses. Roles of pharmacological/toxicological, physiological (maternal, placental, and fetal), genetic and nutritional factors in the teratogenic response are examined. Texts and current readings. (B:F)

7740 Developmental Systems in Reproductive Biology. (PSY 7740) Cr. 3

Theoretical foundations course in development, emphasizing contemporary developmental systems theory and its relevant applications to biology. (W)

7770 Perinatal Biology and Reproduction. Cr. 2

Current areas of interest and research; basic science and clinical perspectives. (W)

7775 Current Research Topics in Reproductive Science. Cr. 1

Lectures covering current topics in reproductive biology, health, and medicine. (F)

7880 Special Problems in Physiology. Cr. 1-8 (Max.8)

Prereq: plan of study. Topics individually arranged with faculty. (T)

7890 Seminar. Cr. 1 (Max. 6)

For graduate students in physiology. Participation in weekly departmental seminars. (F,W)

7910 Molecular Male Reproduction and Chromatin. Cr. 1

Prereq: written consent of instructor. Students write topic-specific essays. (F)

7996 Arranged Research. Cr. 1-15 (Max. 15)

Prereq: plan of study. Graduate level experiences in research techniques. Special research topics in specified areas arranged with individual faculty member. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Open only to graduate students in physiology. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PSL 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PSL 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PSL 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PSL 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PSL 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PSL 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PSL 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Psychiatry and Behavioral Neurosciences

Office: Tolan Park Medical Building, Suite 5-A, 3901 Chrysler Service Drive; 313-577-1808

Chairperson: David R. Rosenberg, M.D.

Graduate Program Director: Jeffrey A. Stanley, Ph.D.

Website (dept.): <http://psychiatry.med.wayne.edu/>

Website (Ph.D. program): <http://tnp.wayne.edu/>

Professors

Cynthia Arfken, Robert Freedman, Matthew P. Galloway, Mark Greenwald, Joseph L. Jacobson, Sandra Jacobson, Donald Kuhn, David R. Rosenberg, Eugene Schoener, Manuel Tancer, Richard Young (Research)

Associate Professors

Julie Wargo Aikins, Deane Aikins, Vaibhav Diwadkar, David Ledgerwood, Steven Ondersma, Jeffrey A. Stanley

Assistant Professors

Michael Butkus (Research), Gabriella Geiszt, Leslie Lundahl, Shane Perrine, Sean Seaman

Clinical Professors

Richard Balon, Elliot Luby (Emeritus)

Clinical Associate Professors

Georgia Michalopoulou, Mary Morreale

Clinical Assistant Professors

Victor Ajluni, Alireza Amirsadri, Diane M. Fischer, Luay Haddad, Elese Hairston, Shuja Haque, Shahid Hussain, Rebecca Klisz-Hulbert, Leonard Lachover, Kathleen Moore, M. Cristina Ramirez, Ashok Shah, Shibany Taormina, Eva Waineo, Jennifer Vinch, Stephen Warnick

VP Faculty

Marie Dewitt, John Dziuba, Bella Schanzer, Nicole Stromberg

Graduate Degrees

DOCTOR OF PHILOSOPHY with a major in Translational Neuroscience

M.D. Program Education

The Department of Psychiatry and Behavioral Neurosciences provides M.D. students with an awareness of psychiatric problems as they are experienced in the practice of medicine. The educational mission of the Department is to teach the knowledge base, skills, and professional attributes in psychiatry and behavioral neurosciences for future physicians to practice competently in any medical specialty.

This Department is active in the teaching of the medical student throughout all four years of training. The core curriculum in psychiatry is taught in the second and third year of medical school and includes:

Year II: Normal development and psychopathology

Year III: Clinical clerkship and didactic learning

Clinical psychiatry rotations are conducted at Detroit Receiving Hospital, Harper University Hospital, Henry Ford Health System, Providence Hospital, Sinai-Grace Hospital, University Psychiatric Centers,

William Beaumont Hospital, and Veterans' Administration Medical Center. These rotation sites provide the student with experiences in a variety of clinical settings, including inpatient, partial hospitalization programs, consultation services, emergency room, and outpatient services. Faculty members also serve as course directors and participate in the teaching of interdisciplinary courses that span the four years of medical school, including clinical medicine (history and communication skills), human sexuality, and behavioral health longitudinal curricula (interpersonal violence, substance use disorders, preventative health and health maintenance).

Translational Neuroscience (Ph.D. Program)

Program Director: Jeffrey A. Stanley, Ph.D.

Office: Tolan Park Medical Building, Suite 5-B, 3901 Chrysler Service Drive

The primary mission of the Translational Neuroscience Program (TNP) is to foster a new generation of neuroscientists trained in interdisciplinary science that focuses on improving the health and care of individuals affected by psychiatric or neurological disorders, or injuries to the nervous system through an understanding of disease mechanisms. The didactic curriculum encompasses an integrated syllabus of basic science, preclinical research, and clinical neurobiology, including cutting-edge neuroimaging technologies. The strength of the program is its interdisciplinary training faculty, which includes leading experts in brain disorders, diseases and injuries, pre-clinical animal research, transgenic and knockout models, substance abuse, neuropharmacological treatments, brain network and computational modeling, and brain development and aging.

The TNP is housed in the Department of Psychiatry & Behavioral Neurosciences, but is comprised of over 40 faculty members from 18 different departments spanning 4 colleges and schools within Wayne State University (WSU). The collaborative and interdisciplinary nature of the TNP program aligns well with the University's mission and strategic plan. Moreover, applications for graduate training in the neurosciences has quadrupled in the past 25 years making neuroscience research one of the most rapidly developing branches of medical research.

The TNP program is fully committed in training basic and clinical neuroscientists who will be driving innovations that impact public health.

Additional information and requests for application material can be obtained by contacting the TNP Graduate Office, Tolan Park Medical Building, Suite 5-B, 3901 Chrysler Service Drive, Detroit, MI 48201; (313) 577-1227; Fax: (313) 577-5900; tnp@med.wayne.edu.

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and satisfaction of requirements of the Graduate Programs of the School of Medicine (see Admission, p. 462). Applicants must have an undergraduate degree including several courses in basic sciences such as biology and chemistry. Three letters of recommendation are required from individuals able to judge the applicant's scientific potential. A one-page statement of purpose for applying in the translational neuroscience program, a Curriculum Vitae (CV) that summarizes academic and research experiences, minimum grade point average of 3.0 (on a 4.0 scale), the Graduate Record Examination (GRE), and an interview with a Graduate Officer or designated representative from the Steering Committee are required. Writing samples including conference abstracts and presentations, or publications, are optional. Foreign students must be proficient in English as determined by satisfactory performance on the standardized TOEFL English proficiency examination. An interview with potential graduate faculty mentor(s) is also desirable.

DEGREE REQUIREMENTS

Students in the doctoral program are required to complete a minimum of ninety credits beyond the baccalaureate degree. Required courses include the following:

ANA 7130 – Neuroanatomy: Cr. 4

BMS 6010 – Responsible Conduct in Biomedical Research: Cr. 1

IBS 7015 – Interdisciplinary Molecular and Cellular Biology: Cr. 7

One of the following two-credit IBS courses

IBS 7030 – Functional Genomics and Systems Biology: Cr. 2

IBS 7050 – Biomedical Neurobiology: Cr. 2

IBS 7090 – Biomedical Immunology: Cr. 2

IBS 7100 – Biomedical Neuropharmacology: Cr. 2

IBS 7130 – Systems Neuroscience:

Structure and Function of the Nervous System: Cr. 2

One of the following courses on statistics

FPH 7150 – Biostatistics I: Cr. 4

FPH 7120 – Biostatistics II: Cr. 3

PSY 7150 – Quantitative Methods in Psychology I: Cr. 4

PSY 7160 – Quantitative Methods in Psychology II: Cr. 4

PYC 7010 – Neurobiology I: Cr. 3)

PYC 7140 – Fundamentals of Neuroimaging: Cr. 3

PYC 7150 – Fundamentals of Neuropsychiatric disorders: Cr. 3

PYC 7890 – Research Seminar: Cr. 1 (Min. 6, Max. 8)

PYC 7990 – Directed Study Cr. 1-6 (Max. 10)

PYC 7996 – Research Problems: Cr. 3(Required: 9)

PYC 7998 – Clinical Neuroscience Rotation Cr. 3 (Max. 9)

PYC 9990 – Pre-Doctoral Candidacy research: Cr. 1-8 (Max. 10)

PYC 9991-9994 – Doctoral Dissertation and Research: Cr. 30 (total)

PYC 9995 – Dissertation Research Maintenance: Cr. 0

Advanced Topic Courses: 12 credits minimum and 24 credits maximum encompassing neuroscience principles and methods, and the applications to nervous system disorders (starts in year 2)

Students are required to seek advice from a graduate advisor on his/her course selection. All course work must be completed according to requirements of the Graduate School (see Academic Regulations, Graduate, p. 32) and the Graduate Programs of the School of Medicine (see Graduate Programs of the School of Medicine, p. 462).

Assistantships, Psychiatry

The Department has graduate assistantships available for a number of qualified students. All students accepted into the graduate program are considered for financial assistance, and no separate application forms are necessary for this purpose.

Additional information and requests for application material can be obtained by contacting the TNP Graduate Office, 2309 Scott Hall, 540 East Canfield, Detroit, Michigan 48201; (313) 577-5949; Fax: (313) 993-4269; lcbrown@med.wayne.edu.

Psychiatry Courses (PYC)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Neurobiology I. Cr. 3

First part of a two-semester in-depth study of nerve cells, their organization into functional circuits and their mediation of normal and aberrant behaviors. (F)

7050 (ANA 7055) Biology of the Eye. (BIO 7055) Cr. 3

Integrated introduction to basic biological structure/function of the eye; causes and clinical treatments of eye-related disorders and diseases. (F)

7140 Fundamentals of Neuroimaging. Cr. 3

Overview of methods: PET, EEG/ERP/TMS, fundamentals of MR, structural MRI, functional MR, MR spectroscopy and DTI. Review of the application of these methods in studying disorders of the nervous system. (W)

7150 Fundamentals of Neuropsychiatric Disorders. Cr. 3

Overview of pathophysiology, clinical manifestations, and treatment of major neuropsychiatric disorders. (F)

7320 MR Imaging of Neurovascular Disease. (BME 7720) Cr. 3

Open only to graduate students (BME, CHE, MSE, ECE, IE). Recent advances in MRI technology applied to human brain vascular diseases. Methods include: 3D anatomical imaging, diffusion tensor imaging, functional brain imaging, perfusion imaging, and susceptibility weighted imaging. (B:F)

7500 Advanced Topics in Neuroscience. Cr. 1-6 (Max. 9)

Open only to Ph.D. students or students in psychiatry M.S. program. Prereq: written consent of instructor. Topics offered each semester in one-credit modules, relevant to ongoing research in the degree program. (T)

7515 Advanced Topics: Imaging, Neurodevelopment and Psychiatric Disorders. Cr. 3

Open only to Ph.D. students. Advanced introduction to imaging neurodevelopment based on anatomical, biochemical and functional studies; focus on abnormal development of psychiatric disorders. (B:W)

7560 (PSY 8560) Models and Methods in Psychopharmacology. Cr. 3

Prereq: PSY 7120 or PSY 8060 or equiv, PSY 3060 or equiv. Psychological and biological bases of psychopharmacology; emphasis on methods, models and theories in basic preclinical research. (B)

7890 Research Seminar. Cr. 1 (Max. 8; min. 6)

Presentations by clinical and basic research staff and by the program's graduate students. (T)

7950 Psychology/Psychiatry Internship. Cr. 3

Offered for S and U grades only. Prereq: completion of graduate coursework in clinical, counseling, or school psychology; completion of 1500 hours of practica. Development of psychotherapy and psychological assessment skills, based on psychological theory and research. Training program is customized for each pre-doctoral intern, based on training needs and career objectives. (T)

7990 Directed Study. Cr. 1-6 (Max. 10)

Independent study under the guidance of an advisor, including complete review of a problem area immediately relevant to basic or clinical neuroscience. (T)

7996 Research Problems. Cr. 3 (Max. 9)

Directed laboratory rotation for graduate students in the translational neuroscience program. (T)

7998 Clinical Neuroscience Rotation. Cr. 3

Prereq: PYC 7150. Neuroscience trainees become familiar with clinical issues in their chosen area of study; transfer of basic science knowledge to clinical application. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (Max. 8)

Preparation in writing of a scholarly proposal and thesis. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PYC 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PYC 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PYC 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PYC 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PYC 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PYC 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PYC 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Radiology

Office: 3L-8, Detroit Receiving Hospital; (132)5-3430

Chairperson: Wilbur L. Smith

Website: <http://www.med.wayne.edu/radiology/>

Professors

E. Mark Haacke, Wilbur L. Smith

Professors (Clinical), Full-Time Affiliate

Manuel Brown, Karvelis, Kastytis, Peter J. Littrup, Thomas Mangner, Suresh Patel, Thomas L. Slovis, Marnix Vanholsbeeck, Imad Zak, J. Michael Zerlin

Clinical Professors

Manuel Brown, Lawrence Davis, Kastytis Karvelis, Suresh Patel, Ali Shirkhoda, Marnix VanHolsbeeck, Alkis Zingas

Associate Professors

Norman Cheng, Jiani Hu

Associate Professors, Full-Time Affiliate

Cheryl Grigorian, Thomas J. Mangner, Otto Muzik, Rajinder Sharma, Hamid Soltanian-Zadeh

Associate Professor (Clinical), Full-Time Affiliate

Jerry Glowniak, Rajan Jain, Faysal Saksouk

Clinical Associate Professors

David Bloom, Joseph Craig, Kathleen A. McCarroll, Duane Mezwa, Murray Rebner, Rojanandham Samudrala, Biren Shah, Kurt Tech

Assistant Professor

Yu-Chung (Norman) Cheng, Ajay Kumar

Assistant Professors (Clinical), Full-Time Affiliate

Maysoon Al-Hihi, Deniz Altinok, Rimma Aronov Pulak Chakraborty, Jeffrey Critchfield, Subhash Chander, Jeffrey Critchfield, Shahida Danier, Daniel Eggleston, Adnan Fateh, Gary Galens, Jerry Glowniak, Cheryl Grigorian, Ronela Hanson, Monte Harvill, Gerald Hillman, Samuel C. Johnson, Aparna Joshi, Richard N. Joyrich, Thomas A. Matthys, Peter R. Miller, Yogesh S. Mody, Gregory Moore, Vidya Pai, William Powell, Karen Rosenspire, Sheena Saleem, Prasantha Sarcar, Swati Shah-Mody, Mahendra Shah, Yash Shah, Eric Spickler, Victoria Swegles, Wasseem Ullah, Daya Vora, Gregg Warren, Daniel J. Walz

Clinical Assistant Professors

Khaled Abdallah, Anthony Alcantara, Hussein Aoun, Saleem Azad, Stephen Bai, Helena Balon, Kathleen Barry, Kostaki Bis, John Bonnett, Mark Burnstein, Charles Cash III, Donald Conn, Daniel L. Croteau, Louan Cuzzort, James Denier, Purushottam Dixit, Alberto Farah, George Figacz, John Finger, Gina Fundaro, Aaron Gibson, Nancy Gregory, Martin L. Gross, Sharon Helmer, Sherif Ibrahim, Jacqueline Huynh, Roger Kakos, Prasada Kandula, Ivan Katty, Chris Kazmierczak, Hugh Kerr, Richard Krikorian, Joe Koza, Ajay Kumar, Alfredo Lazo, Dale Lee, Danny Ma, Paolo Marciano, James Mastromatteo, Ronald Meade, Mishal Mendiratta-Lala, Vjekoslav Mikelic, Jeffrey Nadig, Mitchell Pace, Christine Park, Ramesh Rao, Rob Reed, William Romano, Carol Roseland, David Rossow, Sophia Roumanis, James E. Selis, Katharine Scharer, Gassan Shahin, Kanchi Sherpa, Anil Shetty, Daniel Siegal, Steven Soliman, Ronald Sparschu, Scott Sturza, Brent Thompson, Rennard Tucker, Glenn Webster, Brent Wolf, Robert Weinfeld, Pierre A. Zayat, Conor Zuk

Clinical Instructors

Louis Furicchia, S Rojanandham Samudrala

Adjunct Assistant Professor

Christopher Green, Anil Shetty

M.D. program instruction by this department is directed toward a total integration of the fundamentals of radiology with the basic sciences, particularly anatomy, physiology, chemistry and pathology. Radiologic instruction is correlated at the M.D. Year I and II levels with other departments. Year III-level instruction is clinically oriented and numerous radiologic electives are offered in Year IV. Various diagnostic imaging techniques such as conventional radiographic procedures; radionuclide imaging, both static and dynamic; ultrasonography; computerized tomography, MR; and digital subtraction radiography are included in both the undergraduate and graduate level of instruction. The pre-clinical program has been designed to orient the anatomy student to normal roentgen anatomy and also to relate this to aspects of physical diagnosis. There is further coordination in anatomy and physiology to emphasize function and in turn relate this to aspects of history taking. In the fields of physiology and physiologic chemistry, radioactive isotope techniques are presented relating particularly to endocrine functions, renal functions and blood formation. Correlated teaching is also carried in gross pathology.

In the clinical years, teaching of diagnostic radiology, radiation therapy, nuclear radiology, computerized tomography, MRI, and ultrasonography is related to total patient care and such teaching is, therefore, predominantly correlated with other clinical departments. The clinical aspects of diagnostic radiology, radiation therapy and radionuclide procedures and techniques are taught during clerkship and in the clinics and various inter-departmental and intra-departmental conferences.

Surgery

Office: 6th Floor, University Health Center; 313-577-5013

Chairperson: Donald Weaver

Website: www.wsusurgery.com

Professors

Gregory Auner, Frank Baciewicz, Marc Basson, David L. Bouwman, Arthur Carlin, Lawrence Diebel, Scott Dulchavsky, Scott Gruber, Harriette Horst, Changhe Huang, Michael D. Klein, Mary Ann Kosir, Anna M. Ledgerwood, Charles E. Lucas, Gamal Mostafa, David S. Nathanson, J. Edson Pontes, Daniel J. Reddy, Charles Shanley, Alexander Shepard, Allen Silbergleit, Yvan J. Silva, Roberta Sonnino, Christopher P. Steffes, Larry W. Stephenson, Choichi Sugawa, James Tyburski, Henry Walters, Donald W. Weaver, Robert F. Wilson

Clinical Professors

Harry Anderson, Agustin Arbulu, O. William Brown, Laurence Y. Cheung, John Faith, Mehdi Hakimi, Andris Kazmers, Mark Mattos Vijay Mittal, Kevin D. Nolan, Jeffrey Rubbin, Walter Whitehouse, Michael Wood

Associate Professors

Marwan S. Abouljoud, Ramesh Batchu, Mary Brandt, Michelle Brusatori, David Edelman, David H. Gorski, Eti Gursel, Zane Hammoud, M. Salik Jahania, Dean Kim, Steven Kim, Judith Lin, Jeffrey Morgan, Joe Patton, Craig Reickert, Arlene Rozzelle, Ilan Rubinfeld, Steven Tennenberg,

Clinical Associate Professors

Wallace Arneson, Ingida Asfaw, Joseph S. Bassett, Richard A. Berg, Stephen Bradley, Joseph Buck, Michael Busuito, Fauzia Butt, Donald Ditmars, Jeffrey Falk, Thomas Flake, M.M. Gazayerli, Darla Granger, J. William Gross, Georges Haddad, Khatchadour Hamamdjian, Steven Hendrick, Keith Hinshaw, Hubert Huebl, Michael Jacobs, Ali Kafi, Joseph Lelli, Jr., Larry Lloyd, Gaetano Paone, Eduardo Phillips, Richard Reynolds, Krishna Sawhney, Thomas Siegel, Narendra Tyagi

Assistant Professors

Faisal Almufarrej, Tariq Awan, Alfred Baylor, Keiva L. Bland, Robert Brewer, Andrew Chen, Lydia Choi, Marc Cullen, Heather Dolman, Anthony J. Falvo, Ruben Gomez, Raquel Gonzalez, Tolga Gursel, Laszlo Hoesel, Shakir Hussein, Masih Kader, Rachel Kast, Scott Laker, Scott Langenburg, Chong Suh Lee, Michael S. Malian, Vinod Narra, Guillermina Nava, Walter A. Salwen, Christina Shanti, Aamir Siddiqui, Cecilia Speyer, Paul Stockman, Alexander Stoffan, Eric J. Szilagy, Samantha Tarras, John Webber, Michael White

Clinical Assistant Professors

Majd Aburabia, King Ang, Dimitrios Apostolou, Daniel Bacal, Roberta Barbosa, John Barnwell, Pamela Benitez, Richard Berri, Carl Bergen, Srinivas Bhandarkar, Dione Blyden, Norman Bolz, Robert Boorstein, Tamer Boules, Paul G. Bove, Luis Camero, Hyun Chang, Kassem Charara, Michael Charboneau, Robert Cleary, Reza Dabir, Vigen B. Darian, Jason Denny, Linda M. DuBay, Elango Edhayan, John Eggenberger, Richard Flanagan, Lisa Flynn, Robert A. Forte, Maurice Frankel, Paul Friedman, Doreen Ganos, Jeffrey Genaw, Gary Goodman, Yousef Goriel, Mune Gowda, Mohamad Hakim, Brian Halloran, Jimmy Haouilou, Michelle Hardaway, Abdelkader Hawasli, Mark Herman, Scott Henry, Michael Heuton, Joseph Hildebrand, Verne Hoshal, Herman Houin, John Hramiec, Jean A. Jaffke-Whitney, Peter Janevski, Pamela Johnson, Robert P. Jury, Loay Kabbani, Seema Kapur, Richard D. Keidan, Nicole Kennedy, William Kestenber, Manish Khare, Ramachandra Kolachalam, Peter Kowynia, Kurt Kralovich, Edward Kreske, David Kwon, Yash Lakra, Todd Lavery, JoAnne Levitan, Michael Lodish, W. Graham Long, Peter Lopez, David R. Lorelli, James Lulek, Lauren Malinzak, Jeffery McFadden, Kellie McFarlin, Bruce McIntosh, Alasdair McKendrick, Ahem Meguid, Mehul Mehta, Michael Meininger, Mehran Mirkazemi, Kenneth Monquin, Shreepad Naik,

Surya Nalamati, Andre Nunn, Timothy J. Nypaver, Erin O'Connor Field, William F. Oppat, Paraskevi Orfanou, Janak Parikh, Ralph Pearlman, Richard Pomerantz, Shivana Prakash, Mary Purtill, Kumara Rama, Pritham Reddy, Steven Rimar, Yevgeniy Rits, Marc P. Sakwa, Michael J. Schenden, Donn Schroder, Susan Seman, Kenneth Shaheen, Chinmaya Shelgikar, Sumet Silapaswam, Robert Slater, Jerry Stassinopoulos, Gary Talpos, Michael Taylor, Allen Telmos, Donna Tepper, Edward Treisman, You-Wen Tsai, Fuad Turfah, Maciej Uzieblo, Satish C. Vyas, James Wagner, Bruce Washington, Mitchell Weaver, Shawn Webb, Matthew Weiner, Cheryl A. Wesen, James Whitten, Steven M. Wolf, Ann Woodward

Clinical Instructors

Ronald A. Rusko, Richard Singer

Adjunct Associate Professor

Steven Salley

Adjunct Assistant Professors

Lisa Chism, Brady King, Howard Matthew, Olena Palyvoda, Abhilash Pandya, Luke Reisner

The main objectives of the Department of Surgery are to relate the principles of the basic sciences to clinical practice and to impart the details of patient care in light of modern physiological and pharmacological knowledge. Emphasis is on understanding of the deranged metabolic processes occasioned by surgically treatable disease and physical trauma, the translation of these into recognizable symptoms and signs and the rational correlation of therapy with these basic disturbances. Surgery is taught as only one aspect of patient care and emphasis is placed on the relationship of the surgeon to other personnel who form part of the health care team. As part of their education, students are part of the resident care team and are assigned patients for study.

With the unusually broad spectrum of diseases treatable by surgical methods present in the Wayne State University affiliated hospitals, students have contact with oncological, vascular and gastrointestinal problems. Students obtain a wide clinical experience at Detroit Receiving and Harper University Hospitals. During their third year, they may also select to rotate to one of the other affiliated hospitals such as Henry Ford Hospital, Oakwood Hospital, St. Joseph Mercy Hospital, St. John's Hospital and Medical Center, VA Administration Hospital and William Beaumont Hospital.

Students are encouraged to participate in experimental and clinical research programs with staff supervision during their senior elective periods and summer vacations. The program is designed to provide the student with the opportunity to develop career interests in surgery at an early stage in their education.

Urology

Office: 4201 St. Antoine, UHC-7C Detroit, Michigan 48201;
(313) 577-5222

Chairperson: Michael L. Cher

Professors

Michael L. Cher, J. Edson Pontes, Isaac J. Powell, George Steinhardt

Associate Professors

Daniel R. Bonfi, Sreenivasa Chinni

Assistant Professors

Jeffrey A. Triest, Steven Lucas, Nivedita Dhar

Adjunct Clinical Faculty

Muzammil Ahmed, Theodore Barber, Robert Dimitriou, Rene Frontera, Ramarao Kaza, Vijay Kotha, George Lightbourn, Stephen Liroff, William Nutting, Brian Roelof, Richard Sarle, Edward Schervish, Dinesh Telang

M.D. program instruction in the field of urology begins in the M.D. Year I with the physical diagnosis course. Students receive lecture and laboratory instruction on the male genitourinary physical examination. Instruction continues in Year III with a series of lectures. Students receive these lectures as part of their general surgery curriculum. These lectures incorporate the fundamental concepts of the disease processes which affect the genito-urinary system. The lectures attempt to integrate the physiologic and anatomic mechanisms of urological disorders, their clinical presentations, and contemporary treatment strategies and outcomes. Clinical electives in urology are offered to students in their third/junior and fourth/senior years of medical school training. The electives are arranged in four week blocks. Rotations on the urology service can be tailored to the individual student. Students may also spend time in the various office clinics within the Department of Urology to broaden their experience.

College of Nursing

Dean: Laurie Lauzon Clabo

Foreword to the College of Nursing

The Wayne State University College of Nursing is regionally, nationally, and internationally recognized for educating graduate and undergraduate students as practitioners and scholars in the nursing profession. The College is committed to research and scholarly activity that contributes to the discipline of nursing and excels in the development, application, and dissemination of such knowledge to promote human health and well-being.

Nursing is an academic discipline and a profession. As a discipline, nursing develops knowledge concerning human beings, their care, health, and the environment. Concepts derived from such research order the discipline and profession of nursing as well as give identity to nursing practice and direct inquiry and theory development. As a profession, nursing creatively uses knowledge in response to the health care needs of the local and global society. Both of these functions are enhanced by the scholarly environment of the University and its multicultural urban setting as a context for professional nursing practice.

Consistent with this view of the nursing profession, the College supports the importance of liberal arts, humanities, and the sciences in nursing education. The faculty believes that programs designed for the preparation of nurses must be composed of the intellectual, social, cultural, and technical components of liberal and professional education that are available to students within an institution of higher learning. The faculty also affirms the necessity and value of clinical practice within a professional nursing program. Experience within a variety of clinical and vulnerable populations is one of the primary modes for the development of nursing practice competencies.

Learners from diverse backgrounds enter the College to begin or continue their education and thereby add to the richness of this learning environment. The faculty supports the right of students to question, challenge and debate within the context of inquiry as an essential ingredient to their development. Continuing evaluation on the part of the students and the faculty is essential to advancing nursing knowledge and sustaining the integrity of the program.

The faculty of the College of Nursing, as members of the academic community, recognizes that its professional functions extend beyond contributions to formal teaching. Research, practice, and community service are important expectations of the faculty. The faculty views as essential, academic freedom, shared governance, opportunity to develop knowledge, and responsibility to incorporate new knowledge into teaching and nursing practice. The faculty assumes responsibility for enhancing the image of the College of Nursing and the University locally, nationally, and internationally through various avenues including research, scholarship, practice, consultation, and participatory decision-making.

Accreditation

The baccalaureate program is approved by the Michigan State Board of Nursing, and graduates are admitted to the licensing examination for professional nurses in the State of Michigan. The baccalaureate, master's, and Doctor of Nursing Practice (DNP) programs of the College are accredited by the Commission on Collegiate Nursing Education (CCNE). The graduate nurse-midwife major is also accredited by the Accreditation Commission for Midwifery Education (ACME), (formerly ACNM Division of Accreditation).

Graduate Degrees

MASTER OF SCIENCE in Nursing
with a clinical and nonclinical major in:

Adult-Gerontology Nurse Practitioner- Acute Care (on moratorium)
Adult-Gerontology Nurse Practitioner- Primary Care (on moratorium)
Advanced Public Health Nursing (nonclinical)
Neonatal Nurse Practitioner
Nurse Midwife
Pediatric Nurse Practitioner- Primary Care
Pediatric Nurse Practitioner- Acute Care
Psychiatric Mental Health Nurse Practitioner
Women's Health Nurse Practitioner (on moratorium)

GRADUATE CERTIFICATE in Complementary Therapies in Healthcare (on moratorium)

GRADUATE CERTIFICATE in Nurse-Midwifery

GRADUATE CERTIFICATE in Nursing Education

GRADUATE CERTIFICATE in Pediatric Acute Care Nursing

GRADUATE CERTIFICATE in Pediatric Primary Care Nursing

GRADUATE CERTIFICATE in Psychiatric Mental Health Nurse Practitioner (on moratorium)

GRADUATE CERTIFICATE in Transcultural Nursing (on moratorium)

GRADUATE CERTIFICATE in Women's Health Nursing (on moratorium)

DOCTOR OF NURSING PRACTICE

with a clinical major in

Adult-Gerontology Nurse Practitioner- Acute Care
Adult-Gerontology Nurse Practitioner- Primary Care
Family Nurse Practitioner
Neonatal Nurse Practitioner
Nurse Midwife
Pediatric Nurse Practitioner- Primary Care
Pediatric Nurse Practitioner- Acute Care
Psychiatric Mental Health Nurse Practitioner
Women's Health Nurse Practitioner (on moratorium)

DOCTOR OF PHILOSOPHY in Nursing

DOCTORAL DEGREES (either of the above) with a dual title in Infant Mental Health

Administration and Faculty of the College

Dean: Laurie Lauzon Clabo

Associate Dean, Academic and Clinical Affairs:

Ramona Benkert

Associate Dean, Research and Director of the Office for Health Research: April Vallerand

Assistant Dean, Adult Health: Janet Harden

Director of Doctoral and Post Doctoral Studies:

April Vallerand

Assistant Dean, Office of Student Affairs: Vacant

Director, Business Officer: Shelley Clifton

Professors

Nancy Artinian (Emeritus), Margaret Campbell (research), Laurie Lauzon Clabo, Judith Floyd (Emeritus), Karen Kavanagh, Helene Krouse, Barbara Pieper, Virginia Rice (Emeritus), Thomas Templin (research), April Hazard Vallerand, Hossein Yarandi

Associate Professors

Ramona Benkert, Judith Fry-McComish (Emeritus), Nancy George (clinical), Dawn Hameister (Emeritus), Janet Harden (clinical), Patricia Jarosz, Rosalind Peters, Debra Schutte, Deborah Walker, Feleta Wilson (Fulbright Scholar)

Assistant Professors

Katherine Balint, (clinical), Cynthia Bell, Joan Bickes (clinical), Olubunmi Daramola, (clinical), Margaret Falahee (clinical), Belinda Fish (clinical), Mary Franklin (clinical), Wanda Gipson-Scipio (clinical), Carmen Giurgescu, Carolyn Herrington (clinical), Zorica Kauric-Klein (clinical), Linda Lewin, Mary Anne McCoy (clinical), Janean Monahan (clinical), Leanne Nantais-Smith (clinical), Sandra Oliver-McNeil (clinical), Janna Roop (clinical), Umeika Stephens (clinical), Nutrena Tate (clinical)

Clinical Instructors

JoAnne Ashare, Jana Ayres, Heather Bartlett, Hedi Bednarz, Suzanne Billingsley, Darlene Blair, Lynette Carroll, Jessica Diver, Debra Eastman, Wanda Edwards, Julia Farner, Anthony Harris, Nancy Hauff, MaryLinda Hoes, Vicki Ineson, Markia Jones, Lauren Kelm, Kathryn Keves-Foster, Kathleen Kowalewski, Sarah LeRoy, Cyntera McNeill, Anne Michon, Margie Miller, Michael Mooney, Teofanes Natarvio, Christine Newman, Karen Olsen, Jessica Pastor, Evelyn Renke, Caroline Rich, Kimberly Shmina, Chanta Stanley, Joan Visger, Tara Walker, Barbara Williams,

Directory for the College of Nursing

DEAN:

112 Cohn; 313-577-4104

OFFICE OF ACADEMIC AFFAIRS:

200 Cohn; 313-577-4138

OFFICE OF STUDENT AFFAIRS:

10 Cohn; 313-577-4082; 888-837-0847

OFFICE FOR HEALTH RESEARCH:

315 Cohn; 313-577-4134

Website: <http://www.nursing.wayne.edu>

Email: nursinginfo@wayne.edu

MAILING ADDRESS FOR ALL OFFICES:

College of Nursing
Wayne State University,
5557 Cass Avenue
Detroit, Michigan 48202

Nursing (M.S.N. Program)

Admission Requirements

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Additionally, students must satisfy the following criteria mandated by the College:

1. The applicant must have completed a National League for Nursing (NLN) or Commission on Collegiate Nursing Education (CCNE) accredited baccalaureate program in nursing with a grade point average (g.p.a.) of 3.0 or above in the upper division course work. A qualified admission may be authorized if an applicant's g.p.a. is between 2.80 and 2.99 and there is substantial evidence of extra-scholastic qualifications of such merit as to warrant special consideration.
2. Verification of professional competence as documented by three references.
3. Possession of a current Michigan Registered Nurse Licensure. All applicants educated outside the U.S. must be certified by the Commission on Graduates of Foreign Nursing Schools (CGFNS). Contact CGFNS, 3600 Market St., Philadelphia PA 19104-2651 or <http://www.cgfns.org> to request a certification application, or call: 215-222-8454. Verification of a student's CGFNS certification must be forwarded to the State of Michigan Board of Nursing by the CGFNS in order to take the RN licensure examination.
4. A personal statement of goals for graduate study.
5. An interview with a faculty member may be requested.

There may be additional requirements in each of the specialty clinical major areas. Please refer to the major program and consult with a clinical specialty coordinator for specific requirements.

Application: All new applicants must submit the Wayne State University Application for Graduate Admission. Applications are available at: <http://www.gradadmissions.wayne.edu>. Applications, including all supporting documentation, must be received in the appropriate offices by the posted deadline dates. Deadline dates for submission of application materials vary by semester (please refer to the College of Nursing webpage for more information, nursing.wayne.edu).

READMISSION

The master's student who withdraws from the program in good standing for one or more years should contact their academic advisor and the Office of Student Affairs one semester prior to the semester for which re-enrollment is desired. Following a review by the M.S.N. Committee and the Office for Academic and Clinical Affairs, the student will be informed of the steps needed to qualify for readmission.

Revalidation of Credit: The College of Nursing reserves the right to revalidate all credits in the clinical nursing sequence which are over three years old or any other credits earned at Wayne State University which are between six and ten years old. Additional credits for degree completion may be required. Such authority rests with the M.S.N. Committee and the Associate Dean of Academic and Clinical Affairs.

R.N. — M.S.N. Program

(An admissions moratorium is currently in effect for this program.)

The RN to M.S.N. Completion Program combines baccalaureate and master's degree programs for academically-talented nurses. It consists of two separate and distinct components: the B.S.N. component and the M.S.N. component. Upon completion of the B.S.N. program students may apply fifteen graduate credits toward the M.S.N.

degree. Students must apply to Graduate Admissions and meet the requirements for admission as listed under Admission, Graduate School, p. 17. The Master's of Science in Nursing can be earned after an additional twenty-one to thirty-four credits (course requirements vary by area of study) are completed. Requirements for the B.S.N. degree are listed in the Wayne State University Undergraduate Bulletin.

Admission: (An admissions moratorium is currently in effect for this program.) Students are admitted to this program through the regular undergraduate admission procedures, as set forth in the Wayne State University Undergraduate Bulletin. Students considering a M.S.N. program should contact the Office of Student Affairs at (313) 577-4082 prior to planning your studies. Additionally, students must satisfy the following criteria required by the College:

1. Completion of College of Nursing Undergraduate application initially and the Graduate Application during last year of undergraduate study.
2. Completion of an associate degree or diploma in nursing with a grade point average (g.p.a.) of 3.0 or above.
3. Current registered nurse licensure in Michigan.
4. Applicants pursuing the M.S.N. degree must meet the admission requirements of the Graduate School, see Admission, Graduate School, p. 17. Students are required to have a grade point average of 3.0 or above at the time of application to the Graduate School.
5. Students are requested to have a *Plan of Work* to pursue a master's degree.

Master's Degree Requirements

Candidates for the Master of Science in Nursing (M.S.N.) must complete thirty-eight to fifty-three credits of study. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively. Credits must be normally distributed as follows:

- Clinical or Practicum Nursing Sequence: Cr. 18-24
- Supporting Courses: Cr. 0-11
- Master's Core and Research Courses: Cr. 13

All M.S.N. programs involve some particular major as enumerated in the list of College degrees under Graduate Degrees, p. 516. Majors currently available to satisfy these requirements are detailed below. Supporting courses or cognates, which are clinically specific, are predetermined by selection of the clinical (or non-clinical) nursing sequence and will be found as part of the major areas of study. Students should inquire about possible additional offerings. All programs are subject to periodic revision.

All M.S.N. students must elect a series of courses that will prepare him/her to be competent in the utilization of research findings in practice. To develop these skills, the student completes courses in evidence-based nursing and/or biostatistics and epidemiology.

Plan of Work: With the approval of the advisor, the student and advisor develop and file a *Plan of Work* prior to completion of twelve graduate credits at Wayne State University. A student must have a minimum 3.0 grade point average in order to have a *Plan of Work* accepted by the Graduate Officer. Each *Plan* must include the course requirements for the clinical (and non-clinical) nursing sequence and intended degree. It is the responsibility of the student to meet with his/her advisor to file any changes in the *Plan of Work*.

Time Limitations: Students have six years to complete requirements. The six-year limit begins from the end of the semester during which the student has taken course work applicable toward meeting the requirements of the degree; this may occur before the student is regularly admitted to the major.

M.S.N. Major: Adult-Gerontology Nurse Practitioner Acute Care

(Minimum of forty-two credits required)

(An admissions moratorium is currently in effect for this program.)

The Master of Science in Nursing degree with a major in Adult-Gerontology Nurse Practitioner Acute Care (AGNP-AC) prepares the nurse for advanced practice in the care of physically ill adults. Emphasis is on adults with existing and/or potential physiological alterations and their concomitant developmental and psychosocial needs. Clinical practicum sites are individualized based on the student's identified goals and area of clinical interest. The curriculum develops the advanced practice nurse's roles of practitioner, educator, and clinical scholar through education in rigorous and consistent diagnostic reasoning and theory-based practice. The analysis, critique, and utilization of nursing and biopsychosocial theory and constructs are also reviewed. Graduates are eligible to take the American Nurses Credentialing Center (ANCC) Acute Care Nurse Practitioner certification examination.

M.S.N. Adult-Gerontology Nurse Practitioner Acute Care (Required Courses)

Master's Core Courses: 13 credits

- NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
- NUR 7015 – Research for Evidence-Based Practice I: Cr. 4
- NUR 7018 – Research for Evidence-Based Practice II: Cr. 3
- NUR 7105 – Theoretical Foundations for Nursing: Cr. 3

Clinical Course Sequence: 18 Credits

- NUR 7130 – APN: Oncology, Mental Health, and Lifestyle Change: Cr. 6
- NUR 7140 – APN: Mgt. of Cardiopulmonary and Renal Problems: Cr. 6
- NUR 7370 – APN: Mgt. of Neurological, Endocrine and Musculo-Skeletal Problems: Cr. 6

Supporting Courses: 11 Credits

- NUR 7030 – Advanced Nursing Assessment: Cr. 4
- NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
- NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3

M.S.N. Major: Adult-Gerontology Nurse Practitioner Primary Care

(Minimum of forty-eight credits required)

(An admissions moratorium is currently in effect for this program.)

The Master of Science in Nursing degree with a major in Adult-Gerontology Nurse Practitioner Primary Care (AGNP-PC) prepares the nurse for advanced practice in a primary care setting. The focus of the clinical sequence is on the adult and adolescent client and his/her response to actual or potential health care needs. Primary care includes the assumption of accessible, accountable, comprehensive, coordinated first-contact care, as well as longitudinal management. Opportunity is provided to study the theoretical foundation of nursing practice with the development of practice models of primary care. Advanced assessment and diagnostic reasoning are taught as the basis for nursing management. The study and practice of gerontological nursing are integrated in the clinical sequence. Emphasis is placed on the development of clinical judgment in health promotion as well as in the nursing management of acute and chronic health problems. Clinical practicum is implemented in a variety of settings, including an autonomous primary care nursing center. Graduates are eligible to sit for the Adult Primary Care Nurse Practitioner exam through the American Nurses Credentialing Center (ANCC) or the American Academy of Nurse Practitioners (AANP).

M.S.N. Adult-Gerontology Nurse Practitioner Primary Care (Required Courses)

Master's Core Courses: 13 Credits

NUR 6510 – Health Economics, Policy, and Professional Issues for APNs: Cr. 3
NUR 7015 – Research for Evidence-Based Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Nursing: Cr. 3

Clinical Course Sequence: 21 Credits

NUR 7155 – Primary Prevention Strategies in Primary Care: Cr. 7
NUR 7165 – Clinical Decision Making in Primary Care: Cr. 7
NUR 7175 – Primary Care Management and Evaluation: Cr. 7

Supporting Courses: 11 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3

M.S.N. Major: Advanced Public Health Nursing

(Minimum of thirty-eight credits required)

Admission: see above under Admission Requirements, p. 517.

The Master of Science in Nursing degree in Advanced Public Health Nursing (APHN) prepares nurses for advanced care of populations and communities. The APHN promotes the health and well-being of populations and communities. Improving the health of populations and communities is addressed through community assessment, program planning and implementation, leadership strategies, health policy development, and program evaluation. Community partnerships and collaborations are emphasized throughout the curriculum. The goal of this program is to prepare nurses who meet the APHN core competencies in education, practice, leadership, and research. The program sees the APHN as the voice for public health nursing. Graduates are eligible to seek American Nurses Credentialing Center (ANCC) Advanced Public Health Nursing board certification through portfolio assessment. Certification through portfolio is a new assessment methodology; No exam is required.

M.S.N. Advanced Public Health Nursing (Required Courses)

Master's Core Courses: 13 Credits

NUR 7015 – Research for Evidence-Based Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Nursing: Cr. 3
NUR 7222 – Leadership in Health Policy, Ethics and Change: Cr. 3

Practicum Course Sequence: 18 Credits

NUR 7025 – Community-Based Participatory Research: Cr. 3
NUR 7040 – Comprehensive Community Assessment: Cr. 5
NUR 7055 – Health Promotion and Prevention with Diverse Populations: Cr. 5
NUR 7065 – Program Planning, Quality Improvement and Evaluation Residency: Cr. 5

Supporting Courses: 13 Credits

FPH 7015 – Biostatistics I: Cr. 4
FPH 7240 – Epidemiology: Cr. 3

M.S.N. Major: Neonatal Nurse Practitioner

(Minimum of forty-seven credits required)

Admission: see above under Admission Requirements, p. 517.

The Master of Science in Nursing degree with a major in Neonatal Nurse Practitioner (NNP) prepares nurses for advanced practice in the care of high risk neonates. The curriculum combines both broad foundational knowledge essential for the care of neonates as a vulnerable population, as well as specialty knowledge in high-risk neonatal care. Attention is given to health promotion, prevention of disease and disability, disease process, clinical management, and family-centered care. The goal of this innovative program is to prepare advanced practice nurses who will promote the health and development of neonates as individuals and as population groups encountering changing healthcare systems within urban and global environments. Three-thousand hours of level three neonatal intensive care unit (NICU) work experience is required for admission. Two years of Level III NICU experience is required prior to start of clinical courses. Upon program completion, students are eligible to take a certification examination through the National Certification Corporation (NCC).

M.S.N. Neonatal Nurse Practitioner (Required Courses)

Master's Core Courses: 13 Credits

NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
NUR 7015 – Research for Evidence-Based Adv. Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Adv. Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Advanced Practice: Cr. 3

Clinical Course Sequence: 24 Credits

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 8
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Supporting Courses: 4-10 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7200 – Advanced Neonatal Pharmacology: Cr. 3
NUR 7203 – Adv. Neonatal Physiology & Pathophysiology: Cr. 3

M.S.N. Major: Nurse-Midwifery

(Minimum of forty-eight credits required)

Admission: see above under Admission Requirements, p. 517.

The Master of Science in Nursing degree with a major in Nurse-Midwifery (NM) prepares nurses for advanced practice in the care of women and newborns. The CNM specialty curriculum combines both broad foundational knowledge essential for the care of women and newborns as vulnerable populations and specialty knowledge in women's health, newborn care and nurse-midwifery. Attention is given to health promotion, prevention of disease, and disability. The goal of this innovative program is to prepare advanced practice nurse midwives who will promote the health and development of women and newborns as individuals and as population groups encountering changing healthcare systems within urban and global environments. Upon program completion, nurse-midwifery students take the Accreditation Commission for Midwifery Education (ACME) (formerly ACNM Division of Accreditation) examination.

M.S.N. Nurse-Midwifery (Required Courses)

Master's Core Courses: 13 Credits

NUR 7015 – Research for Evidence-Based Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for: Cr. 3
NUR 7222 – Leadership in Health Policy, Ethics and Change: Cr. 3

Clinical Course Sequence: 24 Credits

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 8
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Supporting Courses: 11 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3

M.S.N. Major: Pediatric Nurse Practitioner-Acute Care

(Minimum of forty-eight credits required)

Admission: see above under Admission Requirements, p. 517.

The Master of Science in Nursing with a Pediatric Nurse Practitioner – Acute Care specialty prepares nurses for advanced practice in the care of acutely and critically ill children and adolescents. The goal of this innovative program is to prepare advanced practice nurses who will promote the health and development of children and adolescents as individuals and as population groups encountering changing healthcare systems within urban and global environments. Graduates of the PNP-AC program are prepared to provide expert clinical care to meet the specialized physiological and psychological needs of children and adolescents with complex acute, critical, and chronic health conditions and/or urgent, emergent, and life-threatening conditions. The curriculum combines both broad foundational knowledge essential for the care of children as a vulnerable population, as well as specialty knowledge in pediatrics. Attention is given to health promotion, prevention of disease and disability, disease process, treatment, clinical management, and family-centered care provided in a variety of acute and critical care settings including hospitals, intensive care units, emergency departments, and clinics. Upon program completion, students are eligible to take a certification examination through the Pediatric Nursing Certification Board (PNCB).

M.S.N. Pediatric Nurse Practitioner-Acute Care *(Required Courses)*

Master's Core Courses: 13 Credits

NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
NUR 7015 – Research for Evidence-Based Adv. Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Adv. Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Advanced Practice: Cr. 3

Clinical Course Sequence: 24 Credits

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 8
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Supporting Courses: 11 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7207 – Advanced Pediatric Pharmacology: Cr. 3

M.S.N. Major: Pediatric Nurse Practitioner-Primary Care

(Minimum of forty-eight credits required)

Admission: see above under Admission Requirements, p. 517.

The Master of Science in Nursing with a Pediatric Nurse Practitioner – Primary Care specialty prepares nurses for advanced practice in the care of children and adolescents. The goal of this innovative program is to prepare advanced practice nurses who will promote the health and development of children and adolescents as individuals and as population groups encountering changing healthcare systems within urban and global environments. Graduates of the PNP-PC program are prepared to provide pediatric primary healthcare includ-

ing health maintenance, anticipatory guidance, well-child examinations, developmental screening, and diagnosing and managing common and complex health/illness conditions. The curriculum combines both broad foundational knowledge essential for the care of children as a vulnerable population, as well as specialty knowledge in pediatrics. Attention is given to health promotion, prevention of disease and disability, treatment, clinical management, and family-centered care in a variety of settings including primary care clinics, specialty clinics, and community environments. Upon program completion, students are eligible to take a certification examination through the Pediatric Nursing Certification Board (PNCB).

M.S.N. Pediatric Nurse Practitioner-Primary Care *(Required Courses)*

Master's Core Courses: 13 Credits

NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
NUR 7015 – Research for Evidence-Based Adv. Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Adv. Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Advanced Practice: Cr. 3

Clinical Course Sequence: 24 Credits

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 8
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Supporting Courses: 11 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7207 – Advanced Pediatric Pharmacology: Cr. 3

M.S.N. Major: Psychiatric Mental Health Nurse Practitioner

(Minimum of fifty-three credits required)

Admission: see above under Admission Requirements, p. 517.

All students in the Psychiatric and Mental Health Nurse Practitioner (PMHNP) major gain knowledge in biological, neurological, pharmacological, and physiological domains that prepare them to conduct comprehensive assessments and utilize a range of psycho-biological interventions. The PMHNP clinical nursing course sequence focuses on: Psychiatric assessment, triage, and crisis intervention; Biopsychological models of mental health and illness; theory and practice with individual interest (e.g., addictions, eating and sleep disorders, gender issues, HIV/AIDS, major psychiatric illnesses, violence) and with clinical populations of interest. Upon program completion, graduates are eligible to take the American Nurse Credentialing Center (ANCC) Psychiatric-Mental Health Nurse Practitioner certification exam.

M.S.N. Psychiatric Mental Health Nurse Practice *(Required Courses)*

Master's Core Courses: 13 Credits

NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
NUR 7015 – Research for Evidence-Based Adv. Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Adv. Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Advanced Practice: Cr. 3

Clinical Course Sequence: 18Credits

NUR 7840 – Advanced Practice Nursing with Individual/Communities: Cr. 6
NUR 7860 – Advanced Practice Nursing with Families: Cr. 6
NUR 7855 – Advanced Practice Nursing with Groups: Cr. 6

Supporting Courses: 22 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3
NUR 7605 – Psychopharmacology for Advanced Practice Nursing: Cr. 5
NUR 7865 – Foundations of Complementary & Alternative Medicine (CAM): Cr. 3
S W 6540 – Effects of Drugs & Alcohol: Social & Physical Function: Cr. 3

M.S.N. Major: Women's Health Nurse Practitioner

(Minimum of forty-eight credits required)

(An admissions moratorium is currently in effect for this program.)

The Master of Science in Nursing degree with a major in Women's Health Nurse Practitioner (WHNP) prepares nurses for advanced practice in the care of women. The WHNP curriculum combines both broad foundational knowledge essential for the care of women as a vulnerable population and specialty knowledge in women's health. Attention is given to health promotion, prevention of disease, and disability. The goal of this innovative program is to prepare advanced practice nurses who will promote the health and development of women as individuals and as population groups encountering changing healthcare systems within urban and global environments. Upon program completion, WHNP students are eligible to take a certification examination through the National Certification Corporation (NCC).

M.S.N. Women's Health Nurse Practitioner (Required Courses)

Master's Core Courses: 13 Credits

NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
NUR 7015 – Research for Evidence-Based Adv. Practice I: Cr. 4
NUR 7018 – Research for Evidence-Based Adv. Practice II: Cr. 3
NUR 7105 – Theoretical Foundations for Advanced Practice: Cr. 3

Clinical Course Sequence: 24 Credits

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 8
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Supporting Courses: 11 Credits

NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3

Nursing Graduate Certificates

Adult Gerontology Nurse Practitioner Acute Care (Graduate Certificate)

(Minimum of eighteen credits required)

The Graduate Certificate Program will allow advanced practice nurses, who have graduated with a clinical MSN, MS or DNP to acquire the nationally-specified adult acute and critical care content and clinical skills needed to take the national adult acute care certification exam and then to function competently within the acute care scope of practice. It will require satisfactory completion of 18 credits of didactic content and clinical practice. The certificate provides nurses with essential knowledge and skills to assume acute care roles in a myriad of settings. Courses focus on integrating advanced health assessment, pathophysiology, and acute clinical care and management. Students will be expected to acquire approximately 500 hours of acute care experience as required to meet the specialty competencies and the requirements to take the Adult Nurse Practitioner-Acute Care national certification exam.

Admission to this program is contingent upon admission to the College of Nursing and upon admission to the Wayne State University Graduate School and the availability of the College of Nursing resources. An applicant for admission to the graduate certificate program must have a MS in nursing, MSN, or a DNP from a nationally accredited institution. All applicants must be eligible for licensure as a registered nurse in the State of Michigan and provide a statement of purpose for seeking the ACNP certificate, and professional competence as documented by three letters of reference. In addition, the applicant must have completed the following graduate level courses: pathophysiology, pharmacology and physical assessment.

CERTIFICATE REQUIREMENTS

This certificate requires twelve credits which must be taken in sequence over one calendar year with no transfer credit accepted. A grade point average of 3.0 must be maintained. All course work must be completed in accordance with the academic regulations of the Graduate School and the College of Nursing; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively

Required Courses (18 credits)

NUR 7370 – APN: Management of Neurological, Endocrine, and Musculoskeletal Problems: Cr. 6
NUR 7140 – APN: Management of Management of Cardiopulmonary and Renal Problems: Cr. 6
NUR 7130 – APN: Management of Oncology, Mental Health, and Lifestyle Change: Cr. 6

Complementary Therapies in Healthcare (Graduate Certificate)

(Minimum of twelve credits required)

(An admissions moratorium is currently in effect for this program.)

This graduate certificate program includes three required graduate courses that are designed to provide education and clinical experience related to complementary, alternative therapies that are often used to complement conventional health care treatments in the United States. This graduate program provides information for individuals who provide services for patients/clients, families and communities and is open to registered nurses who have a B.S.N. degree,

graduate nursing students and other healthcare providers and students.

The certificate program courses focus on concepts of complementary and alternative medicine and whole systems of care for individuals throughout the lifespan from a health promotion and illness treatment perspective; evidenced-based therapies included in hospital-based integrative medicine centers are explored and research strategies are examined. Students will learn CAM assessment strategies as well as population trends related to use and integration in conventional health settings. Clinical practice components are included in all program courses and the certificate provides essential knowledge and skills regarding complementary therapies in today's healthcare world.

Admission to this program is contingent upon admission to the Graduate School, see Admission, Graduate School, p. 17. Additional requirements include: graduation from an accredited baccalaureate nursing program, or other baccalaureate program with a focus on healthcare needs in society with a clinical concentration. Applicants who are graduates of other accredited baccalaureate programs will be considered on a case-by-case basis.

CERTIFICATE REQUIREMENTS

This certificate requires twelve credits which must be taken in sequence over one calendar year with no transfer credit accepted. A grade point average of 3.0 must be maintained. All course work must be completed in accordance with the academic regulations of the Graduate School and the College of Nursing; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

Required Courses (12 credits)

- NUR 7865 – Foundations of Complementary & Alternative Medicine: Cr. 3
- NUR 7870 – Understanding the Evidence: Complementary Therapy Research: Cr. 4
- NUR 7875 – Complementary & Alternative Medicine Therapies: Clinical Intervention II: Cr. 5

Nurse-Midwifery (Graduate Certificate)

(Minimum of sixteen credits required)

This Graduate Certificate program is designed to prepare advanced practice nurses to practice as nurse-midwives (NM) in the primary care of women and newborns. The certificate provides nurses with essential knowledge and skills in nurse-midwifery care. The courses focus on concepts of nurse-midwifery clinical practice such as well-woman, primary, intrapartum, postpartum, newborn care and professional role transition. Upon completion, CNM students take the American Midwifery Certification Board (AMCB) examination. The graduate nurse-midwifery concentration is accredited by the Accreditation Commission for Midwifery Education (ACME).

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students must also meet the following criteria for admission: 1) completion of a graduate (Master's or doctoral) degree in Nursing; 2) current Michigan Registered Nurse licensure; 3) three letters of reference; and 4) a personal goal statement.

CERTIFICATE REQUIREMENTS

This certificate requires sixteen credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively. Please contact Department for requirements.

Required Courses (16 credits)

(Nurse-Midwifery section for the following two courses)

- NUR 7226 – Pathophysiology, Clinical Care and Mgt. II: Cr. 8
- NUR 7227 – Pathophysiology, Clinical Care and Mgt. III: Cr. 8

Nursing Education (Graduate Certificate)

(Minimum of twelve credits required)

This Graduate Certificate Program in Nursing Education is designed to prepare nurses for teaching positions in educational and service settings. The certificate provides nurses with essential knowledge and skills in teaching, program development, evaluation, clinical instruction, and other aspects of the educational process in nursing. Courses focus on concepts of learning; teaching methods and concepts of teaching in nursing; multimedia and computer-assisted instruction and distance education; development of educational programs in nursing; evaluation; testing; and clinical teaching from a theoretical and research perspective. The program provides learners with a theoretical framework for teaching in nursing and related competencies.

Admission to this program is contingent upon admission to the Graduate School; (for requirements, see Admission, Graduate School, p. 17) and the availability of College of Nursing resources. Students must also meet the following criteria for admission: 1) completion of a Master's degree in Nursing or concurrent enrollment in the Master's program in the College of Nursing at Wayne State University. (If the student is currently enrolled in the M.S.N. program, the certificate will not be awarded until the M.S.N. is posted to the transcript), 2) current Michigan Registered Nurse licensure, 3) a statement of purpose for seeking the Nursing Education certificate, and 4) three letters of reference.

CERTIFICATE REQUIREMENTS

This Certificate requires twelve credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

Required Courses (Twelve credits)

- Graduate-level Nursing or Education course approved by advisor (may be applied toward Master's degree if WSU student): Cr. 3
- NUR 7710 – Theoretical Perspectives of Teaching in Nursing: Cr. 3
- NUR 7720 – Evaluation and Testing in Nursing Education: Cr. 3
- NUR 7730 – Practice Teaching in Nursing: Cr. 3

Pediatric Nurse Practitioner Acute Care (Graduate Certificate)

(Minimum of eighteen credits required)

This Graduate Certificate Program will allow primary care-certified pediatric nurse practitioners to acquire the nationally-specified pediatric acute and critical care content and clinical skills needed to take the national pediatric acute care certification exam and then to function competently within the acute care scope of practice. It will require satisfactory completion of eighteen credits of didactic content and clinical practice. The certificate provides nurses with essential knowledge and skills to assume acute care roles in a myriad of settings using a patient and family-centered care model. Courses focus on integrating advanced health assessment, pathophysiology, and acute clinical care and management. Specific clinical experiences in two of the courses will be tailored to meet needs of individual graduate certificate students. Students will be expected to acquire approximately 500 hours of acute care experience as required to meet the

specialty competencies and the requirements to take the Pediatric Nurse Practitioner-Acute Care national certification examination from the Pediatric Nursing Certifying Board (PNCB).

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students must also meet the following criteria for admission: 1) completion of a graduate (Master's or doctoral) degree in Nursing; 2) current Michigan Registered Nurse licensure; 3) three letters of reference; and 4) a personal goal statement.

CERTIFICATE REQUIREMENTS

This certificate requires a minimum of eighteen credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

Course Requirements: (18 Credits)

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 2
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Pediatric Nurse Practitioner Primary Care (Graduate Certificate)

(Minimum of eighteen credits required)

This Graduate Certificate Program provides nurses with essential knowledge and skills in pediatric primary care with a particular focus on care of children with complex chronic conditions. It will require satisfactory completion of eighteen credits of didactic content and clinical practice. The certificate provides nurses with essential knowledge and skills to assume primary care roles in a myriad of settings using a patient and family-centered care model. Courses focus on integrating advanced health assessment, pathophysiology, primary care clinical care and management. Specific clinical experiences in two of the courses will be tailored to meet needs of individual graduate certificate students. Students will be expected to acquire approximately 500 hours of primary care experience as required to meet the specialty competencies and the requirements to take the Pediatric Nurse Practitioner-Primary Care national certification examination from the Pediatric Nursing Certifying Board (PNCB).

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students must also meet the following criteria for admission: 1) completion of a graduate (Master's or doctoral) degree in Nursing; 2) current Michigan Registered Nurse licensure; 3) three letters of reference; and 4) a personal goal statement.

CERTIFICATE REQUIREMENTS

This certificate requires a minimum of eighteen credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

Course Requirements: (18 Credits)

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 2
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Psychiatric Mental Health Nurse Practitioner (Graduate Certificate)

(Minimum of seventeen credits required)

(An admissions moratorium is currently in effect for this program.)

This Graduate Certificate Program is designed to prepare nurses to assume primary care roles as a Psychiatric Mental Health Nurse Practitioner. The certificate provides nurses with essential knowledge and skills to assume psychotherapy, consultation, and liaison roles. Courses focus on systematic pathophysiology, pharmacotherapeutics interventions, advanced health assessment, and health policy and issues for advanced practice nurses.

Admission to this program is contingent upon admission to the Graduate School, see Admission, Graduate School, p. 17. Students must also meet the following criteria for admission: 1) completion of a Master's degree in Psychiatric Mental Health Nursing or the completion of a Master's Degree in another specialty area or concurrent enrollment in the Master's program in the College of Nursing at Wayne State University. (If the student is currently enrolled in the M.S.N. program, the certificate will not be awarded until the M.S.N. is posted on the transcript.); 2) current Michigan Registered Nurse licensure; 3) three letters of recommendation; and 4) a personal goal statement. Individualized programs will be determined for students with a Master's degree in Nursing in another specialty following evaluation of previous course syllabi and transcripts.

CERTIFICATE REQUIREMENTS

This certificate requires sixteen credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic regulations of the Graduate School and the School of Nursing; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

Required Courses (17 credits)

NUR 6510 – Health Econ., Policy, and Professional Issues for APNs: Cr. 3
NUR 7030 – Advanced Nursing Assessment: Cr. 4
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3
NUR 7605 – Psychopharmacology for Advanced Practice Nursing Cr. 3

Transcultural Nursing (Graduate Certificate)

(Minimum of twelve credits required)

(An admissions moratorium is currently in effect for this program.)

This certificate is designed to provide students with knowledge and skills for working with individuals, families and groups of various cultures, and with cultural institutions exhibiting diverse values, beliefs and lifeways. The courses are especially designed to contrast and compare different cultures throughout the world and offer students the opportunity to understand how culture influences health care. Classroom and field experiences enable students to become competent practitioners, consultants, cultural care facilitators, and teachers in transcultural nursing.

Admission to this program is contingent upon admission to the Graduate School; (for requirements, see Admission, Graduate School, p. 17). Eligibility for this program is extended to students enrolled in the M.S.N. or Ph.D. programs at Wayne State University and to graduates of an accredited M.S.N. program.

CERTIFICATE REQUIREMENTS

This certificate requires a minimum of twelve credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic regulations of

the Graduate School and the School of Nursing; see sections beginning under Academic Regulations, Graduate and Academic Regulations for the College of Nursing, respectively.

Required Courses (12 Credits)

The course requirements for the Graduate Certificate in Transcultural Nursing are being revised. Please contact the Associate Dean for Academic Affairs for further information

Women's Health Nurse Practitioner (Graduate Certificate)

(Minimum of eighteen credits required)

(An admissions moratorium is currently in effect for this program.)

The Women's Health Nurse Practitioner graduate certificate program is designed to prepare nurse practitioners or certified nurse-midwives to additionally practice as women's health nurse practitioners in the primary care of women throughout their life span. This certificate program provides nurses with essential knowledge and skills in women's health care. Courses focus on integrating advanced health assessment, pathophysiology, pharmacotherapeutics, women's health primary care clinical care and management as well as concepts of complicated obstetric and gynecologic care and acute and chronic care. Specific clinical experiences in these courses are tailored to meet the needs of individual graduate certificate students. Students will be expected to acquire approximately 600 hours of women's health care clinical experience as required to meet the specialty competencies and the requirements to take the Women's Health Nurse Practitioner national certification examination from the National Certification Corporation (NCC).

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Students must also meet the following criteria for admission: 1) completion of a graduate (Master's or doctoral) degree in Nursing; 2) current Michigan Registered Nurse licensure; 3) three letters of reference; and 4) a personal goal statement.

CERTIFICATE REQUIREMENTS

This certificate requires a minimum of eighteen credits which must be earned within three years with no transfer credit accepted. A minimum grade point average of 3.0 must be achieved. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

Course Requirements: (18 Credits)

NUR 7225 – Pathophysiology, Clinical Care and Management I: Cr. 2
NUR 7226 – Pathophysiology, Clinical Care and Management II: Cr. 8
NUR 7227 – Pathophysiology, Clinical Care and Management III: Cr. 8

Nursing (Ph.D. Program)

Established in 1975, the Doctor of Philosophy (Ph.D.) in Nursing program is designed to prepare researchers and scholars to provide leadership to the profession and discipline of nursing. The program emphasizes the development of the student's capacity to make significant, original contributions to nursing knowledge. The understanding that nursing provides services that help individuals, families, and communities achieve health drives the Ph.D. program. These services are based on systematic knowledge about human health and human-environment relationships. Particular attention is given to the kinds of human-environment relationships that are optimal for health. This systematic knowledge base is the foundation of nursing science.

Admission Requirements

Informational meetings are held monthly and prospective students are encouraged to attend prior to application. The schedule is posted on the College's web site under Program, Ph.D., and Information Meetings.

1. Admission to this program is contingent upon admission to the Wayne State University Graduate School (for requirements, see Admission, Graduate School, p. 17). In addition, applicants must comply with the following:

2. Application: All new applicants must submit two application forms: 1) the University or International Application for Doctoral Admission and 2) the College of Nursing Application for Admission to the Doctor of Philosophy Program in Nursing. Applications are available online through <http://wayne.edu/admissions/graduate> and at the College Doctoral Programs website. Admission decisions are based upon all materials submitted and a personal interview with potential faculty mentors. Decisions reflect careful consideration of the applicant's professional goals, research interests, and the resources of the College of Nursing. Although an applicant may meet all minimum requirements, admission may not be granted because of 1) unavailable program space, and/or 2) inadequate College resources relevant to the applicant's specific area of research interest. Admission decisions will be made after all required materials have been received.

3. Nursing Degree: Applicants must have earned a bachelor's or master's degree in nursing or the equivalent from a National League for Nursing (NLN) or Commission on Collegiate Nursing Education (CCNE) accredited institution. International applicants must have earned an equivalent degree.

4. Grade Point Average: It is recommended that applicants who have a master's degree have a 3.3 (on a 4.0 scale) graduate g.p.a., based on at least twelve credits of graduate level course work; and applicants who have a bachelor's degree have a minimum 3.0 g.p.a. in upper division undergraduate course work (the last sixty credits).

5. Graduate Record Examination (GRE): The GRE is not required.

6. References: Submit three references (College of Nursing forms are available) from nurse faculty, nurse researchers, and/or other professional colleagues (preferably at the doctoral-prepared level) who can evaluate the applicant's scholarship and aptitude for research.

7. Statement of Professional Goals: Write a brief statement (College of Nursing forms are available) that describes motivation for doctoral study, career goals, potential focus of research and how that research interest may fit with one or more of the research orientations of the faculty in the College of Nursing. To determine a potential fit of research interests with faculty research programs, applicants are encouraged to view faculty interests in the Faculty Research Activity Interest Guide and contact individual faculty members.

8. Interviews: Applicant interviews are required and will be scheduled after receipt of the College of Nursing application, goals statement and curriculum vita.

Admission Deadline: January 31st.

Readmission: Students who are inactive and desire readmission must submit a written request to the Director of the Ph.D. Program of the College of Nursing, four months prior to the semester in which they wish to register. The readmission decision is based on recommendation of the Ph.D. Program Committee and the Graduate School.

Degree Requirements

Candidates for the Doctor of Philosophy in Nursing must complete a minimum of ninety graduate credits beyond the baccalaureate degree including a thirty-credit dissertation. The thirty-credit dissertation registration requirement is fulfilled by registering in the courses NUR 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters. Students are also expected to attend a minimum of two semesters of dissertation colloquia during the dissertation credits. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

7000-Level Courses: The Ph.D. program must include thirty credits, excluding dissertation direction, in courses numbered 7000 or above.

Plan of Work: Early in his/her program the doctoral student, with the assistance of his/her academic advisor plans a sequence of studies, the Interim Plan of Work. The Final Plan of Work, approved by the academic advisor and the Graduate Officer, College of Nursing, should be filed before the student has completed forty graduate credits (including transfer credits). Petition for Transfer of Credits and annual reviews should be attached to the Plan of Work. It is the responsibility of the student to file any changes in the Plan of Work.

Residency: The Ph.D. requirement of one year of residence is met by completion of six graduate credits in course work (not dissertation) over two successive semesters (Spring/Summer Semester may be excluded).

Qualifying Examinations must be applied for following completion of at least 50 credits of graduate level courses, including domain and methods as stated on the student's approved Plan of Work. .

Candidacy: The final Qualifying examination must be passed and the Dissertation Committee approved to establish candidacy. Students must complete both semesters of the Research Residency before defending their proposal and complete the Teaching Residency prior to graduation.

Time Limitations: Students in all paths have a seven year time limit to complete all requirements for the Ph.D. degree. The seven-year period begins with the end of the semester during which the student was admitted to doctoral study and was taking work toward meeting the requirements for the degree. Students whose seven-year time limit has expired may be considered for an extension, provided that the Qualifying Examinations have been successfully completed. Subsequent extensions will not be considered in the absence of substantial progress during the previous year.

Ph.D. Curricular Options

The faculty of the College of Nursing has developed two curricular paths for students to accomplish the requirements for the Ph.D. in Nursing. These paths offer options to applicants based on their present educational level and professional career goal: one path for students entering the program post-B.S.N., and one for those entering post-M.S.N. Full-time and part-time study options are available, fall, winter, spring and summer.

The following curricula courses marked with an asterisk (*) have prerequisites that are listed under the Graduate Courses section and at <http://www.classschedule.wayne.edu>. Students are advised to keep themselves informed of these requirements so that scheduling their courses will be consistent with prerequisite sequencing.

Post-M.S.N., Leading to the Ph.D. (Total Credits: 91)

FOCUS: Research and Nursing Knowledge

Nursing Transfer Courses Advisor Approved (24 credits)

THEORY (6 credits)

NUR 8020* – Theory Guided Nursing Inquiry: Cr. 3

NUR 8012 – Philosophical Basis of Nursing: Cr. 3

DOMAIN OF KNOWLEDGE: (7 credits)

NUR 8210 – Health and Health Disparities: Cr. 3

NUR 8011 – Scientific Writing: Cr. 1

NUR 8014 – Health Interventions: Cr. 3

CONCENTRATION COURSES (9 credits)

Concentration courses are taken to support the student's research interests. Nine credits of concentration must be taken outside of the College of Nursing.

RESEARCH AND STATISTICS COURSES (15 credits)

NUR 8040 – Research Methods: Quantitative: Cr. 3

NUR 8060 – Research Methods: Qualitative: Cr. 3

NUR 8610 – Statistical Analysis. I: Cr. 3

NUR 8612 – Statistical Analysis II: Cr. 3

Advanced Research Methods Elect. (from Nursing or another discipline): Cr. 3

DISSERTATION RESEARCH AND DIRECTION (30 credits)

NUR 9991-9994 – Doctoral Candidate Status I, II, III, IV:
Dissertation Research and Direction: Cr. 7.5 (each)

Post-B.S.N., Leading to the Ph.D. (Total Credits: 92)

FOCUS: Research and Nursing Knowledge

THEORY (9 credits)

NUR 7105 Theoretical Foundations of Nursing: Cr. 3

NUR 8020* – Theory Guided Nursing Inquiry: Cr. 3

NUR 8012 – Philosophical Basis of Nursing: Cr. 3

DOMAIN OF KNOWLEDGE: (10 credits)

NUR 8210 – Health and Health Disparities: Cr. 3

NUR 8011 – Scientific Writing: Cr. 1

NUR 8014 – Health Interventions: Cr. 3

NUR 8630 – Health Policy, Leadership, Ethics: Cr. 3

RESEARCH AND STATISTICS COURSES (28 credits)

NUR 7000 – Statistics: Cr. 3

NUR 7015 – Research for Evidence Based Practice: Cr. 4

NUR 8040 – Research Methods: Quantitative: Cr. 3

NUR 8060 – Research Methods: Qualitative: Cr. 3

NUR 8610 – Statistical Analysis. I: Cr. 3

NUR 8612 – Statistical Analysis II: Cr. 3

Advanced Research Methods Elect. (from Nursing or another discipline): Cr. 3

NUR 8990 – Pilot Research Study Part 1: Cr. 3

NUR 8990 – Pilot Research Study Part 2: Cr. 3

CONCENTRATION COURSES (15 credits):

Concentration courses are taken to support the student's research interests. Nine credits of concentration must be taken outside of the College of Nursing.

DISSERTATION RESEARCH AND DIRECTION (30 credits)

NUR 9991-9994 – Doctoral Candidate Status I, II, III, IV:

Dissertation Research and Direction: Cr. 7.5 (each)

The total Ph.D. program must include thirty credits, excluding dissertation direction, in courses open only to graduate students (7000 level or above).

Infant Mental Health (Ph.D. Dual-Title Program)

Students in the Ph.D. or D.N.P. programs in Nursing can apply to earn a Ph.D. in Nursing or a D.N.P. with a dual-title in Infant Mental Health (IMH). This dual-title degree is designed to prepare nurses to support early social and emotional development in a variety of contexts in which parents or children suffer from developmental disabilities, health problems, or mental health problems. The program also prepares nurses to conduct research related to infant mental health. Students take courses in infant development and assessment, and develop specific skills related to infant mental health assessment and treatment. The dual-title coursework follows competencies outlined by the Michigan Association for Infant Mental Health that are required for endorsement as an infant mental health specialist or an infant mental health mentor.

Admission to this program is contingent upon admission to the Wayne State University Graduate School (for requirements, see Admission, Graduate School, p. 17). Students should indicate on their application to the Nursing program their desire to earn an Infant Mental Health Dual Title. Students may also contact the IMH program director any time prior to the completion of their qualifying/preliminary examination to enroll in the program.

Degree Requirements. In addition to Ph.D. requirements as cited above, students are required to complete twelve to fourteen credits of infant mental health coursework including the following courses with at least a 3.0 g.p.a. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

ELE 7025 – Infant Mental Health Theory to Practice: Cr. 2
NUR 7880 – Infant/Family Mental Health Assessment: Cr. 2
S W 7010 – Infant Mental Health Practice: Cr. 1-2
PSY 7425 – Psychology of Infant Behavior and Development: Cr. 3
PSY 7430 – Developmental Assessment of Infants and Toddlers: Cr. 3

Ph.D. students must also complete a qualifying examination and a Doctoral Dissertation related to infant mental health.

Postdoctoral Study

The purpose of postdoctoral study is to develop scientists capable of sustaining independent research within the theoretical perspective of nursing science. Opportunities are available for postdoctoral study on an individual basis in relation to the specific interest of the applicant, and to the availability of expert faculty mentorship. Interested students should contact the Director of the Doctoral and Postdoctoral Programs, College of Nursing, (313) 577-4134.

Nursing (D.N.P. Program)

The Doctor of Nursing Practice (D.N.P.) program was established in 2008 for registered nurses seeking advanced education for leadership in clinical positions, health policy development, evaluation and application of patient care research, and systemic efforts in health promotion and risk reduction. Through this program, students are trained to use clinical research to improve and transform health care.

Admission Requirements

Admission to this program is contingent upon admission to the Wayne State University Graduate School (for requirements, see Admission, Graduate School, p. 17). In addition, applicants must comply with the following:

Applicants must have earned a bachelor's or master's degree in nursing or the equivalent from a National League for Nursing (NLN) or Commission on Collegiate Nursing Education (CCNE) accredited institution. They must have a minimal grade point average of 3.0 in the most recent nursing program and no less than a 'B' in all pre-requisite courses. International students must meet University and College English language requirements and satisfy all WSU and State Board of Nursing requirements for nurses practicing in Michigan. Two letters of recommendation (it is preferred that one reference from a doctoral-prepared individual), a professional goals statement, and a resume are also required. All qualified applicants will be interviewed.

Post-Masters Applicants are required to have completed courses in the following content areas prior to admission: Advanced Physical Assessment, Pharmacology, Pathophysiology, and Introductory Statistics.

Nurse Practitioner Applicants who are certified in a practitioner specialty are exempt from the Advanced Physical Assessment, Pharmacology and Pathophysiology requirements cited above.

An official Graduate Record Examination (GRE) score report (General Test), taken within the last five years, is recommended for applicants who have earned a minimum of a bachelor's degree in nursing. Applicants may choose instead the GRE Exemption (to be admitted without the GRE score report). Further, if accepted into the D.N.P. program, these applicants will be admitted to a probationary period of twelve credits. During this probationary period students must maintain a minimum grade point average of 3.0 on a 4.0 scale overall. Those probationary students who do not maintain a 'B' or better grades will be dismissed from the program.

Registered Nurse Licensure: Applicants must obtain current Michigan Registered Nurse Licensure prior to entry into the clinical sequence. All applicants educated outside the U.S. must be certified by the Commission on Graduates of Foreign Nursing Schools (CGFNS). Verification of a student's CGFNS certification must be forwarded to the State of Michigan Board of Nursing by the CGFNS in order to take the RN licensure examination, NCLEX. Post-masters nursing students must be certified by a nationally recognized body in their area of specialization.

Application: The final deadline is January 31st. Informational meetings are held monthly and applicants are encouraged to attend before completing the application. The schedule is listed on the College website under the Programs tab, D.N.P., then Information Meetings: <http://www.nursing.wayne.edu>.

Admission decisions are based upon all materials submitted and reflect careful consideration of the applicant's professional goals, clinical inquiry interests, interview and the resources of the College of Nursing. Although even if an applicant meets all minimum requirements, admission may not be granted because of 1) unavailable pro-

gram space and/or 2) inadequate College resources relevant to the applicant's specific interest.

Degree Requirements

All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Nursing, p. 529, respectively.

The D.N.P. program must include a minimum of thirty credits of graduate coursework completed in residence at Wayne State University. Neither courses numbered in the 9000s nor classes elected as "visitor" may be used to fulfill this requirement. Early in the program the student, in consultation with the academic advisor, plans a sequence of courses. This Plan of Work is approved by the academic advisor and the Director of the D.N.P. Program. It is the responsibility of the student to file any changes in the Plan of Work. Preliminary Examination must be applied for following completion of the coursework requirements. Students will be expected to take preliminary examinations to demonstrate their knowledge of each primary field and all supporting fields. Students must pass these examinations.

Students in all paths have a seven year time limit to complete all requirements for the D.N.P. degree. The seven-year period begins with the end of the semester during which the student was admitted to doctoral study and was taking work toward meeting the requirements for degree. Students whose seven-year time limit has expired may be considered for an extension, provided that the Preliminary Examinations have been successfully completed. Subsequent extensions will not be considered in the absence of substantial progress during the previous year.

D.N.P. Curricular Options

The faculty of the College of Nursing has developed three curricular paths for students to complete the requirements for the Doctorate of Nursing Practice. These options are oriented to the applicant's educational level at the time of admission and professional career goal. One path is for students entering the program post-B.S.N., and two paths for those entering post-M.S.N. Full-time and part-time study options are available. Students in path I and path III have several clinical specialty options. The options are described below under each of these paths.

Clinical Practicum: Requirement of one year of residence equaling six graduate credits in course work, not including the Doctor of Nursing Practice project, over two successive semesters. (Spring/Summer semester may be excluded.)

The total D.N.P. program must include thirty credits, excluding the Doctor of Nursing Practice Project, in courses open only to graduate students (7000 level or above).

Path I: Post-B.S.N. Clinical Leading to the A.P.R.N. Specialty and the D.N.P. (Total Credits: 80-82)

FOCUS: Clinical specialty certification, Clinical Inquiry, leadership development, and translation of research into practice (Michigan RN license required)

Nursing Transfer Courses Advisor approved - 5 credits.

THEORY (6 credits)

NUR 8620 – Foundations of Nursing as a Discipline: Cr. 3
NUR 8625 – Evidence Based Nursing Practice: Theoretical and Methodological Issues: Cr. 3

DOMAIN OF KNOWLEDGE: (12 Credits)

NUR 8210 – Health Detriments and Disparities: Cr. 3
NUR 8615 – Informatics Innovations in Nursing: Cr. 3
NUR 8630 – Health Policy Leadership and Ethics: Cr. 3
NUR 8650 – Advanced Professional Leadership: Cr. 3

ELECTIVE COURSES: (6 credits supporting domain of knowledge)

NUR 7710 – Theoretical Perspectives of Teaching In Nursing: Cr. 3
NUR 7720 – Evaluation and Testing in Nursing Education: Cr. 3
NUR 8065 – Health Economics and Policy Evaluation of Nursing Care for Vulnerable Populations: Cr. 4
NUR 8635 – Clinical Practice Outcomes: Cr. 3
NUR 8640 – Health Information Technology: Cr. 3
NUR 8645 – Entrepreneurship/Business Practice Management in APN: Cr. 3

RESEARCH AND STATISTICS: (10-11 Credits)

NUR 7000 or PSY 5100
– Statistics in Nursing: Cr. 3
– Applied Statistics in Psychology: Cr. 4
NUR 8895 – Population Health for Nursing: Cr. 3
NUR 8604 – Health Analytics and Data Management: Cr. 4

D.N.P. PROJECT (12 Credits)

NUR 9500 – D.N.P. Project Practicum I: Cr. 2
NUR 9505 – D.N.P. Project Practicum II: Cr. 2
NUR 9510 – D.N.P. Project Practicum III: Cr. 2
NUR 9520 – D.N.P. Project: Cr. 6

ADVANCED PRACTICE NURSING SPECIALTY COURSES
(Minimum credits 34-35; total credits dependent on major)

NUR 7030 Advanced Nursing Assessment: Cr. 4

Plus one of the following:

NUR 7203 – Adv. Neonatal Physiology & Pathophysiology: Cr. 3
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4

Plus one of the following:

NUR 7200 – Advanced Neonatal Pharmacology: APN: Cr. 3
NUR 7207 -- Advanced Pediatric Pharmacology: Cr. 3
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3

Minimum of 3 APN Specialty Clinical Didactic Courses:

NUR 8670 – APN Specialty I: Foundations: Cr. 3-4
NUR 8680 – APN Specialty II: Intermediate: Cr. 3-4
NUR 8690 – APN Specialty III: Advanced: Cr. 2-4

Minimum of 3 Clinical LAB Courses:

NUR 8675 – APN Specialty Clinical I: Foundations: Cr. 4-5
NUR 8685 – APN Specialty Clinical II: Intermediate: Cr. 4-5
NUR 8695 – APN Specialty Clinical III: Advanced: Cr. 5-6

Path II: Post-Master's with Clinical Specialty Leading to the D.N.P. (Total Credits: 46-47)

FOCUS: Clinical Inquiry, leadership development, and translation of research into practice (Specialty Certification required)

Nursing Transfer Courses Advisor approved - 5 credits.

THEORY (6 credits)

NUR 8620 – Foundations of Nursing as a Discipline: Cr. 3
NUR 8625 – Evidence Based Nursing Practice: Theoretical and Methodological Issues: Cr. 3

DOMAIN OF KNOWLEDGE: (12 Credits)

NUR 8210 – Health Determinants and Disparities: Cr. 3
NUR 8615 – Informatics Innovations in Nursing: Cr. 3
NUR 8630 – Health Policy Leadership and Ethics: Cr. 3
NUR 8650 – Advanced Professional Leadership: Cr. 3

ELECTIVE COURSES: (6 credits supporting domain of knowledge)

NUR 7710 – Theoretical Perspectives of Teaching in Nursing: Cr. 3
NUR 7720 – Evaluation and Testing in Nursing Education: Cr. 3
NUR 8065 – Health Economics and Policy Evaluation of Nursing Care for Vulnerable Populations: Cr. 4
NUR 8635 – Clinical Practice Outcomes: Cr. 3

NUR 8640 – Health Information Technology: Cr. 3
NUR 8645 – Entrepreneurship/Business Practice Management in APN: Cr. 3

RESEARCH AND STATISTICS: (10-11Credits)

NUR 7000 or PSY 5100
– Statistics in Nursing: Cr. 3
– Applied Statistics in Psychology: Cr. 4
NUR 8895 – Population Health for Nursing: Cr. 3
NUR 8604 – Health Analytics and Data Management: Cr. 4

D.N.P. PROJECT (12 Credits)

NUR 9500 – D.N.P. Project Practicum I: Cr. 2
NUR 9505 – D.N.P. Project Practicum II: Cr. 2
NUR 9510 – D.N.P. Project Practicum III: Cr. 2
NUR 9520 – D.N.P. Project: Cr. 6

ADVANCED PRACTICE NURSING SPECIALTY COURSES

None required for this option since already certified.

Path III: Post-M.S.N. Clinical Leading to A.P.R.N. Specialty and the D.N.P. (Total Credits: 80-82)

FOCUS: Clinical specialty certification, Clinical Inquiry, leadership development, and translation of research into practice (Michigan RN license required)

Nursing Transfer Courses Advisor approved - 5 credits.

THEORY (6 credits)

NUR 8620 – Foundations of Nursing as a Discipline: Cr. 3
NUR 8625 – Evidence Based Nursing Practice: Theoretical and Methodological Issues: Cr. 3

DOMAIN OF KNOWLEDGE: (12 Credits)

NUR 8210 – Health Determinants and Disparities: Cr. 3
NUR 8615 – Informatics Innovations in Nursing: Cr. 3
NUR 8630 – Health Policy Leadership and Ethics: Cr. 3
NUR 8650 – Advanced Professional Leadership: Cr. 3

ELECTIVE COURSES: (6 credits supporting domain of knowledge)

NUR 7710 – Theoretical Perspectives of Teaching In Nursing: Cr. 3
NUR 7720 – Evaluation and Testing in Nursing Education: Cr. 3
NUR 8635 – Clinical Practice Outcomes: Cr. 3
NUR 8640 – Health Information Technology: Cr. 3
NUR 8645 – Entrepreneurship/Business Practice Management in APN: Cr. 3

RESEARCH AND STATISTICS: (10-11 Credits)

NUR 7000 or PSY 5100
– Statistics in Nursing: Cr. 3
– Applied Statistics in Psychology: Cr. 4
NUR 8895 – Population Health for Nursing: Cr. 3
NUR 8604 – Health Analytics and Data Management: Cr. 4

D.N.P. PROJECT (12 Credits)

NUR 9500 – D.N.P. Project Practicum I: Cr. 2
NUR 9505 – D.N.P. Project Practicum II: Cr. 2
NUR 9510 – D.N.P. Project Practicum III: Cr. 2
NUR 9520 – D.N.P. Project: Cr. 6

ADVANCED PRACTICE NURSING SPECIALTY COURSES

(Minimum credits 34-35; total credits dependent on major)

NUR 7030 Advanced Nursing Assessment: Cr. 4

Plus one of the following:

NUR 7203 – Adv. Neonatal Physiology & Pathophysiology: Cr. 3
NUR 7444 – Advanced Physiology and Pathophysiology across the Lifespan for APRN's: Cr. 4

Plus one of the following:

NUR 7200 – Advanced Neonatal Pharmacology: APN: Cr. 3
NUR 7207 – Advanced Pediatric Pharmacology: Cr. 3
NUR 7555 – Pharmacotherapeutics for Advanced Health Practice: Cr. 3

Minimum of 3 APN Specialty Clinical Didactic Courses:

NUR 8670 – APN Specialty I: Foundations: Cr. 3-4
NUR 8680 – APN Specialty II: Intermediate: Cr. 3-4
NUR 8690 – APN Specialty III: Advanced: Cr. 2-4

Minimum of 3 Clinical LAB Courses:

NUR 8675 – APN Specialty Clinical I: Foundations: Cr. 4-5
NUR 8685 – APN Specialty Clinical II: Intermediate: Cr. 4-5
NUR 8695 – APN Specialty Clinical III: Advanced: Cr. 5-6

Infant Mental Health (D.N.P. Dual-Title Program)

Students in the Ph.D. or D.N.P. programs in Nursing can apply to earn a Ph.D. in Nursing or a D.N.P. with a dual-title in Infant Mental Health (IMH). This dual-title degree is designed to prepare nurses to support early social and emotional development in a variety of contexts in which parents or children suffer from developmental disabilities, health problems, or mental health problems. The program also prepares nurses to conduct research related to infant mental health. Students take courses in infant development and assessment, and develop specific skills related to infant mental health assessment and treatment. The dual-title coursework follows competencies outlined by the Michigan Association for Infant Mental Health that are required for endorsement as an infant mental health specialist or an infant mental health mentor.

Admission to this program is contingent upon admission to the Wayne State University Graduate School (for requirements, see Admission, Graduate School, p. 17). Students should indicate on their application to the Nursing program their desire to earn an Infant Mental Health Dual Title. Students may also contact the IMH program director, Ann Stacks, any time prior to the completion of their qualifying/preliminary examination to enroll in the program.

Degree Requirements. In addition to DNP requirements as cited above, students are required to complete twelve to fourteen credits of infant mental health coursework including the following courses with at least a 3.0 g.p.a. All course work must be completed in accordance with the academic procedures of the College and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations, Graduate and Academic Regulations for the College of Nursing, p. 529, respectively.

ELE 7025: Infant Mental Health Theory to Practice: Cr. 2
NUR 7880: Infant/Family Mental Health Assessment: Cr. 2
S W 7010: Infant Mental Health Practice: Cr. 1-2
PSY 7425: Psychology of Infant Behavior and Development: Cr. 3
PSY 7430: Developmental Assessment of Infants and Toddlers: Cr. 3

D.N.P. students must also complete a qualifying examination and a Clinical Inquiry Project related to infant mental health.

Academic Regulations for the College of Nursing

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the College of Nursing. Students should also consult the appropriate program handbook.

Registration

Each student is required at the beginning of each semester of attendance to register according to the procedure and schedule published in the official University *Schedule of Classes*. Registration must be completed before the student may attend classes. For registration dates, the student should consult the *Schedule of Classes*. A minimum of eight credits in graduate courses constitutes a full-time load for graduate students. Some courses require approval of the academic advisor and the College Graduate Officer.

Professional Licensure and Liability Insurance

Graduate students must be registered to practice nursing in Michigan and have professional liability and malpractice insurance before registering for courses involving clinical practice. The College offers a blanket school malpractice policy with a minimum amount of liability insurance is \$1,000,000,000/\$5,000,000,000. Each student is expected to pay \$13.00 per year for the malpractice insurance policy coverage and present the registered nurse license to the Office of Student Affairs no later than August 15th of each year of clinical course work. Students in the Nurse Midwife major must secure individual malpractice insurance. Consult with the Office of Student Affairs and the Specialty Coordinator for information.

Health Requirements for Clinical Courses

A completed College of Nursing Health Clearance Form must be on file in the Office of Student Affairs no later than August 15th prior to the first clinical course. All students must have an admission physical examination and history and must comply with requirements for a Basic Cardiac Life Support - Level C (BCLS-Level C) course and present a standard immunization profile with a Tuberculin Skin (TB) test or quantiferon testing, proof of Rubella, Mumps, Rubeola, and Chicken Pox immunity, and the complete series of inoculations against Hepatitis B virus, and TDAP. A Urine Drug Screen Testing and a criminal background investigation are also required. Some majors require Advanced Cardiac Life Support Certification (ACLS).

Students who have met all of the Health Clearance Requirements will be issued a Clinical Permit. Students who do not have a Clinical Permit issued by the College of Nursing Office of Student Affairs will not be allowed into the clinical setting. Clinical Permits will be issued once each semester prior to the start of the semester.

Master's Degree Scholarship Standards

The graduate grading system is intended to reflect high standards of scholarship. The policies for academic progression for graduate students are listed below.

1. A student must earn an overall grade point average of 3.0 or better to be awarded the M.S.N. degree.
2. A student must earn a grade point average of 3.0 or better for advancement from master's applicant status to master's candidate status.

3. A student achieving less than a 3.0 g.p.a. at any point in the program must achieve a g.p.a. of 3.0 or better within the next nine credits. If there is evidence that the goal of a 3.0 g.p.a. is not achievable, the student will be excluded from the program.

4. A student may petition to repeat a graduate course once in which a grade lower than 3.0 is received. No more than two courses may be repeated.

5. A student will be excluded from the program if more than six credits of course work below a 2.67 g.p.a. have been earned, whether or not the courses are repeated and better grades are subsequently received.

6. A student will be excluded if a g.p.a. below 2.67 is earned in two nursing courses, whether or not the courses are repeated and better grades are subsequently earned.

7. A student will be excluded from the program if a failing grade below 2.0 is earned in a nursing course.

8. A student may be excluded from the College of Nursing for unsafe and/or unethical conduct in the program without having been previously warned.

9. Students have a six-year time limit to complete all requirements for the master's degree. The six-year period begins with the end of the semester during which the student has taken work which applies toward meeting the requirements of the degree.

Doctoral Degree Scholarship and Academic Progression Policies

See the section beginning under Grades, Graduate, p. 30.

1. A minimum overall grade point average of at least 3.0 is required for a student to be awarded a Ph.D. or D.N.P. degree.

2. Students must maintain at least a 3.0 g.p.a. to progress.

3. Students with a g.p.a. below 3.0 are placed on probation and will automatically have a hold placed on their registration. Such students are required to confer with their advisor to develop a plan and timetable for elevating their g.p.a. If the advisor approves the plan, s/he should notify the school/college to release the g.p.a. registration hold so the student can register for the agreed upon course(s).

4. A student may petition to repeat a graduate course once in which a grade lower than 3.0 has been earned. No more than two courses may be repeated.

5. Students must be enrolled each academic year while in the doctoral program.

- a. Doctoral students who fail to enroll in either Fall or Winter semester of a given academic year will be considered not in good standing.

- b. Doctoral students who fail to enroll in two (2) consecutive semesters (i.e. Winter/Fall) will be subject to exclusion from the program.

Organizations

The Doctoral Student Forum is an organization of nursing students in the Ph.D. and D.N.P. programs, officially recognized by the University. The goals and objectives are to provide students with opportunities within the group to air concerns, beliefs, and practices related to their educational experiences. Meetings are held monthly. Students serve on College of Nursing committees; such as the Faculty Search Committee, DNP Program Committee, Ph.D. Program Committee and the Center for Health Research Advisory Committee. Special events, such as receptions for new students and other social events are sponsored by this group. All doctoral nursing students are members by virtue of admission to the Doctoral program. Members who wish to receive minutes and to be put on the Forum's mailing list are asked to pay yearly dues of \$20.00. The dues are used to cover expenses and further the goals of the Doctoral Student Forum.

Sigma Theta Tau, International Honor Society of Nursing, installed Lambda Chapter at Wayne State University in 1953. Its purposes include recognition of superior scholastic achievement and leadership potential. Candidates for membership are elected annually from baccalaureate and graduate programs.

Chi Eta Phi Sorority, Inc., is a national professional nurses' and nursing student organization with the twofold purpose of elevating the plane of nursing and increasing interest in the field of nursing.

Michigan Council of Nurse Practitioners (MICNP) Student Affiliate Organization is an organization of nursing students in the graduate programs that focuses on political activism and peer support for fellow graduate students. Similar to the MICNP, the goals of the organization are to promote a healthy Michigan through, advocating for excellence in NP practice, education and research; shaping the future of health care through advancing health policy; ensuring the ability of NPs to practice to the full extent of their education; and building a positive image of the NP role as a leader in the state and national health care community.

The Alumni Association of the College of Nursing is composed of graduates, faculty and former students of the College. This group is part of the general University Alumni Association, but has its own organization. Its purpose is to keep members in close touch with College activities and with professional developments, and to work for the welfare of the College of Nursing.

Student Rights and Responsibilities

Continuance in the College is contingent upon compliance with official rules, regulations, requirements, and procedures of the University and the College of Nursing. *The student is responsible for reading the contents of this bulletin pertinent to the College of Nursing and otherwise becoming informed of and fulfilling all course and degree requirements in proper sequence with satisfactory scholarship.* In case of doubt regarding any matter affecting his or her standing as a student, the student should consult with an advisor. The faculty reserves the right to amend or revise the policies and requirements set forth in the College of Nursing section of this bulletin.

Student Rights and Responsibilities for the University:

see Rights and Responsibilities, Student, p. 35.

Financial Assistance

The University Office of Financial Aid, Welcome Center, 42 W. Warren Ave. (see Financial Assistance, Graduate, p. 26), administers scholarships, grants, loans and emergency funds available to all University students, and funds provided especially for College of Nursing students. Early application is encouraged.

The College of Nursing offers both scholarship and loan funds. Application materials and deadline dates can be obtained from the Office of Student Affairs, College of Nursing, 10 Cohn. The deadline for application for College of Nursing scholarships is May 1st. Some of the scholarships available are:

College of Nursing Alumni Endowed Scholarship: Any full-time student who is enrolled in a College of Nursing degree program and demonstrated outstanding scholastic achievement, qualities of leadership, and financial need is eligible for this award.

College of Nursing Alumni Graduate Scholarship: Any graduate student who is an alumnus of Wayne State University and is enrolled in a College of Nursing degree program is eligible for this award.

College of Nursing Alumni Doctoral Scholarship: Any Wayne State University alumnus who is enrolled in the College of Nursing Ph.D. program is eligible for this award.

Nurse Scholars Society Scholarship: Any graduate (M.S.N. or Ph.D.) student who intends to enroll full-time in the College of Nursing for at least one year and demonstrates outstanding scholastic achievement (at least 3.8 g.p.a.) and financial need is eligible for this award.

Marcia D. Bain Memorial Scholarship: Any graduate student (M.S.N. or Ph.D.) who has a defined interest in psychiatric nursing and demonstrated outstanding scholastic achievement (at least 3.5 g.p.a.) is eligible for this award.

Mary E. Cottle Endowed Scholarship Fund: Any graduate student interested in maternal child health is eligible for this award.

Bertine Fair Endowed Scholarship in Community Health Nursing: Any graduate student enrolled in community health nursing is eligible for this award.

Paulette Hoyer Graduate Scholarship: Any graduate student enrolled in a degree program in the College of Nursing interested in women's health is eligible for this award.

Dorothy E. Reilly Memorial Endowed Scholarship: Any graduate student enrolled in a master's or doctoral program in the College of Nursing is eligible for this award.

College of Nursing Alumni Community Service Award: Any student enrolled in a College of Nursing degree program who demonstrates evidence of community involvement and active contributions to the urban community, and scholastic achievement of 3.0 g.p.a. or above, is eligible for this award.

WSHF Student Financial Assistance Award: Any student enrolled in a College of Nursing degree program who demonstrates scholastic achievement, leadership qualities, and financial need is eligible for this award.

Gloria Ann Colquhoun Memorial Scholarship: Any full-time master's student enrolled in the College of Nursing who demonstrates financial need, outstanding scholastic achievement, and leadership abilities is eligible for this award.

Helen Newberry Joy Scholarship: Any student enrolled in a degree program in the College of Nursing who is in good academic standing and demonstrates financial need is eligible for this award.

Steiger Memorial Scholarship: Any full-time or part-time nursing student in a degree program in the College of Nursing who demonstrates financial need is eligible for this award.

Graduate Teaching Assistantships, Grants, and Other Awards: See the section on the University Office of Financial Aid, beginning under Financial Assistance, Graduate, p. 26.

Other Sources of Financial Support: Graduate fellowships, teaching assistantships, and research assistantships may be available. The National Research Service Awards Program has special nurse fellowships for pre- or post-doctoral students. Qualified students are urged to apply. Contact the Director of the Doctoral and Postdoctoral Programs, College of Nursing, 313-577-4134

Thomas C. Rumble University Graduate Fellowship: The prestigious Thomas C. Rumble Fellowships are awarded annually for the full academic year (Fall and Winter Terms). Full-time graduate students pursuing a Ph.D. degree are eligible to apply. The award includes: a stipend, tuition of up to twelve graduate credits per term; subsidized medical insurance coverage for twelve months; and a housing allowance for the same twelve-month period. Additional information and applications are available from the Office of Student Affairs, College of Nursing. Application deadline is mid-February.

Graduate-Professional Scholarships: Each year the Graduate School sponsors a competition for Graduate-Professional Scholarships for full academic year tuition awards (Fall and Winter terms). Scholarships are available to qualified applicants pursuing master's or Ph.D. degrees or graduate certificates. Awards are based on merit and are available to both full-time and part-time students, and funds up to twelve graduate credits per term. Most awards provide tuition at Michigan resident rates only; a small number are awarded for the full non-resident rate. Additional information and application forms are available from the Scholarships and Fellowships Office of the Graduate School. Application deadline is March 1.

Employment Opportunities for Students: Part-time employment opportunities are available both on and off campus for students. Information about these and other opportunities may be obtained from the University Placement Services, 1001 Faculty/Administration Building.

Nursing Courses (NUR)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

6510 Health Economics, Policy, and Professional Issues for APNs. Cr. 3

Offered for graduate credit only. Prereq: written consent of advisor. Examination of the major health policy and professional issues relevant to the advanced-practice nurse. Students will be assisted in the synthesis of theoretical and pragmatic aspects of issues of concern in order to develop confidence in their skills and establish an APN practice. (W)

7000 Statistics in Nursing. Cr. 3

Prereq: NUR 3400 or equiv.; written consent of advisor. Introduction to statistical analysis in nursing research. Topics include: levels of measurement, statistical inference, selected descriptive and inferential statistics for parametric and nonparametric conditions, and selected statistics used to summarize results from multiple studies (i.e., meta-analytic statistics). (S)

7015 Research for Evidence-Based Nursing I. Cr. 4

Prereq: admission to an MSN program.; written consent of advisor. Identification, review, and evaluation of existing research and other relevant evidence for application in nursing. Application of basic research knowledge and research utilization principles to begin synthesizing the adequacy of the evidence for application in nursing. (F,W)

7018 Research for Evidence-Based Nursing II. Cr. 3

Prereq: NUR 7015; written consent of advisor. Continuation of NUR 7015. Designed to advance the understanding of evidence-based nursing and to advance the ability to synthesize existing evidence in a nursing area. Based on this synthesis, students will be able to develop evidence-based nursing protocols/guidelines, or proposals for obtaining additional evidence if current evidence is insufficient (W,S)

7025 Community Based Participatory Research. Cr. 3

Explores common issues and methods involved in conducting community based participatory research (CBPR). Students engage in building the necessary skills and learn how to collaborate across interdisciplinary perspectives to engage in research that leads to community change, the improvement of public health, and enhances the quality of life. (F)

7030 Advanced Nursing Assessment. Cr. 4

Prereq: NUR 7444 and 7555; NUR 2010 or equiv. for women's health nurse practitioner/nurse/midwife, neonatal nurse practitioner, and pediatric nurse practitioner programs; written consent of advisor. NUR 7030 must be passed with grade of B or above to progress in MSN Program. Development of advanced physical psychosocial assessment skills. Development of critical thinking skills in relation to differential diagnosis (medical and nursing) that are required in the performance of advanced nursing practice. (S)

7035 Family Centered Health Promotion and Risk-reduction. Cr. 3

Theoretical, evidence-based and clinical foundation for health promotion and risk reduction across the lifespan. The emphasis is on theories, evidence based clinical recommendations and research to promote and preserve wellness lifestyles in client populations using epidemiological principles, disease risk appraisal and reduction, and other tools. (W,S)

7040 Comprehensive Community Assessment. Cr. 5

Provides opportunities for students to develop knowledge and skills essential to conducting comprehensive community assessments. Students engage with interprofessional team members, community

agencies, and diverse populations to conduct a comprehensive assessment. (W)

7055 Health Promotion and Prevention with Diverse Populations. Cr. 5

Focuses on the development of advanced public health nursing knowledge and collaborative practice skills essential to integrating theoretical frameworks, comprehensive community assessments, and diverse perspectives when designing and implementing health promotion and prevention programs. (S)

7065 Program Planning, Quality Improvement and Evaluation Residency. Cr. 5

Focuses on the development of knowledge, skills and leadership strategies essential for advanced public health nurses to transform complex systems, and to improve the health of communities and diverse populations. The course emphasizes the application of concepts and theories germane to planning, improving, and evaluating health programs to advance public health, and enhance quality of life. (F)

7105 Theoretical Foundations for Nursing. Cr. 3

Prereq: admission to an MSN program; written consent of advisor. Theory course: foundations for nurses in practice and leadership roles. Discussion of diverse perspectives that influence knowledge development in nursing, including, systems, communication, developmental, health promotion, stress and coping theories. (T)

7130 APN: Management of Oncology, Mental Health, and Lifestyle Change. Cr. 6

Prereq: NUR 7030 with grade of B or above; NUR 7555 and PTH 7500; written consent of advisor. NUR 7130 must be passed with grade of B or above to progress in MSN Program. Development of clinical expertise required to co-manage the care of persons with illness trajectories related to oncology, hematology, mental health and wound management. (W)

7140 APN: Management of Cardiopulmonary and Renal Problems. Cr. 6-10

Prereq: NUR 7030 with grade of B or above; NUR 7555, PTH 7500; written consent of advisor. NUR 7140 must be passed with grade of B or above to progress in MSN Program. Development of clinical nursing expertise required to co-manage the care of persons with illness trajectories related to pulmonary, cardiovascular and renal systems. (W)

7155 Primary Prevention Strategies. Cr. 8

Prereq: NUR 7030 with grade of B or above; NUR 7444 and 7555. NUR 7155 must be passed with grade of B or above to progress in M.S.N. Program. Synthesis of theoretical, scientific, and clinical knowledge to support health promotion, health protection, and disease prevention advanced practice in Adult-Gerontology Primary Care Nursing. (F)

7165 Clinical Decision Making in Adult-Gerontology. Cr. 8

Prereq: NUR 7155 with grade of B or above; NUR 7444 and 7555; written consent of advisor. NUR 7165 must be passed with grade of B or above to progress in MSN Program. Critical thinking and analysis of managerial decisions in primary care of adults and older adults. (W)

7175 Adult-Gerontology Primary Care Management and Evaluation Cr. 8

Prereq: NUR 7165 with grade of B or above; NUR 7444 and 7555; written consent of advisor. NUR 7175 must be passed with grade of B or above to progress in MSN Program. Synthesis of community-based adult-gerontology primary care nursing within the framework of evaluation. (F,W)

7200 Advanced Neonatal Pharmacology. Cr. 3

Prereq: admission to APN/WNC program; written consent of advisor. Basic concepts of pharmacology; application and integration of content to advanced practice nursing with high-risk neonate. (S)

7203 Advanced Neonatal Physiology and Pathophysiology. Cr. 3

Open only to MSN neonatal nurse practitioner students. Prereq: admission to APN/WNC MSN program; written consent of advisor. Basic concepts of developmental physiology; application and integration of content into advanced practice nursing with the high-risk neonate. (F,S)

7207 Advanced Pediatric Pharmacology. Cr. 3

Prereq: written consent of advisor. Preparation of advanced practice nurses to apply concepts of pediatric pharmacology when assessing, managing and treating the pediatric patient in a variety of environments, including acute/critical and primary care. (W)

7222 Leadership in Health Policy, Ethics and Change. Cr. 3

Open only to graduate students. Examines health systems and health policy within evolving sociopolitical contexts from a national and international perspective. Content includes human diversity, social issues, systems theory, health systems analysis, ethics, health policy analysis, and policy formulation. (F,W)

7225 Pathophysiology, Clinical Care and Management I. Cr. 2-8

Prereq: NUR 2010, NUR 3400; NUR 7030 with grade of B or above; for WHNP/NMW: NUR 7444 and 7555; for PNP: NUR 7205, NUR 7207; for NNP: NUR 7200, NUR 7203; written consent of advisor. NUR 7225 must be passed with grade of B or above to progress in MSN Program. Managing health care needs of women, neonates, and/or children; conceptual basis for advanced nursing. (F)

7226 Pathophysiology, Clinical Care and Management II. Cr. 8

Prereq: NUR 7225; written consent of advisor. NUR 7226 must be passed with grade of B or above to progress in MSN Program. Development and demonstration of a model of advanced practice nursing or nurse-midwifery. (W)

7227 Pathophysiology, Clinical Care and Management III. Cr. 8

Prereq: NUR 7226; written consent of advisor. NUR 7227 must be passed with grade of B or above to progress in MSN Program. Synthesis of advanced practice nursing or nurse-midwifery model for care of women, neonates, and/or children. (S)

7370 APN: Management of Neurological, Endocrine, and Musculoskeletal Problems. Cr. 0-6

Prereq: NUR 7030 with grade of B or above; NUR 7555, PTH 7500; written consent of advisor. NUR 7370 must be passed with grade of B or above to progress in MSN Program. Assisting advanced practice nurses in development of clinical expertise required to co-manage persons with problems related to neurology, endocrinology, and musculoskeletal disorders. (W)

7415 Physical and Psychosocial Issues in Aging. Cr. 3

Prereq: admission to GNP program or IOG specialist certificate in aging program; written consent of advisor. Analysis of predominant physical and psychosocial aspects of aging encountered by elderly clients. (W)

7444 Advanced Physiology and Pathophysiology Across the Lifespan for APRNs Cr. 4

Prereq: Anatomy and physiology background comparable to: BIO 1050 and 1510; BIO 2870; NUR 2030; or equivalents. General physiology and pathologic principles for promoting health and treating disease across the lifespan. This course builds upon previous courses in anatomy and physiology and is a core competency that provides the basis for critical thinking in the role as an advanced practice nurse. Further, it provides an in-depth study of principles of advanced physiology and pathophysiology applicable across the lifespan,

including enhancement of knowledge of human physiology of organ systems as well as the etiology, developmental considerations, pathogenesis, morphology, and clinical manifestations of common disease processes. (F)

7515 End-of-Life Issues. (ANT 5430) (ANT 7430) (SOC 5020) (SOC 7020) Cr. 3-4

Prereq: written consent of advisor. Physical, spiritual, legal, economic, political, cultural, and ethical issues at the end of life, examined as stories about individuals, families, and communities. (T)

7555 Pharmacotherapeutics for Advanced Practice. Cr. 3

Open only to students admitted to MSN Program. Prereq: NUR 2060 or undergrad. pharmacy course; PTH 7500 or equiv.; written consent of advisor. General pharmacotherapy; critical evaluation of drug therapy; critique and prescription of appropriate therapeutic regimens. (W)

7605 Psychopharmacology for Advanced Practice Nursing. Cr. 5

Prereq: NUR 7555. Focus on pharmacokinetics and pharmacodynamics of psychotropic and neurologic medications used across the life span. Emphasis on efficacy of the medications, individualized selections, and titration of dosages. (F)

7710 Theoretical Perspectives of Teaching in Nursing. Cr. 3

Prereq: written consent of advisor. Theories of learning and teaching, critical thinking, value development, and psychomotor skill development as basis for teaching in nursing. Teaching methods in nursing for classroom and clinical practice. (Y)

7720 Evaluation and Testing in Nursing Education. Cr. 3

Prereq: written consent of advisor. Development of educational program in nursing. Test construction, clinical and performance evaluation, and grading. (B:W)

7730 Practice Teaching in Nursing. Cr. 3

Prereq: written consent of advisor. Application experience in educational setting appropriate to student's needs and goals. (Y)

7840 Advanced Practice Nursing with Individuals/Communities. Cr. 6

Prereq: NUR 7030 with grade of B or above; NUR 7555, PTH 7500; written consent of advisor. NUR 7840 must be passed with grade of B or above to progress in MSN Program. Opportunities for psychiatric nursing and community health nursing advanced practice students to integrate content about individuals and communities within cultural contexts. (F)

7855 Advanced Practice Nursing with Groups. Cr. 6

Prereq: NUR 7030 with grade of B or above; NUR 7555, PTH 7500; written consent of advisor. NUR 7855 must be passed with grade of B or above to progress in MSN Program. Opportunities for psychiatric nursing and community health nursing advanced practice students to integrate content about groups within cultural contexts. (W)

7860 Advanced Practice Nursing with Families. Cr. 6

Prereq: NUR 7030 with grade of B or above; NUR 7555, PTH 7500; written consent of advisor. NUR 7860 must be passed with grade of B or above to progress in MSN Program. Opportunities for advanced practice psychiatric nursing and advanced practice community health nursing students to integrate content about families within cultural contexts. (S)

7865 Foundations of Complementary and Alternative Medicine (CAM). Cr. 3

Prereq: admission to graduate program; written consent of advisor. Philosophical, historical, physiological basis of CAM; use in advanced practice nursing. (F)

7870 Complementary Therapy Research: Understanding the Evidence. Cr. 4

Prereq: NUR 7865; written consent of advisor. Focus on the research related to complementary therapies allowing students to explore what has already been established, limitations and benefits, and future directions and initiatives that are needed to support CAM therapies for integrative health care use. (F,W)

7875 Complementary Alternative Medicine Therapies: Clinical Intervention II. Cr. 5

Prereq: NUR 7865 and NUR 7870; written consent of advisor. Additional in-depth information on mind-body techniques, herbs/supplements, aromatherapy and energy healing; focus on physiological, psychological, and spiritual aspects of integrative care. (F,W)

7880 Infant/Family Mental Health Assessment. Cr. 2

Prereq: ELE 7025 for students enrolled in dual title program; written consent of advisor. All other students must be enrolled in a graduate program. Using a relationship-based model, assessments of infant and toddler socio-emotional development and parental health is emphasized. Interdisciplinary dialogue about the infant mental health perspective and the impact of culture. (F,S)

7890 Special Topics in Nursing. Cr. 1-8

Prereq: written consent of advisor. Exploration and analysis of topics significant to the development of nursing science and professional practice. (F,W)

7990 Directed Study in Nursing. Cr. 1-8

Prereq: written consent of advisor. Individually designed courses of study in nursing. (T)

7998 Master's Research Project. Cr. 1-3

Prereq: NUR 7010; written consent of advisor. Scientific investigation of nursing phenomena using all steps of the research process; includes written report. (T)

8011 Scientific Writing in Nursing. Cr. 1

Prereq: RN, Admission to the Ph.D program in nursing. Seminar to assist students in becoming more effective scientific writers in order to be successful nurse scholars and scientists. Students will conduct a mini-review of the literature related to a specific aspect of urban health. After identifying a precise statement to focus their review, students will synthesize the literature and write iterative drafts of their review. (F)

8012 Philosophical Basis of Nursing. Cr. 3

Prereq: RN, Admission to the Ph.D. Program in nursing. Philosophical underpinnings of the nursing discipline in order to assist students in understanding the tripartite role of a Ph.D.-prepared nurse as scholar, scientist, and steward of the discipline. Students will explore the interaction of historical, theoretical, and philosophical contexts within which nursing science has developed, discuss the role each has played in the process of developing nursing as an academic research discipline, and examine these for congruence with contemporary thinking. Emphasis is on analyzing epistemological and ontological assumptions underlying the discipline, the science, and the practice of nursing. Debates arising from philosophy and the history of science and nursing inform discussions about the nature of science and nursing's past, present, and future directions in theory and knowledge development. (F)

8014 Health Interventions. Cr. 3

Prereq: graduate status. Evaluation of intervention research to create nursing knowledge to improve health outcomes for urban populations. Students will examine select intervention designs to evaluate the effectiveness of therapeutic interventions related to their phenomenon of interest. The course also addresses important considerations of measurement, feasibility, fidelity, and data safety monitoring plans when conducting intervention research. Ethical concerns related to intervention research are discussed. (W)

8020 Theoretically-Based Nursing Inquiry. Cr. 3

Prereq: NUR 8012, and NUR 8040 or NUR 8060. Synthesis and application of knowledge from theoretical and empirical literature to a phenomenon of interest. Assistance to students in translating philosophical and theoretical perspectives into research methodologies. Concept analysis and construction, theory development, and relationships among conceptual frameworks, theories, and empirical referents are critically analyzed. The course will enable students to develop or further explicate a theoretical framework to guide a study within an emerging program of research in urban health. (S)

8040 Quantitative Research Methods. Cr. 3

Prereq: graduate standing. Non-experimental and experimental designs used in health-care research. Students will examine common threats to study validity and discuss methods to address these threats. Students also will develop the methods section of a quantitative proposal that addresses a researchable problem in nursing and health care. (W)

8060 Qualitative Research Methods. Cr. 3

Prereq: graduate standing. Relevance of qualitative approaches to the advancement of knowledge and practice in nursing and health-care. An overview of qualitative traditions will be covered. Sampling, measurement, data collection, data management, and analysis will be discussed relative to various qualitative approaches. Strategies to maintain data quality and integrity are also discussed. (S)

8065 Health Economics and Policy Evaluation of Nursing Care for Vulnerable Populations. Cr. 4

Prereq: NUR 8630 and FPH 7240, or equivalents. The intersection of vulnerable populations and their health care needs will be explored from a health economics and health policy approach. The course will promote discourse on the economic structure of the American health system as it relates to disparities. Further, it will explore the economic analytical evaluation of health care through current economic models of analysis for nursing care. (S)

8210 Health Determinants & Disparities. Cr. 3

Prereq: Graduate standing;. Examination of multiple determinants of health and issues related to health disparities among vulnerable populations in urban environments. Course content addresses biophysiological, genetic, behavioral, cultural, environmental (social and physical), economic, and health policy factors that affect health and contribute to health disparities. It prepares students to generate questions of concern to health and health outcomes; and to collaborate in interdisciplinary research teams regarding determinants of health and health disparities. (F)

8604 Health Analytics and Data Management. Cr. 4

Prereq: graduate standing and written consent of instructor. This course provides the student with a foundation to evaluate the psychometric properties of outcome measures; to evaluate group differences for clinical programs, quality/process improvement, or practice change projects; and to synthesize results across qualitative and quantitative studies. (F)

8610 Statistical Analysis I. Cr. 4

Prereq: graduate standing. Application of selected univariate statistical procedures commonly used in nursing and health research. Topics will include descriptive and inferential statistics such as measures of central tendency and variability, sampling, estimation, hypothesis testing, analysis of variance, regression and correlation, analysis of covariance, analysis of frequency and nonparametric procedures. Emphasis is on the utilization and interpretation of basic univariate procedures applied in nursing and health research. (F)

8612 Statistical Analysis II. Cr. 4

Prereq graduate standing and NUR 8610. Advanced multivariate statistical procedures. The course will cover a range of advanced quantitative techniques, such as discriminant analysis, logistic regression analysis: dichotomous response, logistic regression analysis: polyto-

mous response, principle component analysis, factor analysis, cluster analysis and survival analysis. The course also addresses statistical analysis for advanced quantitative designs such as analysis of variance for some unbalanced designs, analysis of variance for some fixed-, random-, and mixed-effects models, nested or hierarchical designs, multivariate repeated-measures analysis of variance and power analysis and sample size determination. An introduction to psychometric theory for instrument development also will be addressed. (W)

8615 Informatics Innovations in Nursing. Cr. 3

Prereq: admission to DNP program; written consent of advisor. Development of understanding of concepts in health care informatics relevant to the advanced practice nurse. (F)

8620 Foundations of Nursing as a Discipline. Cr. 3

Prereq: admission to graduate program; written consent of instructor. Critical examination of factors that have contributed to the development of the discipline of nursing. (F)

8625 Evidence Based Nursing Practice: Theoretical and Methodological Issues. Cr. 3

Prereq: admission to graduate program; written consent of advisor. Scientific foundation for integration of evidence based knowledge into clinical practice. (W)

8630 Conceptual Methodologies in Health Policy Leadership and Ethics. Cr. 3

Prereq: RN student, admission to graduate program; written consent of advisor. Basic understanding of health policy and ethical theories and practice, skills in policy development and analysis, joined with ethical analysis. (F)

8635 Clinical Practice Outcomes: Evaluation and Benchmarking Methodologies. Cr. 3

Prereq: RN student, admission to graduate program; written consent of advisor. Foundational knowledge and skills necessary to measure clinical outcomes and quality in advanced clinical nursing practice. (F)

8640 Health Information Technology. Cr. 3

Prereq: admission to nursing graduate program; NUR 8615; written consent of advisor. Current and future advances in health information technologies as they apply to hospital or community health systems. (F)

8645 Entrepreneurship and Business Practice Management in Advance Practice Nursing. Cr. 3

Prereq: NUR 8615; NUR 8635; written consent of advisor. Current and future entrepreneur and business practices for advanced practice nurses who plan to apply these skills to a hospital or community health system. (S)

8650 Advanced Professional Leadership. Cr. 3

Prereq: graduate standing; written consent of advisor. Preparation of advanced nurses and others to effectively transition into the role of leader and change agent. (W)

8670 APN Specialty I: Foundations. Cr. 3-4

Prereq: NUR 7030, NUR 7555; PTH 6860 or NUR 7200; PTH 7500 (or NUR 7205 and NUR 7203); coreq: NUR 8675; written consent of advisor. Foundational knowledge and skills necessary to manage health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Focus on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. (F)

8675 APN Specialty Clinical I: Foundations. Cr. 4-5

Prereq: NUR 7030, NUR 7555; PTH 6860 or NUR 7200; PTH 7500 (or NUR 7205 and NUR 7203); coreq: NUR 8670; written consent of advisor. Clinical (lab) component focuses on the continued applica-

tion of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. (F)

8680 APN Specialty II: Intermediate. Cr. 3-4

Prereq: NUR 8675; coreq: NUR 8685; written consent of advisor. Specialty seminar focuses on strengthening and further development of the application of the specialty knowledge of acute care, children, community, neonates, primary care, psychiatric and women's health within a broad social context. Students manage the care of clients in their designated specialty area while assessing for deviations from normal which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of clients across the lifespan. (W)

8685 APN Specialty Clinical II: Intermediate. Cr. 4-5

Prereq: NUR 8670; coreq: NUR 8680; written consent of advisor. Clinical (lab) component focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Lab component includes 225 hours of clinical practice. (W)

8690 APN Specialty III: Advanced. Cr. 2-4

Prereq: NUR 8680 and NUR 8685; coreq: NUR 8695; written consent of advisor. Synthesis of an advanced practice nursing model for care across the developmental spectrum. Health promotion, development, and long-term care of vulnerable populations within a broad social context. Specialty seminar component focuses on strengthening and applying specialty knowledge of acute care, children, neonates, primary care, and women's health within a broad social context. (W)

8695 APN Specialty Clinical III: Advanced. Cr. 5-6

Prereq: NUR 8685; coreq: NUR 8690; written consent of advisor. Clinical (lab) component centers on expanding knowledge essential for specialty practice, and expanding competence in autonomous practice with women, neonates, and/or children. Lab component includes 225-270 hours of clinical practice. (W)

8890 Special Topics in Nursing. Cr. 1-8

Prereq: doctoral student; written consent of advisor. Exploration and analysis of topics significant to the development of nursing science and professional practice at the doctoral level. (Y)

8895 Population Health for Nursing. Cr. 3

Prereq: graduate standing, RN license, and written consent of instructor. Introduction to the basic concepts of epidemiology as tools that will promote understanding of the complexity of local, national, and global healthcare systems. Emphasis is on the use of epidemiologic reasoning in deriving inferences about the etiology of health outcomes from population data and in guiding the design of health service programs. Discussion of behavioral and contextual factors that converge to impact the health of individuals, families, and communities in relationship to strategies that advanced practice nurses use to mitigate these factors. Students will be challenged to develop approaches for using epidemiology to influence, create, and lead change. (F)

8990 Directed Study. Cr. 1-8

Prereq: written consent of advisor. Open only to doctoral students. Individually designed courses in nursing for doctoral students whose needs and interests are not met in scheduled classes. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8

Prereq: NUR 7010; written consent of advisor. (T)

9500 DNP Project Practicum I. Cr. 2

Prereq: completion of all course work; completion of DNP preliminary exams; written consent of advisor. Provides guided study to identify role components for the advanced practice nurse pursuing a Doctor of Nursing Practice (DNP) degree. The student will begin exploration and identification of a specific practice topic area for the DNP Project. The scholarly practicum gives the student hands on experience in her/his chosen area of clinical inquiry. (F,W)

9505 DNP Project Practicum II. Cr. 2

Prereq: NUR 8625, NUR 9500 or equivalent; completion of DNP preliminary exams; written consent of advisor. Requires the student to engage faculty, community and/or healthcare organization leaders for project proposal planning of an evidenced-based DNP Project based on the specific practice topic identified. The student must establish the state of the science upon which the DNP Project will be based. (T)

9510 DNP Project Practicum II. Cr. 2

Prereq: NUR 9500, NUR 9505 or equivalent; DNP Candidacy and written consent of advisor. Builds on the knowledge and skills developed in the previous courses: DNP Project Practicum I and II. Students, working with their DNP Project Chair and relevant leaders, will implement their projects. (W,S)

9520 Clinical Inquiry Project. Cr. 3-4

Prereq: NUR 9500; completion of preliminary exams; written consent of advisor. Builds on the knowledge and skills developed in the previous courses: DNP Project Practicum I, II and III. Provides the doctorate nursing practice student with the opportunity to demonstrate their ability to analyze, synthesize and apply clinical inquiry knowledge and competencies through written and public presentation. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: NUR 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following NUR 9991. Offered for S and U grades only. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: NUR 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following NUR 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: NUR 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following NUR 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in NUR 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Eugene Applebaum College
of Pharmacy and Health Sciences

Dean: Serrine S. Lau

Foreword to the Eugene Applebaum College of Pharmacy and Health Sciences

The Eugene Applebaum College of Pharmacy and Health Sciences (EACPHS) is a unit of the University formed by the collaboration of health science professions represented by the academic departments of: Fundamental and Applied Sciences, comprised of Clinical Laboratory Science, Mortuary Science, and Forensic Investigation; Health Care Sciences, comprised of Occupational Therapy, Nurse Anesthesia, Physical Therapy, Physician Assistant Studies, Radiation Therapy Technology, Radiologic Technology, Radiologist Assistant Studies, Pharmacy Practice and Pharmaceutical Sciences. The College offers seventeen degrees and certificates. The academic programs of the College maintain autonomous admission requirements, curricula, degree requirements and academic procedures.

History of the College

The College of Pharmacy was founded in 1924. In 1974, the pharmacy unit merged with the Division of Health to form a College dedicated to educating the health care professionals in these fields. In 1985, the College of Pharmacy and Allied Health Professions became home to the Mortuary Science department, which had originated as a unit of the School of Business Administration in 1943.

In 1998 the State of Michigan set aside \$48.2 million for a new facility, based on the University's commitment to raise \$16.1 million from private sources. Eugene Applebaum, a 1960 alumnus of the College's pharmacy program and founder of Arbor Drug Stores, made a lead gift of \$5 million and agreed to chair the College's capital campaign. The new building, which opened in 2002 on the Detroit Medical center campus, features 270,000 square feet of learning and research space. The facility brings all departments of the College under one roof, except Mortuary Science and Clinical Laboratory Science, which have separate facilities.

Mission of the College

The mission of this college is to advance the health and well-being of society through the preparation of highly-skilled health care practitioners, and through research to discover, evaluate, and implement new knowledge to improve models of practice and methods of treatment in pharmacy and health sciences. It is the intent of this college to serve as a preeminent model of learning, scholarship, and engagement, impacting health, safety, and well-being worldwide through leadership, innovation, and the interconnectedness of its disciplines. To this end the College offers a variety of graduate-professional and graduate programs. They are designed to provide advanced-level professional training, basic research and scholarly activities in the various health science fields; detailed information on each program may be found in the departmental sections beginning under Pharmaceutical Sciences, p. 548.

Accreditation

The North Central Association accredits Wayne State University and professional programs in this College are accredited by their respective agencies:

CLINICAL LABORATORY SCIENCE:

National Accrediting Agency for Clinical Laboratory Science (NAA-CLS), 5600 N. River Rd., Suite 720 Rosemont, IL 60018-5119 (<http://www.naacls.org/>)

PATHOLOGIST'S ASSISTANT PROGRAM:

National Accrediting Agency for Clinical Laboratory Science (NAA-CLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119 (<http://www.naacls.org/>)

NURSE ANESTHESIA:

Council on Accreditation of Nurse Anesthesia Education Programs (COA), 222 S. Prospect Ave., Suite 304, Park Ridge IL 60068-4010 <http://www.aana.com/>

OCCUPATIONAL THERAPY:

Accreditation Council for Occupational Therapy Education (ACOTE), 4720 Montgomery Lane, Suite 200, Bethesda MD 20814-3449 (www.acoteonline.org)

PHARMACY:

The Accreditation Council for Pharmacy Education (ACPE), originally founded as the American Council on Pharmaceutical Education: 135 S. LaSalle Street, Suite 4100 Chicago, Illinois 60603-4810; Phone: (312) 664-3575; FAX: (312) 664-4652; website: <http://www.acpe-accredit.org>

PHYSICAL THERAPY:

Commission on Accreditation in Physical Therapy Education (CAPTE) ATPA, Attn: Accreditation Dept., 1111 N. Fairfax St., Alexandria VA 22314-1488 <http://www.capteonline.org/About/>

PHYSICIAN ASSISTANT PROGRAM:

Accreditation Review Committee on Education for the Physician Assistant (ARC-PA), 12000 Findley Road, Suite 150, Johns Creek, GA, 30097, Phone: 770-476-1224, Fax: 770-476-1738 <http://www.arc-pa.org/>

RADIATION THERAPY TECHNOLOGY:

Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago IL 60606-3182 telephone: 312-704-5300; Fax: 312-704-5304; website: <http://www.jrcert.org/>

RADIOLOGIC TECHNOLOGY:

Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Chicago IL 60606-3182; telephone: 312-704-5300; Fax: 312-704-5304; website: <http://www.jrcert.org>

Location

The Eugene Applebaum College of Pharmacy and Health Sciences is a state-of-the-art teaching and research facility at the southwest gateway to the Detroit Medical Center, located at 259 Mack Avenue at John R Street, near the School of Medicine and Shiffman Medical Library. This new facility provides notable clinical and research settings where students participate as part of their professional development.

College Website: <http://www.cphs.wayne.edu/>

Graduate Programs

Admission and degree requirements for each of the programs can be found in the departmental sections, below. The health science professions are a dynamic component of the metropolitan health care delivery systems that respond to the changing needs of society. Con-

sequently, the statements, provisions, or regulations contained herein are not offers or parts of a contract. The academic departments of this College reserve the right to change at any time any such statement, provision or regulation.

DOCTOR OF PHARMACY

DOCTOR OF PHYSICAL THERAPY

MASTER OF SCIENCE with majors in:

Pharmaceutical Sciences with specialization in

Medicinal Chemistry

Pharmaceutics

Pharmacology/Toxicology

MASTER OF SCIENCE in Anesthesia

MASTER OF SCIENCE in Physician Assistant Studies

MASTER OF SCIENCE in Radiologist Assistant Studies

DOCTOR OF PHILOSOPHY with a major in

Pharmaceutical Sciences with specialization in

Medicinal Chemistry

Pharmaceutics

Pharmacology/Toxicology

POST-MASTER'S CERTIFICATE in Pediatric Anesthesia

Directory for the Eugene Applebaum College of Pharmacy and Health Sciences

CPHS: is the University-designated abbreviation for the Eugene Applebaum College of Pharmacy and Health Sciences

DEAN:

Serrine S. Lau: 2600 CPHS; 577-1574

ASSOCIATE DEAN FOR HEALTH SCIENCES:

Howard J. Normile: 2600 CPHS; 577-1574

ASSOCIATE DEAN, RESEARCH:

Deepak K. Bhalla: 2600 CPHS; 577-3980

ASSOCIATE DEAN FOR EXTERNAL SCIENTIFIC AFFAIRS:

Anjaneyulu Kowluru: 2600 CPHS; 577-5490

ASSOCIATE DEAN FOR PHARMACY:

Richard Slaughter: 2600 CPHS; 577-1574

ASSISTANT DEAN FOR STUDENT AFFAIRS

Mary K. Clark: 1600 CPHS; 577-1220

ASSISTANT TO THE DEAN:

Susan Christie: 2600 CPHS; 577-1574

OFFICE OF BUSINESS SERVICES, DIRECTOR:

Kathleen Blumberg 2600 CPHS; 577-1578

HHUMAN RESOURCES CONSULTANT, CLIENT SERVICES:

TeAundra Moore, 2600 CPHS, 577-9706

DEVELOPMENT DIRECTOR:

Denise L. Thomas, 2600 CPHS; 577-1574

ACADEMIC SERVICES OFFICERS:

Moira Fracassa: 1600 CPHS; 577-1716

Michael J. Koltuniak: 1600 CPHS; 577-1716

Robert G. Hellar: 1600 CPHS; 577-1716

Shauna Reeves: 1600 CPHS; 577-1716

Heather Sandlin; 2600 CPHS; 577-5523

Tamra Watt; 2600 CPHS; 577-4928?

ALUMNI RELATIONS OFFICE:

Matthew Williams: 1130 CPHS; (313) 993-6624

INFORMATION OFFICER:

Tracy A. Walker: 4621 CPHS; (313)577-9802

Academic Programs Directory

FUNDAMENTAL AND APPLIED SCIENCES DEPARTMENT

Chairperson: Peter D. Frade: 5439 Woodward; 577-2050

CLINICAL LABORATORY SCIENCE:

Director: Karen Krzysnik Apolloni: 5439 Woodward; 577-2014

PATHOLOGISTS' ASSISTANT:

Director: Peter D. Frade: 5439 Woodward; 577-2050

HEALTH CARE SCIENCES DEPARTMENT

Chairperson: Malcolm P. Cutchin: 2246 CPHS; 577-9956

NURSE ANESTHESIA:

Prudentia A. Worth: 4605 CPHS; 745-3610

OCCUPATIONAL THERAPY:

Doreen Head: 2226 CPHS; 577-5884

PHYSICAL THERAPY:

Sara Maher: 2324 CPHS; 577-5630

PHYSICIAN ASSISTANT STUDIES:

John McGinnity: 2590 CPHS; 577-1369

RADIATION THERAPY TECHNOLOGY:

Adam Kempa: 1130 CPHS; 577-1137

RADIOLOGIC TECHNOLOGY:

Sarah Borland: 4118 CPHS; 313-916-1348

RADIOLOGIST ASSISTANT STUDIES:

Kathy Kath: 4118 CPHS; 313-916-1348

PHARMACEUTICAL SCIENCES DEPARTMENT

Chairperson: George B. Corcoran: 3615 CPHS; 577-5145

PHARMACY PRACTICE DEPARTMENT

Chairperson: Brian Crabtree: 2190 CPHS; 577-0826

Mailing address for all offices:

Eugene Applebaum College of Pharmacy and Health Sciences, Wayne State University, 259 Mack Ave., Detroit, Michigan 48201

Courier Delivery (all offices except Mortuary Science and Clinical Laboratory Science): Eugene Applebaum College of Pharmacy and Health Sciences, 259 Mack Ave., Wayne State University, Detroit MI 48201

Academic Regulations for the College of Pharmacy and Health Sciences

For complete information regarding the academic rules and regulations of the University, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the College of Pharmacy and Health Sciences:

1. Professional course: any course required in the Pharm.D., D.P.T. or M.O.T curriculum and any course approved for professional elective credit and elected by the student for that purpose.
2. Satisfactory grade: a grade of 'C' or above, or a grade of 'S.'
3. Unsatisfactory grade: a grade of 'C-minus' or below 2.0 grade points, or a mark of 'X' or unauthorized 'W.' Marks of 'X' or marks of 'W' which have not been authorized will be treated as an 'E.'
4. Probation: a restricted status in a program (see below).
5. Dismissal from a program means that the student may no longer register in the program, or elect professional course work. Continued registration in the University requires that a Change of Status to another program be made.

Academic and Professional Progress

The College expects its students to develop professional competence and to satisfy the same high standards of exemplary character, appearance, and ethical conduct expected of other health care professionals. To merit confidence and esteem, both personally and in the health care professions, appropriate dress and demeanor are expected of each student in their respective academic and professional program. Each program has a process or committee in place to review student performance regularly and makes decisions concerning probationary status. A student may be dismissed from the College at any time for an unsatisfactory academic or professional record, for irresponsible attendance, or other failures to diligently pursue the academic and professional program.

Employment, Outside

The curriculum has been arranged with the presumption that students will devote full time and energy to their academic program. Internships, fieldwork and other pharmaceutical employment is recognized as an integral part of the academic and professional growth of a pharmacy or health science student. However, students are responsible for maintaining the appropriate balance between such activity and satisfactory achievement in the classroom.

Attendance

Regularity in attendance and performance is necessary for success in college work. At the beginning of each course the instructor will announce and/or include in the syllabus the specific attendance required of students as part of the successful completion of the course.

Elections, Course

The program must be elected on a full-time basis, following the curriculum as outlined in this bulletin, unless specifically directed other-

wise by the Committee on Academic and Professional Progress and/or the faculty.

No course may be elected unless a satisfactory grade has been earned in each of the course prerequisites. Registration to audit a course or for courses elected on a Satisfactory or Unsatisfactory (S or U) is permitted only for elective credits, in certain designated courses such as field work, practicum and internships, in excess of the minimum degree requirements, or by guest or post-degree students.

Leaves of Absence

A leave of absence may, and should, be requested by a student when personal circumstances interfere with his/her ability to devote sufficient time to academic pursuits to assure reasonable expectations of success. A leave of absence is requested from and granted by the Dean in consultation with the departmental committee or faculty advisor. If a student requests and is granted an immediate leave of absence during a term, it is the student's responsibility to follow the Pipeline procedures to withdraw from all courses enrolled in for that term as outlined by instructions found online at <http://reg.wayne.edu/students/information.php>

A leave of absence must be requested no later than the end of the tenth week of the term, or in the case of courses not offered over a traditional semester, prior to completion of seventy-five per cent of the course, and requires a prior consultation with the student's faculty advisor, program director, department chair and/or the Assistant Dean for Student Affairs.

A student who takes an unauthorized leave of absence will be considered to have voluntarily withdrawn from the program and may be permitted to return only upon the recommendation of the Admissions Committee in consultation with the appropriate departmental committee or faculty advisor.

Time Limitations

The program must be completed within six calendar years of admission unless an extension is granted by the appropriate departmental academic progress committee or faculty advisor (extensions are appropriate in circumstances such as a delay required to repeat a course preceding or following an authorized leave of absence or an authorized leave of absence that extends beyond one year).

Students who are delayed in their progress for reasons of academic failure and/or leaves of absence beyond the six-year limit may be required to repeat and/or take additional courses in order to assure their graduation with appropriate preparation for contemporary professional practice; such determination will be made by the appropriate departmental academic progress committee in consultation with appropriate faculty.

Grade Requirement, Minimum

No professional course in which an unsatisfactory grade is earned will be counted for degree credit in this program unless repeated for a satisfactory grade. Please refer to the specific program/department Student Handbook for information regarding minimum grade requirements.

Grade Appeals

Official Policies and Procedures
College Policy No. 89.01 FINAL COURSE GRADE APPEALS
Approved 4/30/2013, Correction 3/26/15, UPDATED August 14, 2015, Adopted September 16, 2015
REPLACES AND SUPERSEDES ALL PRIOR VERSIONS OF FINAL COURSE GRADE APPEALS. This policy is effective immediately for grades received Fall 2015 and forward.

The following is the policy implemented for Final Course Grade Appeals in the Eugene Applebaum College of Pharmacy and Health

Sciences. At the beginning of each term, the instructor is to inform students in writing of the criteria used in arriving at grades for the class including the relative importance of prepared papers, quizzes and examinations, class participation and attendance. Where student performance in other practical and structured activities is relevant in evaluating professional competency, criteria used in such evaluations should be stated. Written materials should be graded in a timely manner and such materials, together with comments and an explanation of grading criteria, are to be made available to students. Students should be encouraged to discuss any class related problems with the instructor.

Instructors are expected to evaluate student work according to sound academic standards. Equal expectations should be required of all students in a class (although more work is expected from graduate students than from undergraduates) and grades should be assigned without departing from announced procedures.

It is the instructor's prerogative to assign grades in accordance with his or her academic and professional judgment and the student assumes the burden of proof in the appeals process.

Grounds for appeals are: (1) the application of non-academic criteria in the grading process, as listed in the university's non-discrimination/affirmative action statute: race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability, or veteran status; (2) sexual harassment or discrimination; or (3) evaluation of student work by criteria not directly reflective of performance relative to course requirements.

This final course grade change policy does not apply to allegations of academic dishonesty. Academic dishonesty matters should be addressed under the WSU STUDENT DUE PROCESS POLICY, which is outlined in detail at the Dean of Students link at: <http://doso.wayne.edu>

Definition:

Instructor- Instructor applies to full-time, fractional-time, part-time faculty as well as Graduate Teaching Assistants, Adjuncts, and Academic Staff with teaching duties.

FINAL COURSE GRADE APPEALS POLICY AND PROCEDURE

Informal Final Course Grade Review

13. Prior to an appeal of a course final grade all issues must first be directed to the instructor of the course for consideration of resolution.

14. The initial request of a grade review should be made directly to the instructor in an informal discussion during office hours or by a requested scheduled appointment.

15. If a student has documented efforts to obtain an informal meeting with the instructor and is unable to schedule this meeting within ten calendar days the student will then have the right to proceed to a formal grade appeal within thirty calendar days following posting of the final course grade. The instructor should make every reasonable effort to meet with the student during this time period prior to a formal appeal.

Formal Final Course Grade Appeal Policy and Procedure

If the final grade in question remains unchanged after the informal final course grade review, any formal Course Grade Appeal to change the grade in question must be initiated in writing by the student within thirty calendar days following the posting of the final course grade. The Student must submit a formal written appeal to the appropriate Department Chair. This formal appeal must include a copy of the current course syllabus and a student appeal letter including detailed justification for the appeal. This documentation must explicitly state which of the three criteria of allowable rationales is applicable and how the alleged violation occurred.

Formal Final Course Grade Appeal

1. The Department Chair shall provide a time-stamped and dated copy of the formal student course grade appeal to the instructor, pro-

gram director or program/department grade appeal committee. The Department Chair will then request input and/or response from the instructor, program director or the program/department grade appeal committee.

2. Student or Faculty involved in a grade appeal process may contact the University Ombudsperson at any time for assistance with any questions associated with a grade decision or the grade appeal process.

3. The Department Chair may convene an ad hoc special review committee (or charge an existing committee) to advise on any dispute.

4. The Department Chair shall review all documentation and respond in writing to the student within thirty calendar days of receiving the formal course grade appeal. The Department Chair will place, in writing, the final decision to the student, instructor, program director, program/department grade appeal committee or the reason for any delay in decision. The decision of the Department Chair can be appealed to the Office of the Dean.

5. Appeals to the Office of the Dean must be submitted in writing within ten calendar days of the postmarked response from the Department Chair. The Dean or his/her designee must respond to the student appeal within thirty calendar days. The decision of the Dean or his/her designee is the final decision at the College level.

6. If the appeal is denied at the Dean (designee) of the College level, the student may appeal to the Office of the Provost within thirty calendar days of the College's decision. The student's formal appeal to the Office of the Provost must include a copy of the current course syllabus, the initial student appeal letter including detailed justification for the appeal, the Department Chair's response letter, and the Dean's (or designee's) written response. The decision of the Provost or his/her designee is final. No further appeal is possible.

The student may also file with the Provost's Office a Request for a Postponement of the effect of the College's final decision. Such a request must be postmarked within seven calendar days of the postmark of the College's final decision, and a copy must be sent to the Dean of the College. Upon receiving a Request for Postponement, the Provost will immediately contact the Dean. Unless the College demonstrates clearly and convincingly that the injury to the College or to third persons that would result from such a postponement would outweigh the injury to the student from denying the postponement, the effect of the decision rendered by the College must be postponed until the date that the Provost issues a decision regarding the underlying Request for Provost Review. The Provost will inform the student and the Dean of her/his decision regarding the Request for Postponement within three school days after receiving the request. Exceptions to this procedure may be granted by the Provost upon a showing of good and sufficient cause.

Probation

Any student who earns an unsatisfactory grade in a professional course will be placed on professional probation until the course is satisfactorily repeated or the student dismissed from the program.

Any student who is on probation may not hold student elective or appointive offices (includes professional fraternities, student professional organizations, and class offices). If a student holding such an office is placed on probation, a hold will be placed on their registration for the following semester until he/she has officially relinquished the position.

For detailed information regarding probationary status, refer to the program or department Student Handbook.

Dismissal from the Program

For detailed information regarding probationary status, refer to the program or department Student Handbook.

Dishonesty, Academic

In any instance of academic dishonesty occurring in any course offered by the Eugene Applebaum College of Pharmacy and Health Sciences, as defined in section 3 of the University Due Process Statute, the provisions of Section 10.1 of the Statute will be implemented as follows: The grade for the course will be reduced to an 'E.' In addition, charges may be filed, as provided for in Section 10.2 of the Statute, which may lead to further sanctions up to and including expulsion from the College and/or University.

Readmission Following Academic Dismissal

For detailed information regarding probationary status, refer to the program or department Student Handbook.

Conduct, Student

Every student is subject to all regulations set forth by the University and the College governing student activities and student behavior in the use of University facilities. The University and the College have responsibility for making these regulations available and it is the student's responsibility to become thoroughly familiar with all regulations and to seek any necessary clarification. Questions and concerns regarding regulations should be brought to the attention of the appropriate faculty member and/or the Dean's office.

There are obligations inherent in registration as a student in the College. Students entering the health science and pharmacy professions are expected to have the highest standards of personal conduct. When there are reasonable grounds to believe a student has acted in a manner contrary to ethical standards, the law, or mores of the community, such student may be disciplined. This discipline may include suspension or dismissal from the program after due process in accord with published policies and the Student Code of Conduct.

Anesthesia, Nurse

Offices: 4601-4606 CPHS

Program Director: Prudentia A. Worth;
313-993-7168; email: aa1635@wayne.edu

Assistant Program Director, and Director Anesthesia Services
Mary Walczyk; 4601 CPHS; 313-577-7689
email: mary.walczyk@wayne.edu

Clinical Coordinator: Nurse Anesthesia Students:
Nikki Fowler, DRH, nscales@dmc.org

Core Faculty:

Phil Mangahas, pmangaha@dmc.org
Mary Walczyk, 313-577-7689, mary.walczyk@wayne.edu
Valdor Haglund, 313-966-0060, vhaglund@dmc.org
Kelly LaBonty, 586-354-8500, Klabonty@wayne.edu
John Nagelhout, john.j.nagelhout@kp.org
Jessica Ouyang, aj5249@wayne.edu, 313-993-7824

Assistant Professors

Kelley LaBonty, Mary Walczyk, Prudentia Worth

Instructors

Christine Anderson, Andrea Czar, Nikki Fowler, Brad Green, Barbara Grover, Todd Hamilton, Phil Kyko, Chaaban Haasan, Alex Lagman, Devon Locust, Mel Mendoza, Jessica Ouyang, Phil Pokorski, Lucia Scarpace-Meehan, Robert Scibiorski, Ruth Watts,

Adjunct Associate Professor

Samuel Perov

Adjunct Assistant Professor

Maria Zestos

Graduate Degree and Certificate Programs

MASTER OF SCIENCE in Anesthesia

GRADUATE CERTIFICATE in Pediatric Anesthesia

The practice of anesthesia is the process used to render a patient insensible to pain and emotional stress during surgical, obstetrical, or some diagnostic procedures. Nurse anesthesia is an expanded role which implements both nursing and medical functions to a wide patient population for surgical and procedural interventions. The required education builds upon previous nursing experiences by incorporating rigorous scientific knowledge, and applied clinical practices which include general, regional, and local anesthetics, and advanced technology in the delivery of quality and safe anesthesia. The practice of nurse anesthesia includes, but is not limited to: pre- and post-operative assessment, planning, implementing, and managing total and safe anesthesia care to all patients regardless of age level and/or the acuity of circumstance. The nurse anesthetist works with a team of health care providers and in collaboration with anesthesiologists, or other fully-privileged physicians or dentists. Nurse anesthetists are also members on the trauma, and cardiopulmonary resuscitation teams as airway experts to secure and manage difficult airway related problems which may occur in various clinical settings.

Accreditation: The program is fully accredited by the Council on Accreditation (COA) of Nurse Anesthesia Educational Programs and the Council for Higher Education Accreditation (CHEA).

Anesthesia (M.S. Program)

The program of Nurse Anesthesia has two curricular options; track I is the generic master curriculum for registered professional nurses,

track II offers a degree completion for Certified Registered Nurse Anesthetists (CRNAs), both tracks lead to a Master of Science in Anesthesia.

TRACK I: This curriculum is designed for the registered professional nurse (RN) with a baccalaureate-degree in nursing (B.S.N.) or related sciences. The program consists of twenty-four months of full-time didactic study with continuous clinical integration that involves many hospital affiliates: the Detroit Medical Center hospitals (DMC), the Veteran's Administration hospital, and many urban, community, and rural hospitals. The program also has a long-term partnership with the Toledo hospital and St Vincent hospital in Toledo, Ohio, that serve as primary clinical sites for students from the Toledo area. Upon completion of the program, graduates are eligible to take the National Certification Examination (NCE) to practice as a Certified Registered Nurse Anesthetist (CRNA).

Applicants are interviewed annually in the fall of each year for enrollment in the Spring Summer of the following year. Details about the application process and deadlines are outlined on the program's website: <http://www.cphs.wayne.edu/anesth>.

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and satisfactory completion of the undergraduate and graduate prerequisites, and a personal interview with the Nurse Anesthesia Admission Committee.

Applicants will be eligible for an interview only if all the nursing prerequisites are on file. Deadlines for submitting applications are outlined on the program's website: <http://www.cphs.wayne.edu/anesth>

TRACK I ADMISSION REQUIREMENTS

- 1) Current licensure as a registered nurse.
- 2) Baccalaureate degree in nursing or related science.
- 3) Cumulative undergraduate grade point average (g.p.a.) of 3.0 or higher on a scale of 4.0 and in all science courses.
- 4) Eight semester credits in organic and inorganic chemistry, taken within ten years prior to application.
- 5) Four semester credits of biology or microbiology, taken within ten years prior to application.
- 6) Completion CCRN.
- 7) A minimum of ONE YEAR of full-time experience in an adult intensive care (SICU, MICU, CCU) unit within the past two years.
- 8) Current Advanced Cardiac Life Support (ACLS) certification.
- 9) A minimum of one in-hospital "shadow" experience by July 1. This can be arranged at your place of work by contacting the chief CRNA in the anesthesia department to schedule a shadow experience.

For additional information please contact the program administrators via email:

Mary Walczyk at mary.walczyk@wayne.edu, 313-577-7689 or

Prudentia Worth at aa1635@wayne.edu, 313-993-7168

TRACK II: is designed for Certified Registered Nurse Anesthetists (CRNAs) with a Baccalaureate Degree in Anesthesia from an accredited Nurse Anesthesia Program. The curriculum is structured to accommodate the practicing CRNA who wish to earn a masters degree in anesthesia.

Admission to this program is contingent upon admission to the Graduate School (see Admission, Graduate School, p. 17) and satisfaction of the following professional program requirements prior to the personal interview:

TRACK II ADMISSION REQUIREMENTS

1. Application and admission to graduate school
2. Official transcripts of both the nursing and anesthesia program.
3. Current Certification and Recertification as a Nurse Anesthetist.
4. Letters of reference from supervisor, chief anesthesiologist, and a work colleague.
5. Be available for a personal interview.

DEGREE REQUIREMENTS

Track I students complete sixty-four credits in professional anesthesia core courses and ten credits in electives; Track II students complete thirty-two credits. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively.

Track I Students must complete sixty-four credits in Core anesthesia courses, and ten credits in program required electives.

Track I: Core Course Requirements

- AN 7010 – Adv. Health & Physical Assessment: Clinical Practicum I: Cr. 1
- AN 7020 – Clinical Anesthesia Practicum II: Cr. 2
- AN 7030 – Clinical Anesthesia Practicum III: Cr. 2
- AN 7040 – Clinical Anesthesia Practicum IV: Cr. 3
- AN 7050 – Clinical Anesthesia Practicum V: Cr. 3
- AN 7060 – Clinical Anesthesia Practicum VI: Cr. 2
- AN 7100 – Pharmacology I: Cr. 4
- AN 7110 – Pharmacology II: Cr. 3
- AN 7120 – Advanced Pharmacology of Anesthesia: Cr. 2
- AN 7150 – Principles of Anesthesia I: Cr. 4
- AN 7160 – Principles of Anesthesia II: Cr. 3
- AN 7170 – Principles of Anesthesia III: Cr. 2
- AN 7180 – Electrocardiography in Anesthesia Practice: Cr. 1
- AN 7190 – Adv. EKG and Cardiovascular-Pathophysiology: Cr. 1
- AN 7240 – Adv. Pathophysiology for the Anesthetist: Cr. 2
- AN 7500 – Chemistry and Physics of Anesthesia: Cr. 2
- AN 7600 – Regional Anesthesia: Cr. 2
- AN 7620 – Pulmonary Mechanics and Anesthesia Implications: Cr. 2
- AN 7690 – Clinical Anesthesia Review I: Cr. 1
- AN 7700 – Clinical Anesthesia Review II: Cr. 1
- AN 7730 – Process of Teaching: Cr. 2
- AN 7780 – Professional Dimensions of Anesthesia Practice: Cr. 3
- AN 7800 – Acute and Chronic Pain Management for Nurse Anesthetists: Cr. 1
- AN 7880 – Anesthesia Seminar: Cr. 1 (Max. 5)
- AN 7885 – Research Design: Cr. 1
- AN 7890 – Terminal Project: Cr. 1
- PSL 7010 – Basic Graduate Physiology Lecture I: Cr. 4
- PSL 7030 – Basic Graduate Physiology Lecture II: Cr. 4

Track II: Course Requirements

Track II Students complete thirty-two credits of coursework. All course work must be completed according to the specified plan between student and the program and in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees. Candidates may vary non-anesthesia course selections with consent of their advisor.

- AN 7590 – Medical Anatomy for Health Professionals: Cr. 4
- AN 7600 – Regional Anesthesia: Cr. 2
- AN 7730 – Process of Teaching: Cr. 2-3
- AN 7880 – Anesthesia Seminar: Cr. 1 (Max. 4)
- AN 7890 – Terminal Project: Cr. 1-3
- EER 7630 – Fundamentals of Statistics: Cr. 3
- NUR 7010 – Research in Nursing: Cr. 3
- NUR 7710 – Theoretical Perspectives of Teaching in Nursing: Cr. 3
- NUR 7720 – Evaluation & Testing in Nursing Education: Cr. 3
- PSL 7010 – Basic Graduate Physiology Lecture I: Cr. 4
- PSL 7030 – Basic Graduate Physiology Lecture II: Cr. 4

Track I and II students

To qualify for the Master of Science degree in anesthesia, all students must complete the required courses and maintain satisfactory cumulative grade point average of 3.0 or above in all courses. Track I curriculum courses are the same for all students and are offered annually in the same sequence.

Advisors: Track I students are assigned a uniform Plan of Work, and the faculty serve as advisors throughout the program including the terminal project or research assignment.

Track II students have the opportunity to develop a plan of work in collaboration with the Program Director. The Program Director will also serve as an advisor to the student.

Candidacy: Track I students will be advanced to candidacy upon completion of the first semester courses. Track II students must file a Plan of Work with their advisor prior to the completion of twelve graduate credits.

Academic Progress: Continuing in the master's program requires satisfactory progress as determined by the individual advisor and program director. Track II Students who have not registered for two or more consecutive semesters will be placed on inactive status. To continue with the curriculum the faculty and the program director will determine the most appropriate choices for the student.

Graduate Certificate in Pediatric Anesthesia

Developed in collaboration with Children's Hospital of Michigan (CHM), the Graduate Certificate in Pediatric Anesthesia is offered to graduates with a Master of Science in Anesthesia from an accredited program who wish to specialize in pediatric anesthesia. Students completing the Master of Science in Anesthesia may apply to the program during their last semester of the curriculum.

Admission: Applicants must meet the admission requirements of the Graduate School, see Admission, Graduate School, p. 17. Applicants must meet with the course coordinators from Children's Hospital to assess availability and applicant eligibility to enter the program. Admission application and registration for classes are all completed on line. Upon completion of the program, the graduate must apply on line for a Post-masters Certificate in Pediatric Anesthesia.

CERTIFICATE REQUIREMENTS

The Certificate Program consists of a minimum of twelve semester credits in course and clinical work. Students in the certificate program must maintain a grade point average of at least 3.0. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively. For additional information, contact the Nurse Anesthesia Program and the coordinator for Children's Hospital Anesthesia Department.

Courses and Clinical requirements:

- AN 7070 – Clinical Practice I: Cr. 2
- AN 7080 – Clinical Practice II: Cr. 3
- AN 7090 – Clinical Practice III; Cr. 1
- AN 7900 – Advanced Pediatric Topics: Cr. 2
- AN 7910 – Special Topics in Pediatric Anesthesia: Cr. 2
- AN 7920 – Case Presentations: Cr. 2

Student Handbook

A student handbook is provided to each student enrollee at the onset of the master's degree program. The program website outlines guidelines on the existing anesthesia curriculum offered.

Anesthesia Courses (AN)

The following courses are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7010 Advanced Health and Physical Assessment and Clinical Anesthesia Practicum I. Cr. 1

Prereq: R.N. degree, admission to professional program for nurse anesthetists. Advanced systematic focus on health assessment, anatomical and physical limitations, and impact on anesthesia practice. Material Fee as stated in Schedule of Classes. (F)

7020 Clinical Anesthesia Practicum II. Cr. 2

Prereq: Registered Nurse degree, admission to professional curriculum. Continuation of AN 7010. (W)

7030 Clinical Anesthesia Practicum III. Cr. 2

Prereq: AN 7020. Continuation of AN 7020. (S)

7040 Clinical Anesthesia Practicum IV. Cr. 3

Prereq: AN 7030. Continuation of AN 7030. (F)

7050 Clinical Anesthesia Practicum V. Cr. 3

Prereq: AN 7040. Continuation of AN 7040. (W)

7060 Clinical Anesthesia Practicum VI. Cr. 2

Prereq: AN 7050. Continuation of AN 7050. (S)

7070 Clinical Practice I. Cr. 2

Prereq: admission to professional curriculum; R.N., CRNA, GRNA. Outpatient anesthesia practice; focus on airway management. (T)

7080 Clinical Practice II. Cr. 3

Prereq: admission to professional curriculum; R.N., CRNA, GRNA. Managing complex pediatric cases involving craniofacial problems, craniotomies, spinal fusion, and abdominal cases. (T)

7090 Clinical Practice III. Cr. 1

Prereq: admission to professional curriculum; R.N., CRNA, GRNA. Clinical experience with complex cardiac diseases requiring thoracic and cardiopulmonary bypass. (T)

7100 Pharmacology I. Cr. 4

Prereq: Registered Nurse, admission to professional curriculum. Pharmacology as it relates to anesthesiology; pharmacokinetics and pharmacodynamics. Material Fee As Indicated In The Schedule of Classes (F)

7110 Pharmacology II. Cr. 3

Prereq: Registered Nurse, AN 7100. Analysis of theories of pharmacology. Material Fee As Indicated In The Schedule of Classes (W)

7120 Advanced Pharmacology of Anesthesia. Cr. 2

Prereq: R.N., admission to professional curriculum. General qualitative and quantitative aspects of pharmacology. Interaction and kinetics of pharmacologic agents and their relationship to anesthetic practice. (F)

7150 Principles of Anesthesia I. Cr. 4

Prereq: Registered Nurse, admission to professional curriculum. Principles and usage of all anesthesia equipment including electronic instrumentation. Theoretical exploration of various techniques of anesthesia. Material Fee As Indicated In The Schedule of Classes (F)

7160 Principles of Anesthesia II. Cr. 3

Prereq: Registered Nurse, AN 7150. Advanced knowledge in application and use of modern anesthesia monitoring technology. Material Fee As Indicated In The Schedule of Classes (W)

7170 Principles of Anesthesia III. Cr. 2

Prereq: AN 7150, 7160, Registered Nurse, admission to professional curriculum. Continuation of AN 7160. Material Fee As Indicated In The Schedule of Classes (S)

7180 Electrocardiography in Anesthesia Practice. Cr. 1

Prereq: R.N., AN 7150, admission to Professional Nurse Anesthesia Program. Background for monitoring, diagnosing, and treating cardiac arrhythmias in the perioperative period. Working background in fundamentals of 12-lead ECG interpretation; its application in the perioperative period. Material Fee As Indicated In The Schedule of Classes (W)

7190 Advanced Cardiovascular Patho-physiology and EKG. Cr. 1

Prereq: AN 7180; admission to professional program for nurse anesthetists. Advanced cardiovascular pathophysiology, assessing and diagnosing cardiac dysfunctions, and integration of appropriate clinical interventions in the anesthetic management plan of care. Material Fee As Indicated In The Schedule of Classes (F)

7240 Advanced Physiology and Pathophysiology. Cr. 2

Prereq: PSL 7030, Registered Nurse; admission to professional program for nurse anesthetists. Advanced knowledge in physiology; in-depth analysis of disease processes; correlation of pathophysiology, pharmacology, and advanced principles of anesthesia care. Material Fee As Indicated In The Schedule of Classes (S)

7500 Chemistry and Physics of Anesthesia. Cr. 2

Prereq: Registered Nurse, admission to professional program for nurse anesthetists. Analysis and principles of chemistry and physics as applied to anesthesia. Material Fee As Indicated In The Schedule of Classes (F)

7590 Advanced Anatomy for Nurse Anesthetists. Cr. 4

Prereq: admission to nurse anesthesia program. Structural and functional aspects of the human body; relationships to nurse anesthesia practice. Study of regions in which anesthesia may be induced. Material fee as given in Schedule of Classes. (S)

7600 Regional Anesthesia. Cr. 2

Prereq: Registered Nurse; AN 7590; written consent of advisor; admission to the professional curriculum. Review of the anatomy and physiology of the spinal cord and peripheral nerves and the pharmacology of local anesthetic agents. Techniques of pain management administration and management of spinal/epidural and peripheral regional anesthetics. Material Fee As Indicated In The Schedule of Classes (S)

7620 Pulmonary Mechanics and Anesthesia Implications. Cr. 2

Prereq: Registered Nurse; AN 7200 or equiv.; admission to professional program. Advanced evaluation of cardiopulmonary/respiratory complication. Clinical anesthesia care. (F)

7690 Advanced Clinical Anesthesia Practice Review I. Cr. 1

Prereq: Registered Nurse, AN 7170, admission to professional program for nurse anesthetists. Use of theoretical concepts and advanced clinical principles to develop the art and science of practice with emphasis on individualizing care, in addition to board preparation. Material Fee As Indicated In The Schedule of Classes (F)

7700 Advanced Clinical Anesthesia Practice and Review II. Cr. 1

Prereq: AN 7170, Registered Nurse, admission to professional program for nurse anesthetists. Use of theoretical concepts and advanced clinical principles in perfecting the art and science of anesthesia practice with emphasis on preparation for board examination. Material Fee As Indicated In The Schedule of Classes (W)

7730 Process of Teaching. Cr. 2-3

Prereq: CRNA, Registered Nurse, written consent of advisor. Instruction in and clinical application of nurse anesthesia process. Material Fee As Indicated In The Schedule of Classes (S)

7780 Professional Dimensions of Anesthesia Practice. Cr. 3

Prereq: written consent of advisor. Analysis of role of professional anesthesia associations, anesthesia accreditation agencies, hospital and governmental regulatory agencies relating to nurse anesthesia practice. Material Fee As Indicated In The Schedule of Classes. (W)

7800 Pain Management for Nurse Anesthetists. Cr. 1

Prereq: AN 7600. Regional techniques and pharmacological interventions to manage acute and chronic pain. (S)

7880 Anesthesia Seminar. Cr. 1 (Max. 4 or 5)

Prereq: CRNA; written consent of advisor. Current developments in concepts and theories of nurse anesthesia. (T)

7885 Research Design for Anesthesia. Cr. 1

Prereq: RN, CRNA, written consent of advisor. Research methodologies, including quantitative and qualitative statistical techniques. Emphasis on designing, implementing, and evaluating health care research. (Y)

7890 Terminal Project. Cr. 1-3

Prereq: CRNA; written consent of advisor. Finalization of research; preparation for poster submission, publication and presentation of research. Material Fee As Indicated In The Schedule of Classes (T)

7900 Advanced Pediatric Topics. Cr. 2

Prereq: admission to professional curriculum; R.N., CRNA, GNA. Detailed advanced lectures in specific pediatric topics. (T)

7910 Special Topics in Pediatric Anesthesia. Cr. 2

Prereq: admission to professional curriculum; R.N., CRNA, GNA. Common pediatric problems; in-depth knowledge on neonatal anesthesia. (T)

7920 Case Presentations. Cr. 2

Prereq: admission to professional curriculum; R.N., CRNA, GNA. Anatomy and physiology of various diseases including principles of anesthetic management. (T)

Occupational Therapy

Office: Room 2226 CPHS: 313-577-5884
Program Director: Doreen Head
Admissions Coordinator: Regina Parnell
Fieldwork Education Level II: Nancy Vandewiele-Milligan
Department Secretary: Cathy Lyles
Administrative Assistant II: Geraldine Neal
Website: <http://cphs.wayne.edu/ot/>

Professors Emerita

Miriam C. Freeling, Suesetta McCree, Martha E. Schnebly

Professor

Catherine L. Lysack

Assistant Professors

Gerry Conti, Rosanne DiZazzo-Miller, Heather Fritz, Doreen Head, Regina Parnell, Preethy Samuel, Wassim Tarraf, Nancy Vandewiele-Milligan

Part-Time Faculty

Kim Banfill

Cooperating Faculty

Sujay Galen, Lou Kramer, Philip Pokorski

Graduate Degrees

MASTER OF OCCUPATIONAL THERAPY

Occupational Therapy (M.O.T. Program)

The Master of Occupational Therapy (M.O.T.) program is the entry-level program for occupational therapy, and is endorsed by the American Occupational Therapy Association (AOTA) and the Accreditation Council for Occupational Therapy Education (ACOTE).

The goal of this entry-level program is to educate individuals to become occupational therapy health care professionals. It is designed as a five-year program. During the first two (undergraduate) years, students complete seventy-one to seventy-three liberal arts and science pre-professional credits. In the following (first professional) year, an additional fifty-six credits are completed, after which the student is awarded a Bachelor of Science in Health Sciences degree. In the final two professional years, students complete thirty-six credits, inclusive of fieldwork requirements (ACOTE Standards). Upon completion of the M.O.T. degree, students are eligible to sit for the national certification and examination procedures of the National Board of Certification in Occupational Therapy. A state License to practice is required after successful completion of the NBCOT certification examination.

Accreditation

The M.O.T. program at Wayne State University is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), the accrediting body of the American Occupational Therapy Association (AOTA). The address for ACOTE is ACOTE, C/O Accreditation Department, American Occupational Therapy Association (AOTA) 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. The courses prepare students to take the National Certification Examination (National Board for Certification in Occupational Therapy NBCOT; <http://www.nbcot.org>). For information, contact: American Occupational Therapy Association, Inc., 4720 Montgomery Lane,

Suite 200, Bethesda MD 20814-3449; telephone: 301-652-6611; Fax: 301-652-7711; Website: <http://www.aota.org>

Admission

Admission to Preprofessional Study: Admission to the preprofessional program is contingent upon undergraduate admission to the University. (Consult the Occupational Therapy Program and the Wayne State University Undergraduate Bulletin.) In the preprofessional program, students complete two years of course work, including the University undergraduate General Education Requirements and the prerequisite courses for the Occupational Therapy Core. The General Education Requirements and prerequisite courses may also be completed at other universities, however this must be done prior to the last thirty credits of the M.O.T. degree completion.

Undergraduate Preparation: For up-to-date descriptions of preprofessional and undergraduate-level professional requirements, contact the CPHS Office of Student Affairs at (313-577-1716) or visit the departmental website: <http://cphs.wayne.edu/ot/> and consult the current Undergraduate Bulletin.

Professional Program Admission: Applicants must apply for admission to the professional program and be formally admitted at the undergraduate level and transition to the Graduate level while in the program. All applicants must hold a minimum grade point average of 3.0 or above for the preprofessional program. All prerequisite courses must be completed with grades of 'C' or better. No more than two professional core prerequisite courses may be repeated to improve grades. In addition, the applicant must: a) complete twenty hours of contact with a registered occupational therapist and provide documentation of this; b) complete a Program Personal/Professional Statement; c) submit a letter of recommendation from a current or former supervisor. Students who have no work experience may seek a recommendation from an instructor of one of the Occupational Therapy Core Courses. For a checklist of application requirements: <http://www.cphs.wayne.edu/program/ot-ms-apply.php>. All applicants must apply through the Occupational Therapy Centralized Application Service (OTCAS) Application: <https://portal.otcas.org/>.

Each student is assigned a faculty advisor upon admission to the M.O.T. program. After completion of the undergraduate and graduate coursework, each student will be assigned a Level II Fieldwork Coordinator faculty advisor, to counsel the student for the remainder of the program.

Admission: Applicants must meet the admission standards of the Graduate School; for requirements, see Admission, Graduate School, p. 17. Please contact the Occupational Therapy Program for further information.

DEGREE REQUIREMENTS

The M.O.T. program consists of a minimum of 162-164 credits in course work including the pre-professional program, professional courses and fieldwork. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively.

M.O.T. Professional Graduate Program¹

Semester One (Winter)

- OT 5040 – Environmental Influence on Disability & Health: Cr. 3
- OT 6000 – Interventions. & Outcomes. II (FWI School Jan.-Apr.): Cr. 5
- OT 6230 – Motor Control: Cr. 3
- OT 7120 – Topics in Assistive Technology: Cr. 3

1. The first three years of the M.O.T. program, including the first year of this Professional Program, are taken at the undergraduate level. For information, consult the Undergraduate Bulletin and contact the CPHS Student Affairs.

Semester Two (Spring)

OT 7200 – Program Administration and Entrepreneurship: Cr. 3
Elective I: Cr. 3

Semester Three (Summer or Fall)

OT 7898 – Level II Fieldwork A: Medical (with seminar): Cr. 8

Semester Four (Fall or Winter)

OT 7899 – Level II Fieldwork B: Community (with seminar): Cr. 8

Electives

OT 6090 – Directed Research: Cr. 1-4
OT 7500 – Specialist Roles in OT: Cr. 3
OT 7990 – Directed Study: Cr. 1-3 (Max. 5)

Manual, Student

A student manual, provided by this Program, contains policy statements that may pertain to admission, candidacy, and degree requirements. Students should be sure to consult this manual for the current statements on these policies.

Financial Aid

Sources of financial aid for graduate students are enumerated in the section on Graduate Financial Assistance beginning under Financial Assistance, Graduate, p. 26 of this bulletin. In addition, a teaching assistantship may be available to a qualified student. Inquiries should be directed to the program director.

Occupational Therapy Courses (OT)

The following courses, numbered 6000-9999, are offered for graduate credit. Courses in the following list numbered 6000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5000 Interventions and Outcomes I. Cr. 5

Prereq: admission to OT program. Occupation-based therapeutic activities, intervention strategies, documentation skills, and discharge planning that promote client-centered outcomes; focus is on children, through the teen years. First of two courses. Material Fee As Indicated In The Schedule of Classes (F)

5040 Environmental Influence on Disability and Health. Cr. 3

Offered for graduate credit only. Application of OT practice in health care delivery. Critical examination of physical, social, economic and political environments on the health, wellness, and disability of individuals, populations, and the health care delivery system. (F)

5050 Life Occupations II. Cr. 3

Prereq: OT 4050. Open only to Pharmacy and Health Sciences students. Role of leisure in health, wellness, prevention and rehabilitation; focus: across the life span. Explores and develops assessment tools, treatment plans for diverse populations; includes experiential learning. Second of two courses. (F)

5400 Neurosciences for Health Care Professionals. (PT 5400) Cr. 3

Prereq: OT 5200. Open only to students admitted to EACPHS professional program. Study of the human central nervous system; emphasis on sensory and motor systems and structures that contribute to normal movement. Material Fee As Indicated In The Schedule of Classes (W)

5505 (PT 5505) Clinical Applications of Human Anatomy. Cr. 4

Prereq: admission to Physical Therapy or Occupational Therapy professional program; coreq: PT 5510 or OT 5510. Knowledge of basic human anatomy for students in health science professional programs; foundation for further study in clinical sciences. (F)

5510 (PT 5510) Clinical Applications of Human Anatomy: Laboratory. Cr. 1-2

Prereq: admission to professional OT program; coreq: OT 5505 or PT 5505. Examination of prosections, dissection of human cadavers; didactic study. Material Fee As Indicated In The Schedule of Classes (F)

5650 (RT 5650) Pathophysiology for Health Sciences. (PT 5650) Cr. 3

Prereq: admission to professional Occupational Therapy program. Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. (W)

6000 Interventions and Outcomes II. Cr. 5

Prereq: OT 5000. Occupation-based therapeutic activities, intervention strategies, documentation skills, and discharge planning that promote client-centered outcome; focus is on young adult, adult years, life span. Second of two courses. (W)

6070 Occupational Therapy Research II. Cr. 3

Prereq: OT 3070. Application of research principles and methods to solving occupational therapy problems. Material Fee As Indicated In The Schedule of Classes (F)

6090 Directed Research. Cr. 1-4 (Max. 8)

Prereq: OT 6070 or equiv., and written consent of instructor. Opportunity to conduct supervised research and to participate in research activities of a mentor. (T)

6230 Motor Control. Cr. 3

Prereq: OT 5200, OT 5400, OT 7300 and written consent of instructor. Current theories of motor control and motor learning; recovery of function and normal movement across the lifespan. (W)

6320 (PPR 6300) Patient Perspectives of Health, Illness and Culture. (PT 6320) Cr. 2

Prereq: enrollment in College of Pharmacy and Health Sciences or other health care program. People from various cultures (religious, ethnic, sexual orientation, disability, chronic illness, economic status) discuss in small groups how these cultures influence living with a chronic illness. Students also discuss readings on health culture and keep a journal on their course experience. (S)

7120 Topics in Assistive Technology. Cr. 3

Prereq: graduate standing and written consent of instructor. Theories of assistive technology; their application in health care and community settings. (S)

7200 Program Administration and Entrepreneurship. Cr. 3

Open only to OT students. Development, management and administration of established and emerging occupational therapy programs; exploration of career development. (W)

7500 Specialist Roles in Occupational Therapy. Cr. 3 (Max. 9)

Issues of the occupational therapy specialist. (I)

7750 Professional Field Experience. Cr. 1-4

Prereq. or coreq: written consent of advisor. Offered for S and U grades only. Supervised placement in area of specialization. (T)

7898 Level II Fieldwork A: Medical. Cr. 8

Offered for S and U grades only. Prereq: completion of all professional curriculum course work. Supervised field work experience in affiliated health care agencies. (T)

7899 Level II Fieldwork B: Community. Cr. 8

Offered for S and U grades only. Prereq: completion of all professional curriculum course work. Supervised field work experience in affiliated health care agencies. (T)

7990 Directed Study. Cr. 1-3 (Max. 5)

Prereq: written consent of instructor. Opportunities for study and experience in areas of special interest in occupational therapy. Written report and oral presentation required. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req.)

Prereq: OT 7700 and written consent of advisor. (T)

Pharmaceutical Sciences

Office: 3610 CPHS; 313-577-1047

Chairperson: George B. Corcoran

Website: <http://www.cphs.wayne.edu/psc/index.php>

Professors

Hanley N. Abramson, Martin Barr (Emeritus), Deepak K. Bhalla, Fei Chen, George B. Corcoran, Raymond J. Dauphinais (Emeritus), Alope K. Dutta, Fusao Hirata, Anjaneyulu Kowluru, Serrine S. Lau, Terrence J. Monks, Janardan B. Nagwekar (Emeritus), Timothy L. Stemmler, Henry C. Wormser (Emeritus), Zhengping Yi

Adjunct Professors

Jacob V. Aranda, David J.P. Bassett, Michael R. Bleavins, Robert A. Levine, Michael J. Rybak

Associate Professors

Randall L. Commissaris, Steven M. Firestine, David K. Pitts, Duska M. Separovic (Research), Paul M. Stemmer (Tenure Retreat)

Adjunct Associate Professors

Merlin E. Ekstrom, Peter D. Frade, Edward J. Kerfoot, Paul E. Kilgore, Ladislau C. Kovari, Howard J. Normile, Allen J. Rosenspire, William C. Watt (Clinical)

Assistant Professors

Arun K. Iyer, Olivia M. Merkel, Anna B. Moszczynska, Philip L. Pokorski (Clinical), Zhihui Qin, Xiangmin Zhang (Research)

Adjunct Assistant Professors

Hossam M. Ashour, Amit Banerjee (Research), Kyle J. Burghardt, Christine Davie, Bradford R. Hepler, Daniel S. Isenschmid, Jing Li, Emily T. Martin, Bonita G. Taffe, David M. Thomas, Hani Zaher

Adjunct Instructor

Aiko Hirata

Graduate Degrees

MASTER OF SCIENCE with a major in Pharmaceutical Sciences and specializations in Medicinal Chemistry, Pharmaceuticals, and Pharmacology/Toxicology

DOCTOR OF PHILOSOPHY with a major in Pharmaceutical Sciences and specializations in Medicinal Chemistry, Pharmaceuticals, and Pharmacology/Toxicology

The pharmaceutical sciences encompass the traditional disciplines of medicinal or pharmaceutical chemistry, pharmaceuticals and pharmacology/toxicology. Medicinal chemistry is primarily devoted to the discovery and development of new compounds which may be of value in the diagnosis and treatment of disease. Included are applications of organic chemistry, natural product chemistry, biochemistry, pharmacology and the relationships among chemical structure, physical properties and biological activity. Pharmaceuticals is concerned with the conception, design, production, characterization, and evaluation of drug delivery systems in vitro and in vivo. Pharmacology includes physical, chemical, biological, microbiological and engineering studies related to the design of drug delivery systems. Pharma-

cology/toxicology deals with the principles and mechanisms of drug action on biological systems and the toxicological aspects of drugs and other substances.

Applicants with a strong background in the behavioral, biological, pharmacy and/or the physical sciences are excellent candidates for graduate work in this department. Study within this department is heavy focused on an interdisciplinary approach and the curriculum involves a single major with specializations rather than separate majors. This leads to greater flexibility in designing individualized programs geared to the applicant's preparation and interests.

Pharmaceutical Sciences (M.S. Program)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. For the master's degree program, with a major in pharmaceutical sciences, the following criteria must also be satisfied:

The General portion of the Graduate Record Examination is required of all applicants. There are no minimum GRE scores required for admissions; however, applicants scoring below 150 on the quantitative portion of the exam are generally not admitted.

Applicants whose native language is other than English must demonstrate proficiency in English prior to beginning the program (see English Proficiency Requirements, p. 20).

In addition to the regular University application, the applicant must also submit the following:

1. A general statement (300-400 words, typewritten) of reasons for selecting the program, including a resume, career objectives, possible research interests, and a list of faculty members that the applicant is interested in working with for their thesis.
2. Three letters of recommendation.

If an applicant's undergraduate preparation is considered deficient for advanced work in the pharmaceutical sciences, additional work may be required at the undergraduate level. All prerequisite credits must be earned prior to or concurrent with the first graduate credits.

Application materials may be obtained by contacting the Graduate Officer, Department of Pharmaceutical Sciences, Eugene Applebaum College of Pharmacy and Health Sciences, Wayne State University, Detroit, Michigan 48202 or may be downloaded from the department website: <http://www.cphs.wayne.edu/psc/graduate-programs.php>

DEGREE REQUIREMENTS

The Master of Science with a major in Pharmaceutical Sciences is offered only as a Plan A master's program requiring thirty credits, including an eight-credit thesis. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32.

Courses required will vary with the student's previous preparation and the area of specialization. These courses will be determined by the student's graduate advisor, with review and approval by the College Graduate Officer as formalized by the Plan of Work. In addition to individualized courses, all Master of Science students are required to complete four core interdisciplinary courses: PSC 6800, PSC 7010, PSC 7020, and PSC 7040. All students in the Graduate Program are required to attend Departmental Seminars (PSC 7850, each semester). Each Master's degree student must present one regular Departmental seminar on their final research project. In addition, all Master's students will register for one credit of Introduction to Seminar, PSC 7860, in the Spring/Summer semester of their first year and provide a seminar of thirty minutes in length describing a research experience during their first year. To qualify for the degree, all courses specified on the Plan of Work must be satisfactorily completed with a cumulative grade point average of at least 3.0. In addition,

a final oral examination of the thesis is required of all candidates.

Selection of Advisor: The Graduate Officer will serve as temporary advisor to the applicant during the first semester. During this semester, the applicant will conduct three research rotations in the laboratory of selected Faculty. Students are encouraged to meet with all graduate faculty in the specialty and discuss their research interests. At the end of the first semester, all Master's students must choose an advisor and obtain his/her consent to direct the student's research. This advisor will then sign the student's program requests, Plan of Work and other necessary forms. If a student fails to find an advisor, the Graduate Officer may provide the student with an additional research rotation. Failure to find a research advisor could result in removal from the program.

Candidacy: Applicants apply to the College Graduate Officer to become degree candidates by filing a Plan of Work, approved by their advisor, prior to the completion of twelve graduate credits in the program. To qualify, applicants must exhibit satisfactory scholarship (graduate grade point average of 3.0 or above), have completed any prerequisite and/or corequisite courses specified at the time of admission and have regular admission status. Applicants who have not been advanced to candidacy by the time twelve graduate credits have been completed may be denied further registration in the program.

Academic Progress: All students are required to complete a comprehensive Capstone exam after the successful completion of all required courses. In addition, at the conclusion of the Fall and Winter semesters, progress of every student in the program will be reviewed by the departmental Graduate Program Committee. Each student is evaluated in terms of performance in course work, research progress, fulfillment of University requirements for filing a Plan of Work, and overall professional development. The evaluation at the conclusion of the winter semester includes a written assessment by the faculty advisor of the student's strengths and weaknesses, as well as an indication of how any deficiencies will be addressed. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively

A student will be placed on probation for any of the following reasons;

1. Qualified admission status at the time of matriculation;
2. Receipt of a grade lower than 'B' in any departmental course;
3. Notification from the advisor and/or thesis committee that the student is not making adequate progress in his/her research.
4. Inappropriate, unprofessional and unsafe conduct as determined by the Graduate Program Committee.

The student will be informed in writing, at the time of being placed on probation, of the requirements for removal from probationary status. The decision to place a student on probation rests with the Graduate Program Committee.

A student may be dismissed from the program for the following reasons:

1. Failure to comply with requirements set by the Graduate Program committee;
2. Receipt of two or more grades below 'B' in any single semester;
3. Unauthorized leave of absence;
4. Inability to find a research advisor;
5. Receipt of a grade less than B while on probation.

Leave of Absence: A leave of absence is defined as an absence from the graduate program for one or more semesters and is only permitted for extenuating personal or medical reasons. Students who

are granted a leave of absence may be required to do remedial work, depending on the length of absence from the program.

Students who have not registered for two or more consecutive semesters will be placed on inactive status and must obtain the permission of the Department Graduate Program Committee and the College Graduate Officer before registering again.

Pharmaceutical Sciences (Ph.D. Program)

Admission: In addition to the requirements of the Graduate School (see Admission, Graduate School, p. 17), the applicant should present a bachelor's or master's degree with a major in the behavioral, biological, pharmaceutical or physical sciences.

The General portion of the Graduate Record Examination is required of all applicants. There are no minimum GRE scores required for admissions; however, applicants scoring below 150 on the quantitative portion of the exam are generally not admitted.

Applicants whose native language is other than English must demonstrate proficiency in English prior to beginning the program (see English Proficiency Requirements, p. 20).

In addition to the regular University application, the applicant must also submit the following.

1. A general statement (300-400 words, typewritten) of reasons for selecting the program, including a resume, career objectives, possible research interests and a list of faculty members that the applicant is interested in working with for their dissertation.
2. Three letters of recommendation.

Application materials may be obtained by contacting the Graduate Officer, Department of Pharmaceutical Sciences, Eugene Applebaum College of Pharmacy and Health Sciences, Wayne State University, Detroit, Michigan 48202.

DEGREE REQUIREMENTS

Candidates for the doctoral degree must complete ninety credits beyond the baccalaureate degree, in compliance with the academic procedures of the Graduate School; see Doctor of Philosophy Degrees (Ph.D.). All PhD students are required to complete four core interdisciplinary courses: PSC 6800, PSC 7010, PSC 7020, and PSC 7040. The thirty-credit dissertation registration requirement is fulfilled by registering for the courses PSC 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Selection of Advisor: Doctoral students either select an advisor after rotating in three labs (see above, under Master of Science Program) or are directly placed under the supervision of an advisor.

Candidacy: See the requirements of the Graduate School, Candidacy for Ph.D. Degree, p. 40.

Seminar Presentation: All Ph.D. students will register for PSC 7850 each semester they are in the program. In total, all PhD students must present three seminars not including their defense seminar. Students register for one credit of Introduction to Seminar, PSC 7860, in the Spring/Summer semester of their first year and provide a seminar of thirty minutes in length describing a research experience during their first year. After the first academic year, all Ph.D. students will register for one credit of PSC 7870, Second Year Seminar (Winter semester) and PSC 7880, Third Year Seminar (Fall). For PSC 7870, the seminar shall be on a topic not directly related to the student's dissertation work. The topic will be selected by the student in concert with his/her research advisor and must be approved by that semester's seminar coordinator not less than two weeks prior to the scheduled seminar. Furthermore, the student must make available to the Department a two-page outline or summary of the seminar, including pertinent references. The outline/summary must be approved by the semester's seminar coordinator, who will deliver it to the Department faculty, students, and staff by email not less than one week prior to the seminar. Failure to comply with this requirement

shall result in a lowering of the student's seminar grade by one full mark. PSC 7880 will take place after the student has obtained Candidacy and will be on their dissertation research.

Academic Progress: See above, under Master of Science Program.

Leave of Absence: See above, under Master of Science Program.

Manual, Student

A student manual, provided by the Department, contains policy statements that may pertain to admission, candidacy, and degree requirements. Students should be sure to consult this manual for the current statements on these policies.

Financial Aid

General sources of financial aid for graduate students are listed in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin. In addition, there are a limited number of teaching and research assistantships available to qualified students. Inquiries should be directed to the Graduate Officer, Department of Pharmaceutical Sciences. The following scholarship is open to pharmaceutical sciences students:

Frank O. Taylor Pharmacy Graduate Scholarship: An award of \$1,000 is given to a Department of Pharmaceutical Sciences graduate student with an interest in pursuing a career in industrial pharmacy and who, in the opinion of the faculty, excels in both research productivity and didactic courses. The student must have completed three semesters, twenty credits of graduate level courses and Advance Drug Action and Safety I (PSC 7010). A minimum 3.6 g.p.a. (on a four-point scale) is required (excluding thesis research credits). The student's research performance must be in the top ten percent of students based on annual evaluation by his/her thesis advisor.

George Fuller Endowed Scholarship. Full time students working toward their PhD in the Pharmaceutical Sciences are eligible for this award, established by the friends and family of alumnus and former dean, George Fuller. Applicants must be in good academic standing, yet need not demonstrate financial need.

Pharmaceutical Sciences Courses (PSC)

The following courses, numbered 4000-4999, are offered for professional credit. Courses numbered 4000-4999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

4115 Pharmaceutics I Cr. 3

Prereq: first year professional standing. Introduction to pure drug substance formulation into dosage forms and the principles and mechanisms for developing dosage forms for safe and effective use in patients. (F)

4125 Introduction to Pharmaceutical Sciences: Medicinal Chemistry / Pharmacology / Immunology Cr. 3

Prereq: first year professional standing. Introduction to medicinal chemistry, pharmacology and biotechnology with a focus on drug discovery and drug action. (F)

4215 Pharmaceutics II Cr. 3

Prereq: PSC 4115; first year professional standing. Basic pharmacokinetics: principles of drug administration, distribution, metabolism and excretion (ADME) using different dosage forms, and basics of route administration. (W)

4225 Autonomic Pharmacology Cr. 2

Prereq: PSC 4125; first year professional standing. The principles of autonomic pharmacology integrated into an understanding of the functioning of the autonomic system; the major target organs and the physiological effects of agonists and antagonists elicited through autonomic receptor subtypes. (W)

4320 Principles of Drug Action. Cr. 3

Prereq: second professional year standing. General principles of pharmacology and medicinal chemistry. (Y)

5115 Pharmacokinetics Cr. 2

Prereq: second professional year standing. Conceptual knowledge-base and practical calculation applications of pharmacokinetic principles. (F)

5600 Drugs of Abuse. Cr. 3-4

Prereq: third professional year standing. Pharmacology and toxicology, both clinical and animal, associated with recreationally-used agents; treatment of acute and chronic problems associated with these agents; concept of chronic drug administration and abuse as disease state. (Y)

5870 Seminar in Pharmacology. Cr. 1 (Max. 2)

Prereq: written consent of instructor. Open to undergraduates in good academic standing. Offered for undergraduate credit only. Reports and discussions on current literature and recent advances in the field. Assigned topics presented by students. (T)

5990 Directed Study in Medicinal Chemistry. Cr. 2

Prereq: written consent of instructor. No pharmacy program credit after completion of two credits of PSC 5991, PSC 5992, PPR 5990, except by written consent of department chair. Offered for undergraduate credit only. (T)

5991 Directed Study in Pharmaceutics. Cr. 2

Prereq: written consent of instructor. No pharmacy program credit after completion of two credits of PSC 5990, PSC 5992, PPR 5990, except by written consent of department chair. Offered for undergraduate credit only. (T)

5992 Directed Study in Pharmacology. Cr. 2

Prereq: written consent of instructor. Nopharmacy program credit after completion of two credits of PSC 5990, PSC 5991, PPR 5990, except by written consent of department chair. Offered for undergraduate credit only. (T)

6000 Fundamentals of Drug Design. Cr. 2

Prereq: last professional year, graduate, or graduate professional standing; written consent of instructor. Discussion of practical applications and theoretical consideration in the design of new drug molecules. Topics include quantitative structure-activity relationships, metabolic antagonism, enzyme inhibition, and pro-drugs. (Y)

6285 Pharmacy Seminar Cr. 1

Prereq: third professional year standing. Presentations on topics of current interest on basic science problems relevant to the major discipline of pharmaceutical sciences. (W)

6800 Introduction to Research. Cr. 2

Prereq: last professional year, graduate, or graduate professional standing. Fundamental concepts and resources for responsible conduct of biomedical research and advancing scientific professional development, and data analysis and statistics. (Y)

6890 Toxicology and Adverse Drug Reactions. Cr. 3

Prereq: last professional year, graduate, or graduate professional standing; written consent of instructor. Study of toxicology and adverse drug reactions including metabolism, hypersensitivity, carcinogenicity, drug-drug interactions, and other factors hazardous to human health. (Y)

6910 Pharmaceutical Waste: Environmental Impact and Management. (CE 6910) Cr. 2-3

Prereq: advanced standing in Pharmacy program or in College of Pharmacy and Health Sciences; or graduate student in engineering. Course designed for advanced professional and graduate students with sufficient chemistry and/or biological sciences background who are interested in the environmental impact, management, and regulation of waste pharmaceuticals as emerging issues. (S)

7010 Advanced Drug Action and Safety I. Cr. 3

Prereq: last professional year, graduate, or graduate professional standing; written consent of instructor. Survey of advanced research topics in pharmacology. (F)

7020 Advanced Drug Discovery I. Cr. 3

Prereq: last professional year, graduate, or graduate professional standing; written consent of instructor. Survey of advanced research topics in medicinal chemistry. (W)

7040 Advanced Drug Formulation and Delivery I. Cr. 3

Prereq: last professional year, graduate, or graduate professional standing; written consent of instructor. No credit after PPR 4230. Survey of advanced research topics in pharmaceutics. (W)

7160 Advanced Practice Basic Pharmaceutical Sciences Elective. Cr. 3-6 (Max. 6)

Prereq: admission to Pharm.D. program. Eight-week rotation in basic science-oriented research laboratory. (I)

7600 Drugs of Abuse: Advanced. Cr. 2

Prereq: prior course in pharmacology and good academic standing. Pharmacology and toxicology, both clinical and animal, associated with recreationally-used agents; treatment of acute and chronic problems associated with these agents; concept of chronic drug administration and abuse as disease state. (W)

7700 Advanced Drug Action and Safety II. Cr. 2

Prereq: PSC 7010, last professional year, graduate, or graduate professional standing; written consent of instructor. Continuing survey of modern research topics in pharmacology. (B:W)

7710 Advanced Drug Discovery II. Cr. 2

Prereq: PSC 7020, last professional year, graduate, or graduate professional standing; written consent of instructor. Continuing survey of advanced research topics in medicinal chemistry. (B:W)

7720 Advanced Drug Formulation and Delivery II. Cr. 2

Prereq: last professional year, graduate, or graduate professional standing; written consent of instructor. Second course in survey of advanced research topics in pharmaceuticals. (B:W)

7800 Research Techniques in Medicinal Chemistry. Cr. 1-4 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Laboratory work employing modern techniques available in medicinal chemistry; application of basic principles to graduate study and research. (T)

7810 Research Techniques in Pharmaceuticals. Cr. 1-4 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Laboratory work employing modern techniques available in pharmaceuticals: application of basic principles to graduate study and research. (T)

7820 Research Techniques in Pharmacology. Cr. 1-4 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Laboratory work employing some of the modern techniques available in pharmacology, including the application of basic principles to graduate study and research. (T)

7840 Seminar in Basic Pharmaceutical Sciences. Cr. 1-3

Prereq: graduate standing or admission to Pharm.D. program. Basic science seminar for doctor of pharmacy students or graduate students. (I)

7850 Pharmaceutical Sciences Colloquium. Cr. 1 (Max. 10)

Prereq: written consent of instructor. This course is a required seminar course for all graduate students in the Department of Pharmaceutical Sciences. (T)

7860 Introduction to Seminar. Cr. 1 (Max. 4)

Prereq: written consent of instructor. A required seminar course for all first year graduate students in the Department of Pharmaceutical Sciences. Students will be required to present a seminar on their research progress during their first year in the program. (T)

7870 Second Year Seminar. Cr. 1

Prereq: PSC 7860. A required seminar course for all second year PhD students in the Department of Pharmaceutical Sciences. Students will be required to present a seminar on a topic unrelated to their research. (F,W)

7880 Third Year Seminar. Cr. 1

Prereq: PSC 7870. A required seminar course for all third year PhD students in the Department of Pharmaceutical Sciences. Students will be required to present a seminar on their research. (F,W)

7999 Master's Essay Direction. Cr. 2 (2 req., max. 2)

Prereq: written consent of instructor. (T)

8650 Special Topics in Medicinal Chemistry. Cr. 2 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Recent developments in medicinal chemistry. Topics under investigation and of current interest offered in different semesters. (T)

8660 Special Topics in Pharmaceuticals. Cr. 2 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Recent developments in pharmaceuticals. Topics under investigation and of current interest offered in different semesters. (T)

8670 Special Topics in Pharmacology. Cr. 2 (Max. 6, M.S.; max. 12, Ph.D.)

Prereq: written consent of instructor. Recent developments in pharmacology. Topics under investigation and of current interest offered in different semesters. (T)

8999 Master's Thesis Research and Direction. Cr. 1-8 (8 req., max. 8)

Prereq: written consent of instructor. (T)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of department and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Research in preparation for doctoral dissertation. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in department and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: PSC 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following PSC 9991. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: PSC 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following PSC 9992. Offered for S and U grades only. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: PSC 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following PSC 9993. Offered for S and U grades only. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in PSC 9991-9994. Offered for S and U grades only. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Pharmacy Practice

Office: 2152 CPHS; 313-577-0826

Chairperson: Brian L. Crabtree

Website: <http://www.cphs.wayne.edu/practice/index.php>

Professors

Brian L. Crabtree, Linda Jaber, Pramodini Kale-Pradhan, Richard Lucarotti, Douglas A. Miller, Michael J. Rybak, Maureen Smythe, Jesse C. Vivian,

Associate Professors

David Bach, Raymond Cha, Susan L. Davis, Candice Garwood, Paul Kilgore, Lynette Moser, Victoria Tutag-Lehr, Mary Beth O'Connell, Dennis Parker, Francine Salinitri, Sheila Wilhelm

Assistant Professors

Hossam Ashour, Helen Berlie, Kyle Burghardt, Christine Radinak Davie, Joseph Fava, Christopher Giuliano, Justine Gortney, Melissa Lipari, Vanessa Millisor, Amber Lanae Smith, Brittany Stewart

Graduate Degree

DOCTOR OF PHARMACY

The Profession of Pharmacy

Expanded opportunities for pharmacists in patient care roles and therapeutic decision-making have evolved during the past three decades. The traditional role in drug distribution has increasingly expanded to incorporate the concept of comprehensive medication management, a philosophy which gives pharmacists the responsibility for assuring drug therapy that achieves defined outcomes and improves a patient's quality of life. Pharmacists in contemporary practice are trained and expected to work collaboratively with the patient and the patient's other health care providers to assure that drug therapy is safe and effective.

The ability of the pharmacist to play an active role in drug therapy is recognized at both the state and national levels. In recent years, several states have passed legislation that allows pharmacists to initiate or modify drug therapy, through collaboration with a physician or through independent authority. In Michigan, pharmacists may prescribe under the delegated authority of a licensed physician.

Pharmacy (Pharm.D. Program)

The College offers to qualified applicants a professional program leading to the Doctor of Pharmacy (Pharm.D.). The Doctor of Pharmacy program develops a highly qualified expert in pharmacotherapy who is prepared to provide professional leadership in the practice of pharmacy.

Admission: Students are admitted to the Doctor of Pharmacy program for the fall semester only. Enrollment is limited to applicants who have met the general requirements for admission to the University by the stipulated deadline and present evidence of professional admissibility and promise of academic and professional competence in pharmacy.

The applicant must have completed (or be pursuing completion of) preprofessional core courses at the undergraduate level, with a grade point average of 2.75 or better, and demonstrated competency in computer literacy, critical thinking, and oral communication.

For complete information on admission, and preprofessional and professional undergraduate program requirements, consult the Wayne State University Undergraduate Bulletin.

Application: Deadline for submission of all application materials is the first Monday in November each year. The Doctor of Pharmacy

Program participates in the Early Decision program. Applications are available through the Pharmacy College Application Service (PharmCAS) at <http://www.pharmCAS.org>. A competitive score on the Pharmacy College Admissions Test (PCAT) is also required. Only candidates who have completed all prerequisites by the end of the winter term preceding the fall term of prospective admission, are considered for admission.

ADMISSION REQUIREMENTS

Admission to the Doctor of Pharmacy program is competitive and the following criteria are used to evaluate applications from prospective students. Admissions decisions are made by the Admissions Committee. The committee evaluates all factors, including interview evaluation. Admission granted to students while they are in the preprofessional program will be contingent upon their completion of that program with grade point averages as indicated below.

1. Minimum core grade point average of 2.75 (on a four-point system), calculated on the final grades earned in the required preprofessional courses. Completion of prerequisites with minimum grades does not guarantee admission.
2. Minimum undergraduate grade point average of 3.0 (on a four point system).
3. Promise of success in a professional curriculum. Transcripts are evaluated for evidence of continued success in a full-time, science-based curriculum. Patterns of course repetition and excessive withdrawals are considered. It is recommended that applicants repeat not more than two mathematics and science courses in order to improve grades.
4. All applicants must take the Pharmacy College Admissions Test (PCAT). The PCAT must be taken no later than the year prior to admission. Applicants must have a minimum composite PCAT percentile score of 50. Scores on the individual components of the PCAT examination will be reviewed by the Admissions Committee.
5. All applicants must complete the Wayne State University English Proficiency Requirement during the winter semester prior to fall admission. Applicants not enrolled at Wayne State University may arrange for out-state testing to satisfy this requirement at their present educational institution; for information, call the Testing and Evaluation Office: 313-577-3400.
7. A personal interview is required.
8. Nonacademic factors including work experience, community service and leadership abilities will be evaluated.
9. A criminal background check is performed on all accepted applicants and is evaluated prior to an applicant matriculating into the program.

DEGREE REQUIREMENTS

The Doctor of Pharmacy requires a minimum of 124 credits in the professional program. All course work must be done in compliance with the academic procedures of the University and the College; see the sections of this bulletin beginning under Admission, Graduate School, p. 17 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, and the Wayne State University Undergraduate Bulletin.

A student must complete all curriculum and program requirements, remove any marks of 'I' or 'Y', and be recommended for the degree. The student must complete the required minimum number of credits, elect courses in the proper sequence in the curriculum shown below, and meet all course prerequisites and corequisites, unless excused from doing so by the Dean.

A graduate of the following four-year professional curriculum earns a Doctor of Pharmacy (Pharm.D.) and is eligible for the NAPLEX exam leading to licensure as a pharmacist. Students should also note that they may apply for a Bachelor of Health Sciences with a concentration in Pharmaceutical Sciences after completion of their first year of the Pharm.D. program. Students are eligible once they have com-

pleted a minimum of 120 credits, including all university general education requirements, professional courses in the P1 year, and any electives needed to reach that 120 credit minimum. The B.H.S. degree will allow students the opportunity to enter other fields of advanced study which require a baccalaureate degree, but granting of the B.H.S. degree does not qualify for licensure; application for licensure will occur after completion of the Pharm.D. degree.

Pharm.D. Professional Curriculum *- without concentration*

FIRST PROFESSIONAL YEAR (P-1) - Undergraduate Level

FALL SEMESTER

PHA 4105 – Pathophysiology I: Cr. 3
PHA 4125 – Drug Literature and Foundations of Research: Cr. 3
PSC 4115 – Pharmaceutics I: Cr. 3
PSC 4125 – Introduction to Pharmaceutical Sciences: Medicinal Chemistry/Pharmacology/Immunology: Cr. 3
PPR 4115 – Social and Administrative Sciences and Professional Development I: Introduction to the Pharmacy Profession: Cr. 2

Total credits: 14

WINTER SEMESTER

PHA 4205 – Pathophysiology II: Cr. 2
PHA 4225 – Principles of Pharmacotherapy I: Respiratory, Gastroenterology, Allergy, Ophthalmology, and Basic Self-Care: Cr. 4
PHA 4235 – Pharmacotherapeutic Problem Solving I: Respiratory, Gastroenterology, Allergy, Ophthalmology, and Basic Self-Care: Cr. 2
PSC 4215 – Pharmaceutics II: Cr. 2
PSC 4225 – Autonomic Pharmacology: Cr. 2
PPR 4245 – Patient Care Lab I Cr. 1
PPR 4255 – Social and Administrative Sciences and Professional Development II: Healthcare Systems and Social Aspects of Pharmacy: Cr. 2

Total credits: 15

SPRING SEMESTER

PPR 4315 – Pharmacy Jurisprudence: Cr. 2
PPR 4365 – Introductory Pharmacy Practice Experience I: Cr. 1

Total Credits: 3

SECOND PROFESSIONAL YEAR (P-2) THROUGH FOURTH PROFESSIONAL YEAR (P-4) – Graduate Level

SECOND PROFESSIONAL YEAR (P-2)

FALL SEMESTER

PHA 5115 – Principles of Pharmacotherapy II: Nephrology, Cardiology: Cr. 5
PHA 5125 – Principles of Pharmacotherapy III: Endocrinology, Gynecology, Urology: Cr. 4
PHA 5135 – Pharmacotherapeutic Problem-Solving II: Nephrology, Cardiology, Endocrinology, Gynecology, Urology: Cr. 2
PSC 5115 – Pharmacokinetics: Cr. 2
PPR 5145 – Patient Care Lab II: Cr. 1
PPR 5155 – Social and Administrative Sciences and Professional Development III: Practice Management: Cr. 2
PPR 5165 – Introductory Pharmacy Practice Experience II: Cr. 1

Total credits: 17

WINTER SEMESTER

PHA 5215 – Principles of Pharmacotherapy IV: Infectious Diseases: Cr. 4
PHA 5225 – Principles of Pharmacotherapy V: Neurology, Psychiatry: Cr. 4
PHA 5235 – Pharmacotherapeutic Problem-Solving III: Infectious Diseases, Neurology, Psychiatry: Cr. 2
PPR 5245 – Patient Care Laboratory III: Cr. 1
PPR 5215 – Applied Pharmacokinetics and Pharmacogenomics, Cr. 2
PPR 5255 – Social and Administrative Sciences and Professional Development IV: Medication Use Process - Pharmacist Responsibility: Cr. 2
PPR 5265 – Introductory Pharmacy Practice Experience III: Cr. 1

Professional Elective Option (Directed Study only): Cr. 2

Total credits: 16

Total Year Credits: 33

Accumulated Credits for the Program: 65

SPRING SEMESTER

Professional Elective Option (Didactic and/or Directed Study), Cr. 2-4*

THIRD PROFESSIONAL YEAR (P-3)

PPR 6165 and 6175 are offered in both Fall and Winter terms; students will be assigned to one of these courses in the Fall and the other in the Winter.

FALL SEMESTER

PHA 6125 – Principles of Pharmacotherapy VI: Oncology, Advanced Therapeutics: Cr. 3
PHA 6135 – Pharmacotherapeutic Problem-Solving IV: Oncology and Advanced Therapeutics: Cr. 3
PPR 6115 – Applied Therapeutics to Self Care: Cr. 2
PPR 6145 – Patient Care Lab IV: Cr.1
PPR 6155 – Social and Administrative Sciences and Professional Development V: Pharmacy Practice Development: Cr. 3
PPR 6165 – Hospital Practice Introductory Experience: Cr. 2
or
PPR6175 – Community Practice Introductory Experience: Cr. 2
Professional Electives (Didactic and/or Directed Study): Cr. 2*
Total credits: 14

WINTER SEMESTER

First Seven-week Block

PHA 6235 – Pharmacotherapeutic Problem-Solving IV: Drug-Induced Diseases: Cr. 2

Second Seven-week Block

PPR 6295 – Clinical Capstone: Cr. 2

Courses Taken Throughout Semester

PSC 6285 – Pharmacy Seminar: Cr.1
PPR 6165 – Hospital Practice Introductory Experience: Cr. 2
or
PPR 6175 – Community Practice Introductory Experience: Cr. 2
PPR 6235 – Social and Administrative Sciences and Professional Development VI: Public Health and Population Based Care: Cr. 2
PPR 6245 – Pharmacy Ethics and Professional Responsibility: Cr. 2
Professional Electives: Cr. 2-4*

Total credits: 11

*A total of 6 credits of professional electives must be taken between the start of the P-2 Winter Semester and completion of the P-3 Winter Semester; only Directed Study electives may be taken prior to the Spring/Summer of the P-2 Year. Students in the Research Scholars Track will fulfill the professional elective requirement with 4 credits of PHA 5195 (Research Scholars Elective) in addition to PHA 4395 Research Scholars: Research Development, subject to the provisions outlined in the Research Scholars Concentration.

Total Year Credits: 25

Accumulated Credits for the Program: 96

FOURTH PROFESSIONAL YEAR (P-4)

Students are required to complete seven advanced practice rotations during the P-4 year.

SPRING/SUMMER, FALL, AND WINTER SEMESTERS

PPR 7410 – Adv. Pharm. Pract Patient Care 1 (inpatient/acute care/general medicine): Cr. 4
PPR 7420 – Adv. Pharm. Pract.: Ambulatory Care: Cr. 4
PPR 7430 – Adv. Pharm. Pract.: Patient Care Core: Cr. 4
PPR 7550 – Adv. Pharm. Practice General Hospital: Cr. 4
PPR 7560 – Adv. Pharm. Practice General Community: Cr. 4

Elective Adv. Pharm. Pract Patient Care or Non-Patient Care: Cr.4
Elective Adv. Pharm. Pract Patient Care or Non-Patient Care: Cr.4

Total credits for year: 28

Accumulated Credits for the Program: 124

Pharm.D. Professional Curriculum - with Research Scholars Concentration

The Research Scholars concentration is offered to students who desire to complete a focus aimed at the development of research related knowledge and skills. There are a limited number of seats available and interested students must apply and be accepted to take this Concentration. Students are selectively offered a position in the Research Scholars Concentration and complete a longitudinal research project as part of that concentration. This program requires completion of PHA 4395 Research Scholars: Research and Development. In subsequent semesters, 4 credit hours of Research Scholars elective (PHA 5195) must be taken between Winter P2 and Winter P3 year, as agreed upon by the faculty research mentor and Research Scholars Program Director. Students in the Research Scholars Concentration will take a special section of the Pharmacy Seminar (PSC 6285) Students electing to and being accepted into this concentration must also complete 1 additional mandatory research focused Advanced Pharmacy Practice Experience (PPR 7195) for 4 credit hours in the place of an elective Advanced Pharmacy Practice Experience offering.

Admissions Requirements to the Research and Scholars Concentration

Pharm.D. students admitted to the WSU Doctor of Pharmacy program are eligible to apply to the Research Scholars Program by December 1st of their P1 year only. Application requirements include:

1. A grade of "B" or better in PHA 4125 Drug Literature and Foundations of Research Course.
2. A cumulative undergraduate G.P.A. of 3.0 or higher at end of fall semester in the P1 year.
3. A minimum composite score at the 75th percentile on the PCAT, with minimum PCAT component scores at the 75th percentile in the chemistry, quantitative and biology sections. The PCAT requirement can be waived by the Research Scholars admissions committee. (As an exception for the 2016 entering class, the PCAT requirement is waived for HealthProStart students who were not required to take PCAT for admission to the PharmD program.)
4. Submission of an essay describing interests, career goals, and any past research experiences. Additionally, a resume or curriculum vitae should be included with the application.

FIRST PROFESSIONAL YEAR (P-1) - Undergraduate Level

FALL SEMESTER

PHA 4105 – Pathophysiology I: Cr. 3
PHA 4125 – Drug Literature and Foundations of Research: Cr. 3
PSC 4115 – Pharmaceutics I: Cr. 3
PSC 4125 – Introduction to Pharmaceutical Sciences: Medicinal Chemistry/Pharmacology/Immunology: Cr. 3
PPR 4115 – Social and Administrative Sciences and Professional Development I: Introduction to the Pharmacy Profession: Cr. 2
Total credits: 14

WINTER SEMESTER

PHA 4205 – Pathophysiology II: Cr. 2
PHA 4225 – Principles of Pharmacotherapy I: Respiratory, Gastroenterology, Allergy, Ophthalmology, and Basic Self-Care: Cr. 4
PHA 4235 – Pharmacotherapeutic Problem Solving I: Respiratory, Gastroenterology, Allergy, Ophthalmology, and Basic Self-Care: Cr. 2
PSC 4215 – Pharmaceutics II: Cr. 2
PSC 4225 – Autonomic Pharmacology: Cr. 2
PPR 4245 – Patient Care Lab I Cr. 1

PPR 4255 – Social and Administrative Sciences and Professional Development II: Healthcare Systems and Social Aspects of Pharmacy: Cr. 2

Total credits: 15

SPRING SEMESTER

PPR 4315 – Pharmacy Jurisprudence: Cr. 2
PPR 4365 – Introductory Pharmacy Practice Experience I: Cr. 1
PHA 4395 -- Research Scholars: Research Development: Cr 2
Total Credits: 5

SECOND PROFESSIONAL YEAR (P-2) THROUGH FOURTH PROFESSIONAL YEAR (P-4) – Graduate Level

SECOND PROFESSIONAL YEAR (P-2)

FALL SEMESTER

PHA 5115 – Principles of Pharmacotherapy II: Nephrology, Cardiology: Cr. 5
PHA 5125 – Principles of Pharmacotherapy III: Endocrinology, Gynecology, Urology: Cr. 4
PHA 5135 – Pharmacotherapeutic Problem-Solving II: Nephrology, Cardiology, Endocrinology, Gynecology, Urology: Cr. 2
PSC 5115 – Pharmacokinetics: Cr. 2
PPR 5145 – Patient Care Lab II: Cr. 1
PPR 5155 – Social and Administrative Sciences and Professional Development III: Practice Management: Cr. 2
PPR 5165 – Introductory Pharmacy Practice Experience II: Cr. 1
Total credits: 17

WINTER SEMESTER

PHA 5215 – Principles of Pharmacotherapy IV: Infectious Diseases: Cr. 4
PHA 5225 – Principles of Pharmacotherapy V: Neurology, Psychiatry: Cr. 4
PHA 5235 – Pharmacotherapeutic Problem-Solving III: Infectious Diseases, Neurology, Psychiatry: Cr. 2
PPR 5245 – Patient Care Laboratory III: Cr. 1
PPR 5215 – Applied Pharmacokinetics and Pharmacogenomics, Cr. 2
PPR 5255 – Social and Administrative Sciences and Professional Development IV: Medication Use Process - Pharmacist Responsibility: Cr. 2
PPR 5265 – Introductory Pharmacy Practice Experience III: Cr. 1
PHA 5195 -- Research Scholars: Research Conduct Elective: Cr. 1-4
Total credits: 16
Total Year Credits: 33
Accumulated Credits for the Program: 67

SPRING SEMESTER

PHA 5195 -- Research Scholars: Research Conduct Elective: Cr. 1-4

THIRD PROFESSIONAL YEAR (P-3)

PPR 6165 and 6175 are offered in both Fall and Winter terms; students will be assigned to one of these courses in the Fall and the other in the Winter.

FALL SEMESTER

PHA 6125 – Principles of Pharmacotherapy VI: Oncology, Advanced Therapeutics: Cr. 3
PHA 6135 – Pharmacotherapeutic Problem-Solving IV: Oncology and Advanced Therapeutics: Cr. 3
PPR 6115 – Applied Therapeutics to Self Care: Cr. 2
PPR 6145 – Patient Care Lab IV: Cr.1
PPR 6155 – Social and Administrative Sciences and Professional Development V: Pharmacy Practice Development: Cr. 3
PPR 6165 – Hospital Practice Introductory Experience: Cr. 2
or
PPR6175 – Community Practice Introductory Experience: Cr. 2
PHA 5195 -- Research Scholars: Research Conduct Elective: Cr. 1-4
Total credits: 14

WINTER SEMESTER

First Seven-week Block

PHA 6235 – Pharmacotherapeutic Problem-Solving IV: Drug-Induced Diseases: Cr. 2

Second Seven-week Block

PPR 6295 – Clinical Capstone: Cr. 2

Courses Taken Throughout Semester

PSC 6285 – Pharmacy Seminar: Cr. 1

PPR 6165 – Hospital Practice Introductory Experience: Cr. 2

or

PPR 6175 – Community Practice Introductory Experience: Cr. 2

PPR 6235 – Social and Administrative Sciences and Professional

Development VI: Public Health and Population Based Care: Cr. 2

PPR 6245 – Pharmacy Ethics and Professional Responsibility: Cr. 2

PHA 5195 -- Research Scholars: Research Conduct Elective: Cr. 1-4

Total credits: 11

*Students in the Research Scholars Concentration will elect to take 4 credits of PHA 5195 at any time over the course of the P2 and P3 year

Total Year Credits: 29

Accumulated Credits for the Program: 96

FOURTH PROFESSIONAL YEAR (P-4)

Students are required to complete seven advanced practice rotations during the P-4 year.

SPRING/SUMMER, FALL, AND WINTER SEMESTERS

PPR 7410 – Adv. Pharm. Pract Patient Care 1 (inpatient/acute care/general medicine): Cr. 4

PPR 7420 – Adv. Pharm. Pract.: Ambulatory Care: Cr. 4

PPR 7430 – Adv. Pharm. Pract.: Patient Care Core: Cr. 4

PPR 7550 – Adv. Pharm. Practice General Hospital: Cr. 4

PPR 7560 – Adv. Pharm. Practice General Community: Cr. 4

PPR 7195 – Adv. Pharm. Practice Advanced Research Scholars Rotation: Cr 4

Elective Adv. Pharm. Pract Patient Care or Non-Patient Care: Cr.4

Total credits for year: 28

Accumulated Credits for the Program: 124

Pharm.D. Practice Experiences

To provide the pharmacy student with education in the application of knowledge he/she has gained in courses in the curriculum, pharmacy practice experiences are scheduled throughout the Pharm.D. program. Pharmacy practice experiences give the student the opportunity to apply his/her pharmaceutical education directly to patients in a variety of pharmacy settings: community, ambulatory, and institutional locations. Practice experiences are required of all students.

During the fourth professional year (P-4), required pharmacy practice experiences include General Community Practice, General Hospital Practice, Ambulatory Care, and Inpatient/Acute Care General Medicine. An additional experience involving patient care is also required. Students have two elective experiences which may be in patient care or non-patient care settings, such as pharmaceutical sciences or pharmacy practice research, managed care, pharmacy organizations, institutional or community management, or pharmaceutical management.

Requirements: Before students are scheduled to visit practice environments, they must provide health clearance documentation, proof of professional liability insurance, personal medical insurance, and Basic Cardiac Life Support certification; and sign a travel waiver. Students provide their own transportation to practice sites. A criminal background check may also be required by a practice site before a student can visit that site. Additional information on practice experience requirements and when they are required may be obtained from

the College. These change regularly. The most recent requirements can be found at <http://www.cphs.wayne.edu/pharmd/resources.php>.

Pharmacist Licensure

The graduate of the four-year Pharm.D. curriculum earns the degree Doctor of Pharmacy and is eligible for the NAPLEX examination to obtain licensure as a pharmacist. Licensure, either by examination or reciprocity, is available in all states and the District of Columbia.

Internship is a professional and practical experience under the supervision of a preceptor in a pharmacy approved by the Michigan State Board of Pharmacy, beginning after the student has been licensed by the Board of Pharmacy as an intern. Students must obtain a Michigan Internship License when they begin the professional curriculum of the College.

For additional information regarding internship, examination, or licensure in Michigan, write: Director, Licensing Division, Bureau of Health Services, Department of Consumer and Industry Services, P.O. Box 30670, Lansing MI 48909. Reciprocity information is available from: The Executive Director, National Association of Boards of Pharmacy, 700 Busse Highway, Park Ridge IL 60068-2402.

Handbook, Student

The student handbook, provided by this department, also contains policy statements that may pertain to admission, candidacy, and degree requirements. Students should be sure and consult this manual for the current statements on these policies. This can be found at <http://www.cphs.wayne.edu/pharmd/resources.php>

Financial Aid

General sources of financial aid for graduate students are listed in the section on Graduate Financial Assistance, beginning under Financial Assistance, Graduate, p. 26 of this bulletin. Additional scholarships are open to Pharm.D. students through the Office of Student Affairs, 2600 CPHS.

Pharmacy Courses (PHA)

The following courses, numbered 4000-4999, are offered for professional credit. Courses numbered 4000-4999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

4105 Pathophysiology 1 Cr. 3

Prereq: first professional year standing. Advanced pathophysiologic concepts affecting the adult human using a research-based, system-focused approach, including etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states. (F)

4125 Drug Literature and Foundations of Research Cr. 3

Prereq: first professional year standing. Critical evaluation of the medical literature and provision of foundational research skills. (F)

4205 Pathophysiology II Cr. 2

Prereq: PHA 4105; first year professional year standing. Advanced pathophysiologic concepts affecting the adult human using a research-based, system-focused approach, including etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states. (W)

4225 Principles of Pharmacotherapy I: Respiratory, Gastroenterology, Allergy, Ophthalmology, and Basic Self-Care Cr. 4

Prereq: PHA 4105; first professional year standing. Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of gastroenterologic, pulmonary, ophthalmologic, and allergic disorders, and basic self-care. (W)

4235 Pharmacotherapeutic Problem Solving I: Respiratory, Gastroenterology, Allergy, Ophthalmology, and Basic Self-Care Cr. 2

Prereq: first professional year standing. Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of respiratory, gastroenterologic, allergic, and ophthalmologic disorders, and basic self-care. (W)

4395 Research Scholars: Research Development Cr. 2

Prereq: first professional year standing; selection in the research scholars program. Development of basic foundations of research practices for students pursuing the Research Scholars path. (S)

5115 Principles of Pharmacotherapy II: Cardiology, Nephrology Cr. 5

Prereq: second year professional standing. Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of cardiovascular and renal disease. (F)

5125 Principles of Pharmacotherapy III: Endocrinology, Gynecology, Urology Cr. 4

Prereq: second year professional standing. Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of endocrinologic, gynecologic, and urologic disorders. (F)

5135 Pharmacotherapeutic Problem Solving II :Nephrology, Cardiology, Endocrinology, Gynecology, Urology Cr. 2

Prereq: second year professional standing. Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of nephrologic, cardiologic, endocrinologic, and gynecologic conditions. (F)

5195 Research Scholars: Research Conduct Elective Cr. 1-4

Prereq: PHA 4395; selection in the Research Scholars Program. Conducting research project for students pursuing the Research Scholars path. (F)

5215 Principles of Pharmacotherapy IV: Infectious Diseases Cr. 4

Prereq: second year professional year standing. The chemistry, pharmacology, and toxicology of anti-infective agents and the pathophysiology, microbiology, and therapeutics of infectious diseases. (W)

5225 Principles of Pharmacotherapy V: Neurology, Psychiatry Cr. 4

Prereq: second professional year standing. Medicinal chemistry, pharmacology and therapeutics of neurologic and psychiatric disorders. (W)

5235 Pharmacotherapeutic Problem Solving III: Infectious Diseases, Neurology, Psychiatry Cr. 2

Prereq: second professional year standing. Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of infectious, neurologic, and psychiatric diseases. (W)

6125 Principles of Pharmacotherapy VI: Oncology, Advanced Immunology Cr. 3

Prereq: third professional year standing. Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of oncologic and immunologic disorders (F)

6135 Pharmacotherapeutic Problem Solving IV: Oncology and Advanced Pharmacotherapeutics Cr. 3

Prereq: third professional year standing. Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of neoplastic disorders and advanced pharmacotherapeutics. (F)

6235 Pharmacotherapeutic Problem Solving V: Drug Induced Diseases Cr. 2

Prereq: third professional year standing. Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry, and pharmacotherapeutics of drug-induced diseases. (W)

Pharmacy Practice Courses (PPR)

The following courses, numbered 4000-4999, are offered for professional credit. Courses numbered 4000-4999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

4115 Social Administrative Sciences and Professional Development I: Introduction to the Pharmacy Profession Cr. 2

Prereq: first professional year standing. Designed to familiarize the student with pharmacy as a profession and to facilitate an understanding of its place in health care today and in the future. (F)

4245 Patient Care Lab 1 Cr. 1

Prereq: first year professional standing. The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. (W)

4255 Social Administrative Sciences and Professional Development II: Healthcare Systems and Social Aspects of Healthcare Cr. 2

Prereq: first professional year standing. Exploration of health care delivery and payment systems, with an emphasis on pharmacy and pharmacists. Discussion of social constructs, cultural sensitivity, and health belief models as related to pharmacy practice. (W)

4315 Pharmacy Jurisprudence Cr. 2

Prereq: first professional year standing. Application of Michigan state and federal laws to the practice of pharmacy. (S)

4365 Introductory Pharmacy Practice Experience I Cr. 1

Prereq: first professional year standing. Beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. (S)

5145 Patient Care Lab II Cr. 1

Prereq: second professional year standing. The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. (F)

5155 Social Administrative Sciences and Professional Development III: Practice Management Cr. 2

Prereq: second year professional standing. Focus on topics that will enable an understanding of how pharmacy services are managed and how to manage personnel and provide leadership. (F)

5165 Introductory Pharmacy Practice Experience II Cr. 1

Prereq: second professional year standing. Beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. (F)

5215 Applied Pharmacokinetics and Pharmacogenomics Cr. 2

Prereq: PSC 5115; second professional year standing. Application of knowledge of pharmacokinetics and pharmacogenomics to patient-specific drug dosing. (W)

5245 Patient Care Lab III Cr. 2

Prereq: second professional year standing. The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. (W)

5255 Social Administrative Sciences and Professional Development IV: Medication Use Process and Pharmacist Responsibility Cr. 2

Prereq: second professional year standing. Designed to enable understanding of the importance of constructing medication systems and processes around proven best practices to maximize patient safety and to begin developing the ability to conceptualize, implement, and manage these systems in all health care settings. (W)

5265 Introductory Pharmacy Practice Experience III Cr. 1

Prereq: second professional year standing. The introductory pharmacy practice experiences are to provide a beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. (W)

5990 Directed Study in Pharmacy Practice. Cr. 2

Prereq: written consent of instructor. No credit after election of two credits in any of PSC 5990, PSC 5991, PSC 5992, except by written consent of department chair. (T)

6115 Applied Therapeutics in Self-Care Cr. 2

Prereq: third professional year student. Application of concepts of patient assessment, therapeutics, patient education, and health care systems to patient self-care. (F)

6145 Patient Care Lab IV Cr. 1

Prereq: third year professional standing. The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. (F)

6155 Social Administrative Sciences and Professional Development V: Pharmacy Practice Development Cr. 3

Prereq: third professional year standing. Development of and justification for a pharmacy service, including background, service objectives, service design, implementation plan, and evaluation. (F)

6165 Community-Introductory Pharmacy Practice Experience (C-IPPE) Cr. 2

Prereq: third professional year standing. Introduction to the organization and provision of community pharmacy services. (F)

6175 Hospital-Introductory Pharmacy Practice Experience (H-IPPE) Cr. 2

Prereq: third professional year student. Introduction to the organization and provision of health-system pharmacy services. (F)

6235 Social Administrative Sciences and Professional Development VI: Public Health and Population Based Care Cr. 2

Prereq: third professional year standing. Understanding, developing and evaluating population health and population-based health care programs. (W)

6245 Pharmacy Ethics and Professional Responsibility Cr. 2

Prereq: third professional year standing. Understanding ethical precepts and applying normative principles to the practice of pharmacy in the context of professional service to the community. (W)

6295 Clinical Capstone Cr. 2

Prereq: third professional year standing. Utilization of pharmacotherapeutic-related knowledge and skills to evaluate patient cases and practice-related problems in order to assess students' preparedness for advanced pharmacy practice experiences. (W)

6300 (PPR 6300) Patient Perspectives of Health, Illness and Culture. (OT 6320) (PT 6320) Cr. 2

Prereq: enrollment in Pharmacy and Health Sciences college, or other health care program. People from various cultures (religious, ethnic, sexual orientation, disability, chronic illness, economic status) discuss in small groups how these cultures influence living with a chronic illness. Students also discuss readings on health culture and keep a journal on their course experience. (S)

6520 Contemporary Issues in Nutrition Support. Cr. 2

Provision of patient care in cooperation with patients' agents, prescribers, and other members of an interprofessional health care team; management and use of resources of the health care system; evaluation of a patient case and design of an optimal nutritional regimen. (S)

6580 Contemporary Issues in Anticoagulation Management. Cr. 2

Prereq: P3 (Third Year) standing in Pharm.D. program. Open only to Pharm.D. students. Offered for graduate credit only. Advanced therapeutics in area of anticoagulant use. (F)

6590 Principles of Pain Management. Cr. 2

Prereq: Pharm.D. students must be at level P-2 or above. Offered for graduate credit only. Etiology, pathology, signs, symptoms and diagnosis of common pain syndromes from birth to end of life; treatment protocols, goals, outcomes, and monitoring parameters used for pain management. (W)

6720 Clinical Applications of Diabetes. Cr. 2

Prereq: PHA 5165. Advanced elective course on management of diabetes mellitus and its related disorders. Principles of student directed learning, literature discussion and evaluation, interprofessional exposure, small group learning, and hands-on activities. (F)

6770 Study of Medicinal Plants and Culture in Amazonia. Cr. 2

Offered for graduate credit only. Ethnobotany of indigenous plants and use of these substances in the health and beliefs of the native people. Students meet with botanists, taxonomists, pharmacists, shamans, and native people. (S)

6860 Principles of Pediatric Pharmacy. Cr. 2-3

Prereq: fourth professional year, graduate, or graduate professional standing. Common pediatric problems and diseases including poisonings, cystic fibrosis, sickle-cell anemia, placental transfer of drugs and teratology. (Y)

7195 Advance Research Scholars: Advance Pharmacy Practice Experience. Cr. 4

Fourth Professional Year Standing; Selection in the Research Scholars Program. Provides capstone research instruction aimed at project completion, writing and peer review processes, and research program advancement (F)

7225 Vaccines in Clinical and Public Health Practice. Cr. 2

Prereq: introductory course in biology or human physiology; P2 (second year) standing in Pharm.D. program. or M.P.H. student; others by written consent of instructor. Offered for graduate credit only. Explorations of topics related to use of vaccines for infants, children and adults in practice settings that include clinics, pharmacies and public health programs. (Y)

7410 Advanced Pharmacy Practice Inpatient/Acute Care. Cr. 4

Prereq: fourth professional year standing in Pharm.D. program. Experimental education designed to provide practical training experi-

ence in managing drug therapy of patients in a variety of health-care settings. Material Fee As Indicated In The Schedule of Classes (T)

7420 Advanced Pharmacy Practice Ambulatory Care. Cr. 4

Prereq: fourth professional year standing in Pharm.D. program. Open only to Doctor of Pharmacy students. Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. (T)

7430 Advanced Pharmacy Practice Patient Care Core. Cr. 4

Prereq: fourth professional year standing in Pharm.D. program. Open only to Doctor of Pharmacy students. Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. (T)

7530 Advanced Pharmacy Practice Patient Care Elective I. Cr. 4

Prereq: fourth professional year standing in Pharm.D. program. Open only to Doctor of Pharmacy students. Experimental education designed to provide practical training experience in managing drug therapy of specialized patients in diversified health-care settings. (T)

7540 Advanced Pharmacy Practice Non-Patient Care Elective I. Cr. 4

Prereq: fourth professional year standing in Pharm.D. program. Open only to Doctor of Pharmacy students. Practical education to develop knowledge in specific areas of pharmacy practice in specialized pharmacy or health-care settings. (T)

7550 Advanced Pharmacy Practice Hospital. Cr. 4

Prereq: fourth professional year standing in Doctor of Pharmacy program. Coreq. with PPR 7560, PPR 7410-7440, PPR 7530. Practical training experience in hospital pharmacy practice, including pharmacy operations and clinical services. (T)

7560 Advanced Pharmacy Practice Community. Cr. 4

Prereq: fourth professional year standing in Doctor of Pharmacy program. Coreq. with PPR 7550, PPR 7410-7440, PPR 7530. Practical training experience in management of a community pharmacy, and managing drug therapy of patients in community pharmacy setting. (T)

7670 Clinical Pharmacokinetics. Cr. 2

Prereq: PHA 5155, PHA 5165, PPR 6180. Use of pharmacokinetic principles in dosing and monitoring of drug therapy. (W)

7840 Seminar in Pharmacy. Cr. 1

Prereq: third or fourth professional year standing. Reports and discussions by students and members of the staff concerning current developments in clinical pharmacy. (F,W)

7960 Economic Evaluation of Health Care Interventions. Cr. 2-3

Prereq: advanced standing in the College of Pharmacy and Health Services or in M.P.H. program. Designed for advanced professional students (3rd year pharmacy, medicine, health sciences), students in the Master of Public Health degree program, graduate students and Fellows who would like an introduction to cost-effectiveness analysis. (S)

7990 Directed Study in Pharmacy Practice. Cr. 1-3

Prereq: written consent of advisor and graduate officer. Open only to Pharm.D. and M.S. students in hospital pharmacy. Minor projects in pharmacy for students whose interests and needs are not adequately met in other scheduled classes or in the doctoral research project. (T)

Physical Therapy

Office: 2248 CPHS; 313-577-1432

Program Director: Sara F. Maher

Director of Clinical Education: Martha Schiller

Website: <http://www.pt.cphs.wayne.edu/>

Associate Professors

Sara F. Maher
Moh H. Malek

Assistant Professor

Diane Adamo, Jennifer Dickson, Nora Fritz, Sujay Galen, Vicky Pardo, Marie Pepin, Fredrick Pociask, Kristina Reid, Joseph Roche, Martha Schiller

Cooperating Faculty

Veralucia Mendes-Kramer, Phillip L. Pokorski

Associate Faculty

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Center Coordinators of Clinical Education

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Physical Therapy (D.P.T. Program)

Physical therapy is a dynamic health profession that develops, coordinates and utilizes selected knowledge, skills and techniques in planning, organizing and directing programs for the care of individuals whose ability to function is impaired or threatened by disease or injury. This therapy includes examination, evaluation, diagnosis, prognosis, intervention, and analysis of outcomes. It provides services to patients/clients who have impairments of body function and structure, activity limitations, participation restrictions, disabilities, or changes in physical function and health status resulting from injury, disease, or other causes. Physical therapists also must be able to collaborate with a variety of professionals, address risk factors to health, be leaders and providers in the areas of prevention and promoting health, wellness and fitness, serve as educators, consultants, administrators and advocates, utilize critical inquiry skills and direct and supervise the provision of therapy services.

Some examples of diagnoses of individuals who might be seen by a physical therapist include stroke, low back pain, neck pain, ACL knee injury, Parkinson's Disease, spinal cord injury, amputation, heart attack, athletic injury, arthritis, cerebral palsy, rotator cuff (shoulder) injury, total or partial joint replacement, spina bifida, general health and personal training, congestive heart failure, emphysema, cancer, head injury, multiple sclerosis, learning disabilities, speed and agility training, and many more.

The American Physical Therapy Association (APTA) is the organization which represents the physical therapy profession. The mission of the APTA is to further the profession's role in the prevention, diagnosis, and treatment of movement dysfunctions and the enhancement of the physical health and functional abilities of members of the public. Learn more about physical therapy at the APTA's website at <http://www.apta.org>.

Accreditation: The Physical Therapy Program at Wayne State University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) (<http://www.capteonline.org/Home.aspx>). Graduates who receive a Doctor of Physical Therapy degree are eligible to take the national physical therapy licensure examination, the Canadian licensure examination, and for active membership in the American Physical Therapy Association.

General Admission

Admission to this program is contingent upon admission to the Graduate School (for requirements, see Admission, Graduate School, p. 17) and completion of the pre-professional course component thereof (see below).

The Doctor of Physical Therapy (D.P.T.) is offered by this department at two levels of admission: entry level D.P.T. and transitional D.P.T. The entry level degree program is for individuals who are not now practicing physical therapists but are interested in becoming physical therapists. The transitional Doctor of Physical Therapy program is for individuals who are already licensed as a physical therapist in the United States or Canada and who wish to expand their knowledge and skills to be better prepared to work as a primary care provider and expert practitioner. These programs lead to the same degree but require different admissions criteria and the completion of different sets of core courses.

Entry-Level Program

Admission - Entry Level: A baccalaureate degree is not required for admission to the Doctor of Physical Therapy program. The requirements for consideration for admission vary, depending on whether the applicant will have an earned baccalaureate degree prior to enrollment but all applicants must meet requirements for admission to the Graduate School at Wayne State University (for require-

ments, see Admission, Graduate School, p. 17). Starting in 2015, the Graduate Record Examination will be required.

Applicants who will not have a baccalaureate degree upon enrollment in the physical therapy program must successfully complete 1) a minimum of ninety credits, 2) all University General Education Requirements, 3) all physical therapy science pre-requisite courses, 4) all physical therapy non-science pre-requisite courses, and 5) an upper-level concentration to be considered for admission. Specific pre-requisites are listed below. A maximum of sixty credits of pre-professional course work may be transferred from a community college. Students admitted to the Doctor of Physical Therapy Program without a baccalaureate degree will graduate with the D.P.T. degree. A Bachelor of Health Science (physical therapy concentration) may be applied for after the successful completion of the first year in the program.

Applicants who will have completed a baccalaureate degree prior to enrollment in the physical therapy program must complete all physical therapy science pre-requisite courses and all physical therapy non-science pre-requisite courses as listed below.

Admission to the entry-level Doctor of Physical Therapy (D.P.T.) professional program occurs on an annual basis with Physical Therapy courses beginning in the Fall Term. There are a limited number of spaces in the Physical Therapy program and admission is competitive. Completion of the admission requirements does not guarantee admission.

Pre-professional course work taken at another accredited college or university is acceptable as long as the courses are equivalent to the required courses. Students may use the Transfer Credit Evaluation tool to check equivalency of courses. A maximum of sixty credits of pre-professional course work may be transferred from a community college.

1. SCIENCE PREREQUISITE COURSES

The following thirty-seven Credits completed within six years prior to application, but all science courses must be completed during the Fall Term prior to the application deadline.

BIO 1510 – (LS) Basic Life Mechanisms: Cr. 4
BIO 2879 – Anatomy and Physiology: Cr. 5
BIO 3200 – Human Physiology: Cr. 3

CHM 1220 – (PS) General Chemistry I: Cr. 4
CHM 1230 – General Chemistry I Lab: Cr. 1
CHM 1240 – Organic Chemistry I: Cr. 4
CHM 1250 – Organic Chemistry I Lab: Cr. 1

KIN 3570 – Physiology of Exercise I: Cr. 3

MAT 1800 – Elementary Functions: Cr. 4

PHY 2130 – (PS) General Physics: Cr. 3
PHY 2131 – General Physics - Lab: Cr. 1
PHY 2140 – General Physics: Cr. 3
PHY 2141 – General Physics Lab: Cr. 1

2. NON-SCIENCE PREREQUISITE COURSES (Nineteen Credits)

ENG 1020 – (BC) Introductory College Writing: Cr. 4
ENG 3050 – Technical Communication I: Reports: Cr. 3

PSY 1010 – (LS) Introductory Psychology: Cr. 4
PSY 2400 – Developmental Psychology: Cr. 4
PSY 3010 – Statistical Methods in Psychology: Cr. 4

3. UPPER-LEVEL CONCENTRATION (Six Credits Minimum) Required only for students who will not have completed a baccalaureate degree prior to enrollment.

A minimum of six additional credits in upper division (3000 level or above) concentrated in ONE of the following areas:

Biology
Chemistry
Exercise Science

Physics
Psychology

4. UNIVERSITY GENERAL EDUCATION REQUIREMENTS

Individuals must complete all University General Education requirements prior to enrolling in the Doctor of Physical Therapy program. These requirements can be found at the following Wayne State University website: <http://www.advising.wayne.edu/curr/gnd1.php>.

Individuals who have earned a baccalaureate degree are not required to complete the General Education Requirements.

5. Minimum of a 3.00 g.p.a. and no less than a 'C' (2.0 on a 4.00 scale) in all pre-requisite courses

6. Completion of PTCAS application: two letters of recommendation provided through PTCAS; a personal professional statement included in the PTCAS application; and a personal resume outlining your community or vocational activities, honors, employment, extra-curricular and volunteer activities included in the PTCAS application.

7. Completion of application to the Graduate School.

8. Written and Verbal Interviews (Notification of interview date is given after review of initial application. All applicants may not be invited to the interview process).

9. Starting in 2015, the Graduate Record Examination will be required.

Degree Requirements

The Doctor of Physical Therapy degree requires a minimum of 123 credits, including all courses in the core curriculum listed below.

Consistent with Graduate School policy, the grading system for graduate students is 'intended to reflect a higher standard of critical and creative scholarship than those applied at the undergraduate level.' Continuing students are required to earn a minimum of a 3.00 g.p.a. to satisfy degree requirements. A graduate student who receives a 'C' grade in any course is expected to complete remedial work to demonstrate competency in the course requirements that may include repetition of the course the next time it is offered. Receiving more than two 'C' grades, or five grades below a B (3.0), in the curriculum is considered unsatisfactory progress and achievement, and will result in dismissal from the professional program. Students may also be dismissed from the program for unsatisfactory clinical performance or for unsatisfactory professional behavior.

All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively. In addition, the criteria for academic performance given in the Physical Therapy Student Handbook should be followed. The Physical Therapy Student Handbook, provided by this program, also contains policy statements that may pertain to admission, candidacy, and degree requirements which students should consult.

The core curriculum is subject to change without prior notice in response to the changing health care environment and accreditation standards.

Core Curriculum (Entry-Level Program)

PT 5010 – Clinical Applications I: Cr. 1
PT 5020 – Foundations of Physical Therapy: Cr. 2
PT 5030- Basic Patient Care in Physical Therapy: Cr. 2
PT 5070 – Clinical Applications II: Cr. 2
PT 5100 – Therapeutic Exercise I: Cr. 3
PT 5120 – Human Growth and Development: Cr. 2
PT 5300 – Surface Anatomy: Cr. 2
PT 5320 – Basic Examination and Evaluation Procedures: Cr. 3
PT 5400 – Neurosciences for Health Care Professionals: Cr. 3

PT 5410 – Clinical Medicine I: Cr. 2
 PT 5430 – Clinical Medicine II: Cr. 2
 PT 5500 – Kinesiology and Biomechanics: Cr. 3
 PT 5505 – Clinical Applications of Human Anatomy: Cr. 3
 PT 5510 – Clinical Applications of Human Anatomy: Lab Cr. 1
 PT 5650 – Pathophysiology for Health Sciences: Cr. 3
 PT 5660 – Pathokinesiology: Cr. 3
 PT 5800 – Clinical Education I: Cr. 3
 PT 5820 – Clinical Education II: Cr. 3
 PT 6100 – Therapeutic Exercise II: Cr. 3
 PT 6200 – Diversity, Ethics and Legal Issues in Health Care: Cr. 3
 PT 6300 – Research I: Critical Thinking: Cr. 2
 PT 6310 – Physiology of Exercise II: Cr. 3
 PT 6400 – Teaching and Learning in Health Care: Cr. 2
 PT 6500 – Pharmacology: Cr. 2
 PT 6700 – Motor Learning and Motor Control: Cr. 2
 PT 6750 – Complementary and Alternative Health Care: Cr. 2
 PT 7000 – Therapeutic Modalities: Cr. 3
 PT 7100 – Management of Patients with Orthopedic Conditions I: Cr. 3
 PT 7120 – Management of Patients with Orthopedic Conditions II: Cr. 3
 PT 7200 – Management of Patients with Neurological Disorders I: Cr. 3
 PT 7220 – Management of Patients with Neurological Disorders II: Cr. 3
 PT 7300 – Orthotics and Prosthetics: Cr. 3
 PT 7320 – Rehabilitation Procedures: Cr. 3
 PT 7400 – Cardiopulmonary Rehabilitation: Cr. 4
 PT 7600 – Physical Therapy for Medical and Surgical Conditions: Cr. 3
 PT 7700 – Research II: Design and Methodology: Cr. 2
 PT 7720 – Research III: Data Analysis and Interpretation: Cr. 3
 PT 8000 – Therapeutic Management of Pediatric Populations: Cr. 3
 PT 8110 – Geriatrics: Cr. 2
 PT 8200 – Management in Physical Therapy Practice: Cr. 2
 PT 8300 – Differential Diagnosis for Health Sciences: Cr. 3
 PT 8400 – Diagnostic Procedures for Health Sciences: Cr. 2
 PT 8500 – Clinical Decision Making: Cr. 3
 PT 8600 – Health Promotion and Wellness: Cr. 2
 PT 8800 – Clinical Internship I: Cr. 4
 PT 8820 – Clinical Internship II: Cr. 8

Transitional Program

Admission to the transitional program requires that the applicant be a physical therapist who has graduated from an accredited Baccalaureate or Master's Physical Therapy Program and is currently licensed in the United States or Canada. Letters of recommendation and a personal statement are also required. Persons interested in the transitional D.P.T. program should obtain information on admission from The Office of Student Affairs, Eugene Applebaum College of Pharmacy and Health Sciences, 259 Mack Ave., Wayne State University, Detroit, MI 48201 or by visiting the physical therapy website at pt.wayne.edu. Admission at this level also requires admission to the Graduate School (for requirements, see Admission, Graduate School, p. 17).

DEGREE REQUIREMENTS — Transitional Program

Students in this program are required to complete a minimum of twenty-four credits in eight core courses if the student already possesses a Master of Physical Therapy degree. For individuals not possessing a Master of Physical Therapy degree, the applicant's educational and professional qualifications will be reviewed and an individual plan of work will be designed to provide sufficient preparation for the transitional D.P.T. curriculum.

The Physical Therapy Student Handbook, provided by this department, also contains policy statements that may pertain to admission, candidacy, and degree requirements. Students pursuing the D.P.T.

should consult this handbook for the current statements on these policies.

The core curriculum is subject to change without prior notice in response to the changing health care and education environment.

Core Curriculum (Transitional Program)

PT 6300 – Research I: Critical Thinking: Cr. 2
 PT 6400 – Teaching and Learning in Health Care: Cr. 3
 PT 6700 – Motor Learning and Motor Control: Cr. 3
 PT 7990 – Directed Study: Cr. 3
 PT 8170 – Professional Development and Reflective Practice: Cr. 3
 PT 8300 – Differential Diagnosis for Health Sciences: Cr. 3
 PT 8400 – Diagnostic Procedures for Health Sciences: Cr. 3
 PT 8850 – Clinical Practicum: Cr. 3

Health and Liability Insurance

Clinical Education is provided throughout the professional program along with didactic courses. The final twenty-eight weeks of the program are spent in two assignments in selected clinical facilities throughout the metropolitan Detroit area, Michigan and other parts of the country. Patient care involves inherent risk of exposure to potential diseases, particularly blood borne pathogens, and the risk of possible mishaps in patient care. Therefore, all students are required to maintain health insurance coverage and this must be in effect prior to and during the professional program. Liability insurance is rolled into course fees associated with clinical education. The student is responsible for the cost of health insurance and all other costs (such as travel, meals, living expenses) associated with the clinical education portion of the program.

Financial Aid

The University offers opportunities to students in need of financial assistance to meet the expenses of their education. Information about scholarships and loans is available from the University Office of Scholarships and Financial Aid, University Welcome Center. Students in the professional D.P.T. curriculum are eligible to apply for the Graduate Professional Scholarship offered through the Graduate School. Additional information on these scholarships can be attained through the Graduate School website.

Physical Therapy Courses (PT)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5010 Clinical Applications I. Cr. 1

Prereq. or coreq: PT 5320, PT 5020. Offered for S and U grades only. First part-time supervised clinical experience for physical therapy students. Orientation to clinical education; practice to develop professional behaviors, observation skills, communication, basic examination and intervention. Two half-days per week in seven-week term. Material Fee as indicated in Schedule of Classes. (W)

5020 Foundations of Physical Therapy. Cr. 2

Prereq: admission to professional curriculum. Sociological and historical background of the PT profession. Professional behavior, patient care interaction and medical terminology. Basic physical therapy care procedures, documentation, patient education, care in medical emergencies. Material Fee As Indicated In The Schedule of Classes (F)

5030 Basic Patient Care in Physical Therapy. Cr. 2

Prereq: Admission to Physical Therapy Program (D.P.T.). Introduction to the basic skills necessary for patient care and provide a foundation to the theory and practice of basic patient care procedures for the Physical Therapist. (F)

5070 Clinical Applications II. Cr. 2

Offered for S and U grades only. Prereq. or coreq: PT 5010. Second part-time supervised clinical experience for physical therapy students. Orientation to clinical education including basic and intermediate examination and intervention skills, professional behavior, communication, documentation. (F)

5100 Therapeutic Exercise I. Cr. 3

Prereq: PT 5430 and PT 5500. Foundational course designed to focus on the principles and techniques of therapeutic exercise for patients with pathological conditions to the neuromusculoskeletal system. Students will develop and administer treatment plans for specific patient problems and progress treatment plans based on patient condition and response to treatment. Material Fee As Indicated In The Schedule of Classes (F)

5120 Human Growth and Development. Cr. 2

Prereq: PT 5020. Theories and basic principles in prenatal, physical, sensorimotor, perceptual, cognitive, social, emotional and language growth and development. Implications for physical therapy evaluation and treatment of children with developmental disabilities. Material Fee As Indicated In The Schedule of Classes (W)

5300 Surface Anatomy. Cr. 2

Coreq: PT 5200 and PT 5210. Laboratory-based course teaching skills for soft tissue palpation, identification of surface anatomy landmarks, soft tissue mobilization and massage. (F)

5320 Basic Examination and Evaluation Procedures. Cr. 3

Prereq. or coreq: PT 5200, PT 5300, PT 5400 and PT 5500. Lecture and laboratory experience focusing on principles and procedures of

foundational medical screening, physical therapy differentiation, and clinical reasoning and decision-making skills; basic principles and techniques for posture, integumentary, neurological, range of motion, and strength examination and evaluation, documenting progress and outcome, and the continued development of patient care skills. Material Fee As Indicated In The Schedule of Classes (W)

5400 (OT 5400) Neurosciences for Health Care Professionals. Cr. 3

Open only to students admitted to EACPHS professional program. Study of the human central nervous system; emphasis on sensory and motor systems and structures that contribute to normal movement. Material Fee As Indicated In The Schedule of Classes. (F)

5410 Clinical Medicine I. Cr. 2

Prereq: admission to Physical Therapy program. Disease processes, medical and surgical interventions. Role of physical therapist and other health care professionals: physician, occupational therapist, speech pathologist, psychologist, nurse, others. (W)

5430 Clinical Medicine II. Cr. 2

Prereq: PT 5410. Continuation of PT 5410. Disease processes, medical and surgical interventions. Role of physical therapy as part of comprehensive health care team. (S)

5500 Kinesiology and Biomechanics. Cr. 3

Prereq: PT 5200, PT 5210 and PT 5400. Normal movement and biomechanics applied to the human body. Material Fee As Indicated In The Schedule of Classes (W)

5505 Clinical Applications of Human Anatomy. (OT 5505) Cr. 3

Prereq: admission to Physical Therapy or Occupational Therapy professional program; coreq: PT 5510 or OT 5510. Knowledge of basic human anatomy for students in health science professional programs; foundation for further study in clinical sciences. (F)

5510 Clinical Applications of Human Anatomy: Laboratory. (OT 5510) Cr. 1

Prereq: admission to professional OT program; coreq: OT 5505 or PT 5505. Examination of prosections, dissection of human cadavers; didactic study. Material Fee As Indicated In The Schedule of Classes. (F)

5650 (RT 5650) Pathophysiology for Health Sciences. (OT 5650) Cr. 3

Prereq: admission to Physical Therapy program. Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. (W)

5660 Pathokinesiology. Cr. 3

Prereq: PT 5500. Continuation of PT 5500 designed to teach the biomechanical and kinesiological principles of human movement as related to anatomical and neuroanatomical structure. Analysis of pathological motion and pathokinesiology of selected joints will be included. Material Fee As Indicated In The Schedule of Classes. (S)

5800 Clinical Education I. Cr. 3

Prereq: PT 7120 or PT 7220. Offered for S and U grades only. Full-time supervised clinical experience for physical therapy students. Six-week experience. First in a two-course clinical education sequence. Material Fee as indicated in Schedule of Classes. (W,S)

5820 Clinical Education II. Cr. 3

Offered for S and U grades only. Prereq: PT 5800. Full-time supervised clinical experience for physical therapy students. Six-week experience. Second in a two-course clinical education sequence. Material Fee as indicated in Schedule of Classes. (F,S)

6100 Therapeutic Exercise II. Cr. 3

Prereq: PT 5100. Advanced application of principles and techniques of therapeutic exercise; evaluation and modification of therapeutic exercise plan of care, based on physical and functional responses

and characteristics of patients or clients. Material Fee As Indicated In The Schedule of Classes (F)

6200 Diversity, Ethics and Legal Issues in Health Care. Cr. 3

Prereq: PT 5120. Impact of diversity and legal practice standards, including federal, state, and institutional regulations related to patient care and fiscal management of health care practice. Issues in cultural awareness, cultural sensitivity, cultural competence, ethics, and ethical decision making in personal, professional, and societal contexts. Self-analysis of personal attitudes, values, and beliefs. (W)

6300 Research I: Critical Thinking. Cr. 2-3

Prereq: admission to DPT or tDPT program. Transitional DPT students must elect three credits; transitional course is Web-based. Introduction to evidence-based practice and clinical reasoning and decision making. Identification, location, critique and analysis of evidence. Evidence-based case report appropriate for publication required, if elected for three credits. (F,W)

6310 (PSL 6010) Physiology of Exercise II. (KIN 6310) Cr. 3

Prereq: KIN 3570. Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. (F)

6320 (PPR 6300) Patient Perspectives of Health, Illness and Culture. (OT 6320) Cr. 2

Prereq: enrollment in Pharmacy and Health Sciences college or other health care program. Transitional DPT students must elect three credits; transitional course is Web-based. People from various cultures (religious, ethnic, sexual orientation, disability, chronic illness, economic status) discuss in small groups how these cultures influence living with a chronic illness. Students also discuss readings on health culture and keep a journal on their course experience. (S)

6400 Teaching and Learning in Health Care. Cr. 2-3

Prereq: admission to DPT or tDPT program. Transitional DPT students must elect three credits; transitional course is Web-based. Exploration of theoretical and practical issues pertinent to physical therapy profession: educational methods, adult learning theories, instructional design methodologies, evaluation, instructional management. Additional project required if elected for three credits. (W,S)

6500 Pharmacology. Cr. 2

Prereq: PT 5430 and PT 7400. Effects of drug distribution, absorption and excretion as pertaining to physical therapy. Major drug categories, OTC, and nutritional supplements, pertinent to acute and chronic responses to physical therapy; indications, mechanisms, effects. (F)

6700 Motor Learning and Motor Control. Cr. 2-3

Prereq: PT 5400; or admission to DPT or tDPT program. Transitional DPT students must elect three credits; transitional course is Web-based. Current theories and concepts in processes of motor skill acquisition and performance, from a behavioral objective. Additional evidence-based case reports required if elected for three credits. (F,W)

6750 Seminar: Complementary and Alternative Health Care. Cr. 2

Prereq: PT 5430 and PT 5650. Physical, psychological, and nutritional approaches relevant to practice of physical therapy. Seminar course. (W)

7000 Therapeutic Modalities. Cr. 3

Prereq: PT 5430 and PT 5660. Lecture and laboratory experiences focusing on principles and procedures for using physical agents and spinal traction. Tissue inflammation and repair, pain, superficial and deep heat, cryotherapy, electrotherapy, and spinal traction included.

Integumentary evaluation and wound management. Material Fee As Indicated In The Schedule of Classes (F)

7100 Management of Patients with Orthopedic Conditions I. Cr. 3

Prereq: PT 5320, PT 5500; prereq. or coreq: PT 5100. Lecture and laboratory experience focusing on knowledge, principles, clinical reasoning and decision making skills, examination and evaluation procedures, and interventions required for managing patients with impairments, functional limitations, and disabilities due to musculoskeletal pathologies of the extremity joints across the life span, and the continued development of patient care skills. Material Fee As Indicated In The Schedule of Classes (F)

7120 Management of Patients with Orthopedic Conditions II. Cr. 3

Prereq: PT 7100. Lecture and laboratory experience focusing on knowledge, principles, clinical reasoning and decision making skills, examination and evaluation procedures, and interventions required for managing patients with impairments, functional limitations, and disabilities due to musculoskeletal pathologies of the spinal column and extremity joints across the life span, and the continued development of patient care skills. Material Fee As Indicated In The Schedule of Classes (W)

7200 Management of Patients with Neurological Disorders I. Cr. 3

Prereq: PT 5400 and PT 6700. Basic principles and techniques of assessing problems associated with neurological disorders including postural tone, sensation, superficial and developmental reflexes, quality of movement, perceptual-motor skills and functional mobility. Material Fee As Indicated In The Schedule of Classes. (Y)

7220 Management of Patients with Neurological Disorders II. Cr. 3

Prereq: PT 7200. Theory, principles and application of the neurophysiological approach to evaluation and treatment. Proprioceptive neuromuscular facilitation, neuro development treatment, sensory integration, and sensory-motor approaches. Material Fee As Indicated In The Schedule of Classes (W)

7300 Orthotics and Prosthetics. Cr. 3

Prereq: PT 5100. Principles and techniques of prosthetic and orthotic function, component selection and application, use and training. Upper and lower extremity devices, and spinal devices, wheelchairs, ambulatory aids, assistive devices and environmental control systems. Advanced gait and movement biomechanics and evaluation. Material Fee As Indicated In The Schedule of Classes (F,W)

7320 Rehabilitation Procedures. Cr. 3

Prereq. or coreq: PT 7200 and PT 7300. Theoretical issues and treatment of patients with spinal cord injury, traumatic brain injury, problems of aging, and chronic neuromuscular conditions. Material Fee As Indicated In The Schedule of Classes (W,F)

7400 Cardiopulmonary Rehabilitation. Cr. 4

Prereq: PT 5100, PT 5430 and PT 6310. Physiology and pathophysiology of disorders of the cardiac and pulmonary systems. Evaluation and treatment of cardiopulmonary disorders. Material Fee As Indicated In The Schedule of Classes (F,W)

7600 Physical Therapy for Medical and Surgical Conditions. Cr. 3

Prereq: PT 5650 and PT 5430. Management of patients with complex problems including medical and surgical conditions seen in acute care hospital settings. Material Fee As Indicated In The Schedule of Classes (F,W)

7700 Research II: Design & Methodology. Cr. 2

Prereq: PT 6300. Introduction to basic principles of research theory, design, and methodology for physical therapy. Biostatistics and analysis of scientific literature relevant to physical therapy. (F)

7720 Research III: Data Analysis and Interpretation. Cr. 3

Prereq: PT 7700. Basic principles of research design as it relates to the theory and practice of physical therapy. Students will analyze relevant scientific literature, design, develop and implement a research project, and learn basic computer skills in utilizing a statistical analysis program. Material Fee as indicated in Schedule of Classes. (T)

7990 Directed Study. Cr. 1-4

Prereq: PT 5100. Independent study: critical analysis or review of new or unique topics in health care; or physical therapy role, approach, methodology, techniques or scientific rationale for professional practice. Oral and written presentation required. Elective. (Y)

8000 Therapeutic Management of Pediatric Populations. Cr. 3

Prereq: PT 5120 and PT 7220. Principles and application of the elements of physical therapy practice in the management of pediatric populations. Material Fee as indicated in Schedule of Classes. (F)

8110 Geriatrics. Cr. 2

Prereq: Admission to Physical Therapy Program (DPT). Theories and basic principles of physical, sensorimotor, perceptual, cognitive, social, emotional, and language changes during the aging process. Emphasis is placed on the how the aging process impacts functional independence and contributions from all body systems. Implications for physical therapy evaluation and treatment for the aging population are examined. (F)

8170 Professional Development and Reflective Practice. Cr. 3

Prereq: admission to DPT or tDPT program. Exploration of novice vs. expert practice in physical therapy; role of reflection in developing professional skills and behaviors. Current professional and legal issues in provision of physical therapy services. Web-based course. (T)

8200 Management in Physical Therapy Practice. Cr. 2

Prereq: admission to physical therapy program. Overview of health care systems; financing and administration of physical therapy services within various health care systems. (F)

8300 Differential Diagnosis for Health Sciences. Cr. 3

Prereq: admission to DPT or tDPT program. Principles and procedures designed to facilitate the integration of previously-introduced examination and evaluation skills, in order to perform differential diagnosis for primary care practice. (T)

8400 Diagnostic Procedures for Health Sciences. Cr. 2-3

Prereq: PT 5650, PT 5430; or admission to DPT program or transitional DPT program. Transitional DPT students must elect three credits; transitional course is Web-based. Medical diagnostic procedures and application of results as related to provision of physical therapy health services, including diagnostic imaging and laboratory tests. Additional project required if elected for three credits. Material Fee As Indicated In The Schedule of Classes (T)

8500 Clinical Decision Making. Cr. 3

Prereq: PT 8300. Integration of didactic and clinical knowledge in development of diagnostic prognostic skills in physical therapy; focus on refining competencies in peer referral across health care disciplines; development of strategies for clinical decision making. Material Fee As Indicated In The Schedule of Classes. (Y)

8600 Health Promotion and Wellness. Cr. 2

Prereq: PT 5100 and PT 7400. Dimensions of health promotion and wellness, including implementation strategies for different populations. Analysis of physical, emotional and cost benefits. Identification of needs and development of practice plan for groups and individuals. (Y)

8700 Seminar in Physical Therapy. Cr. 2

Prereq: PT 7720 and 7800; coreq: 8500. Exploration of contemporary and controversial topics in physical therapy and health care. Student presentations, discussions, and written assignments. (Y)

8800 Clinical Internship I. Cr. 4

Prereq: satisfactory completion of all professional didactic and clinical courses. Offered for S and U grades only. Final full-time supervised clinical experiences for physical therapy students. First of two-course series. Material Fee as indicated in Schedule of Classes. (Y)

8820 Clinical Internship II. Cr. 8

Prereq. or coreq: PT 8800. Offered for S and U grades only. Full-time supervised clinical internship. Continuation of PT 8800. Material Fee as indicated in Schedule of Classes. (F)

8850 Clinical Practicum. Cr. 3

Prereq: admission to transitional DPT program and written consent of instructor. Monitored clinical practice in a focused area of physical therapy practice. Focus may include: administration and management, cardiopulmonary, neurology, orthopedics, integumentary care, pediatrics, and teaching. (T)

Physician Assistant Studies

Office: 2590 CPHS; 313-577-1368

Program Director: John McGinnity

Website: <http://www.pa.cphs.wayne.edu/>

Professor

John McGinnity, Howard J. Normile

Assistant Professors

Lindsay Gietzen, Stephanie J. Gilkey, Jamie McQueen, Mary Jo Pilot, Raylene Platel, Philip Pokorski

Lecturer

Doug Howell

Part-Time Faculty

Elizabeth Adams, Mary Tracey Bee, Matthew Cooper, Elizabeth Jackson, Sara Lolar, Michael Wimmer

Graduate Degree

MASTER OF SCIENCE in Physician Assistant Studies

A physician assistant (PA) is a health care provider who is nationally certified and is found in every medical specialty and setting. PAs manage the full scope of patient care, often handling patients with complex medical problems. PAs conduct physical exams, assist in surgery, diagnose and treat illness, order and interpret tests, counsel on preventative health care, and prescribe medications. The role may also include educational, research, and administrative activities as well as clinical responsibilities. PAs are critical members of the health care team, collaborating with physicians and all team members to improve patient outcomes.

Physician Assistant Studies (M.S. Program)

Admission to this program is conducted through applications submitted to the Centralized Application Service for PAs (<http://www.caspaonline.org>) and is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants must have a bachelor's degree from an accredited college or university. In addition, students must: 1) have a minimum cumulative and prerequisite undergraduate grade point average of 3.0; 2) complete the general test of the Graduate Record Examination; 3) submit three letters of recommendation, one from a work supervisor and preferably one from a physician assistant; 4) submit an essay expressing your motivation to become a PA; and 5) have a minimum of 500 hours of direct, "hands-on" patient care experience in a health-service environment. (Additionally, students whose native language is not English and have not completed four years of high school in the U.S., must complete the TOEFL.) Please consult the WSU PAS program website (<http://www.pa.cphs.wayne.edu>) for a complete list of admission criteria.

Prerequisite Study: In addition, the following coursework must have been successfully completed with a grade of "B" (3.0) or higher in order to be considered for admission. Those marked with an asterisk (*) must be completed within the six years prior to the date of application to this degree program:

Anatomy:* one course

Human physiology:* two courses, (one course must be 3000 level or above)

Microbiology* (with laboratory): one course

Nutrition: one course

Chemistry*: two courses (one course must be organic or biochemistry)

Developmental psychology: one course

Basic statistics: one course

English composition: two courses

Medical terminology, one course

Admission Interview: Admission to the Program is competitive. All those admitted to the WSU PAS program have satisfied all requirements listed above, and have successfully completed a personal interview. Interviews are offered to the most competitive candidates, not all candidates meeting the minimum requirements.

Program Deadlines: All prerequisite coursework must be completed by September 1 of the year prior to the start of the program. Applicants must submit two separate applications: 1) one to the WSU Graduate School, and 2) one through the national physician assistant studies application service (CASPA). Internet sites for these applications are:

WSU Graduate School application may be found at the following url: <http://gradadmissions.wayne.edu/>

CASPA website: <http://www.caspaonline.org>

Applications to the Program will be available each May. Application deadline for the Program and the date by which date all material must be submitted is September 1.

General Information Meetings are held at the Eugene Applebaum College of Pharmacy and Health Sciences the first Tuesday of each month at 6:00 p.m. at the College. Contact the program website: <http://cphs.wayne.edu/meetings.php> for details.

DEGREE REQUIREMENTS

The Master of Science in Physician Assistant Studies is offered under a Plan C option, requiring successful completion of fifty-four credits in course work over two years or six semesters. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively, and in accordance with the Physician Assistant Studies Program Student Policy and Information Manual. A grade of 'C' in any graduate course is unacceptable.

YEAR I: Spring/Summer Term

PAS 7000 – Anatomy for Physician Assistants I: Cr. 2

PAS 7001 – Anatomy for Physician Assistants II: Cr. 1

PAS 7010 – Clinical Medicine I: Cr. 3

PAS 7040 – Patient Evaluation I: Cr. 2

PAS 7070 – Health Care Issues I: Cr. 1

PAS 7500 – Pathophysiology I: Cr. 1

YEAR I: Fall Term

PAS 7020 – Clinical Medicine II: Cr. 3

PAS 7050 – Patient Evaluation II: Cr. 2

PAS 7080 – Health Care Issues II: Cr. 1

PAS 7100 – Pharmacology I: Cr. 2

PAS 7510 – Pathophysiology II: Cr. 1

YEAR I: Winter Term

PAS 7030 – Clinical Medicine III: Cr. 4

PAS 7060 – Patient Evaluation III: Cr. 3

PAS 7090 – Health Care Issues III: Cr. 1

PAS 7110 – Pharmacology II: Cr. 2

PAS 7520 – Pathophysiology III: Cr. 1

Note: The sequencing of clinical year two rotation is illustrative of a typical student schedule but may vary in individual cases.

YEAR II: Spring/Summer Term

PAS 8000 – Internal Medicine Rotation (Practicum): Cr. 4

PAS 8050 – Surgery Rotation (Practicum): Cr. 4

YEAR II: Fall Term

- PAS 8010 – Obstetrics & Gynecology Rotation (Practicum): Cr. 2
- PAS 8020 – Emergency Medicine Rotation (Practicum): Cr. 2
- PAS 8030 – Pediatrics Rotation (Practicum): Cr. 2
- PAS 8040 – Psychiatry Rotation (Practicum): Cr. 2

YEAR II: Winter Term

- PAS 8060 – Family Medicine Rotation (Practicum): Cr. 6
- PAS 8070 – Preceptorship: Cr. 2

Manual, Student

The student manual, provided by this Program, also contains policy statements that may pertain to admission, candidacy, and degree requirements. Students should be sure to consult this manual for the current statements on these policies.

Financial Aid

Sources of financial aid for graduate students are enumerated in the section on Graduate Financial Assistance beginning under Financial Assistance, Graduate, p. 26 of this bulletin. In addition, the Program suggests that students consult external sources such as the National Health Service Corps Scholarship and Loan Repayment Programs.

Physician Assistant Studies Courses (PAS)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 which are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7000 Anatomy for Physician Assistants I. Cr. 2

Prereq: admission to physician assistant studies program. Structural and functional anatomy of the human body relevant to physician assistant responsibilities. All major regions of body will be studied. Regional dissections; programmed instruction; lectures and demonstrations with emphasis on use of gross anatomy in physical diagnosis. Material Fee As Indicated In The Schedule of Classes (Y)

7001 Anatomy for Physician Assistants II. Cr. 1

Prereq: admission to physician assistant studies program. Continuation of PAS 7000. Structural and functional anatomy of the human body relevant to physician assistant responsibilities. All major regions of body will be studied. (Y)

7010 Clinical Medicine I. Cr. 3

Prereq: admission to physician assistant studies program. Introduction to etiology, manifestation, diagnosis, prevention and treatment of disease; includes: all major organ systems and disease entities. Material Fee As Indicated In The Schedule of Classes (Y)

7020 Clinical Medicine II. Cr. 3

Prereq: PAS 7010. Continuation of PAS 7010. Material Fee As Indicated In The Schedule of Classes (Y)

7030 Clinical Medicine III. Cr. 4

Prereq: PAS 7020. Continuation of PAS 7020. Material Fee As Indicated In The Schedule of Classes (Y)

7040 Patient Evaluation I. Cr. 2

Prereq: admission to physician assistant studies program. The elicitation and recording of complete medical history, including a complete and comprehensive physical examination. Material Fee As Indicated In The Schedule of Classes (Y)

7050 Patient Evaluation II. Cr. 2

Prereq: PAS 7040. Continuation of PAS 7040. Material Fee As Indicated In The Schedule of Classes (Y)

7060 Patient Evaluation III. Cr. 3

Prereq: PAS 7050. Continuation of PAS 7050. Material Fee As Indicated In The Schedule of Classes (Y)

7070 Health Care Issues I. Cr. 1

Prereq: admission to physician assistant studies program. Specialized topics in the care of patients, medical research, as well as issues concerning the delivery of health care to the public. Material Fee As Indicated In The Schedule of Classes (Y)

7080 Health Care Issues II. Cr. 1

Prereq: PAS 7070. Continuation of PAS 7070. Material Fee As Indicated In The Schedule of Classes (Y)

7090 Health Care Issues III. Cr. 1

Prereq: PAS 7080. Continuation of PAS 7080. Material Fee As Indicated In The Schedule of Classes (Y)

7100 Pharmacology I. Cr. 2

Prereq: admission to physician assistant studies program. Principles of pharmacologic action followed by review of major therapeutic agents in each clinical area. Major systems of the body as related to drugs and diseases. Material Fee As Indicated In The Schedule of Classes (Y)

7110 Pharmacology II. Cr. 2

Prereq: PAS 7100. Continuation of PAS 7100, Material Fee As Indicated In The Schedule of Classes (Y)

7500 Pathophysiology I. Cr. 1

Prereq: admission to physician assistant studies program. Dynamics of alterations in function in response to disease. (Y)

7510 Pathophysiology II. Cr. 1

Prereq: PAS 7500. Continuation of PAS 7500. (Y)

7520 Pathophysiology III. Cr. 1

Prereq: PAS 7510. Continuation of PAS 7510. (W)

8000 Internal Medicine Rotation: Practicum. Cr. 4

Prereq: completion of first year didactic curriculum in PAS. Advanced training in internal medicine with particular emphasis on both inpatient and outpatient primary care. Material Fee As Indicated In The Schedule of Classes (Y)

8010 Obstetrics and Gynecology Rotation: Practicum. Cr. 2

Prereq: completion of first year didactic curriculum in PAS. Advanced training in the problems associated with gestation, birth, and women's health. Material Fee as indicated in Schedule of Classes. (Y)

8020 Emergency Medicine Rotation: Practicum. Cr. 2

Prereq: completion of first year didactic curriculum in PAS. Advanced training in all aspects of the practice of urgent and emergency medicine. Material Fee As Indicated In The Schedule of Classes (Y)

8030 Pediatrics Rotation: Practicum. Cr. 2

Prereq: completion of first year didactic curriculum in PAS. Advanced training in the care of children from birth through adolescence. Material Fee As Indicated In The Schedule of Classes (Y)

8040 Psychiatry Rotation: Practicum. Cr. 2

Prereq: completion of first year didactic curriculum in PAS. Advanced training in the care of patients with psychiatric disorders. Material Fee As Indicated In The Schedule of Classes (Y)

8050 Surgery Rotation: Practicum. Cr. 4

Prereq: completion of first year didactic curriculum in PAS. Examination of patients with surgical disorders, arrangement and participation in selected surgical procedures and recommendations for further evaluation and care. Material Fee As Indicated In The Schedule of Classes (Y)

8060 Family Medicine Rotation: Practicum. Cr. 6

Prereq: completion of first year didactic curriculum in PAS. Advanced training in outpatient evaluation of pediatric and adult patients with emphasis on family health, lifespan, and coordination of the health care team. Material Fee As Indicated In The Schedule of Classes (Y)

8070 Preceptorship. Cr. 2

Prereq: completion of first year didactic curriculum in PAS. Rotation specialized to the primary care needs of individual physician assistant students in last phase of clinical training. Material Fee As Indicated In The Schedule of Classes (Y)

Radiologist Assistant Studies

Office: EACPHS, Suite 4118; 313-916-1348

Website: <http://www.cphs.wayne.edu/program/ra-ms.php>

Assistant Professor

Kathleen Kath

Part-Time Faculty

Donald Peck, William Porter

Adjunct Faculty

John Blasé, Denise Collins, William Sanders, Scott Sturza, Gail White

Graduate Degree

MASTER OF SCIENCE in Radiologist Assistant Studies

A radiologist assistant is an advanced-level radiologic technologist who enhances patient care by extending the capacity of the radiologist in the diagnostic imaging environment. The radiologist assistant is an ARRT-certified radiographer who has completed an advanced academic program encompassing a nationally recognized radiologist assistant curriculum and a radiologist-directed clinical preceptorship. With radiologist supervision, the radiologist assistant performs fluoroscopy and selected radiology procedures, patient assessment, patient management and initial evaluation of diagnostic images, but does not provide an official interpretation (final written report) as defined by the ACR Standards for Communication: Diagnostic Radiology.

Radiologist Assistant Studies (M.S. Program)

(An admissions moratorium is in effect for this program.)

Admission to this program is contingent upon admission to the Graduate School; for requirements, see Admission, Graduate School, p. 17. Applicants must have a bachelor's of science degree from an accredited college or university. In addition, students must: 1) have a minimum cumulative undergraduate grade point average of 3.0; 2) have graduated from a Radiologic Technology program accredited by the Joint Review Committee on Education in Radiologic Technology; 3) be employed as a Radiologic Technologist for a minimum of three years; 4) provide a current copy of proof of American Registry of Radiologic Technologists registration; 5) provide proof of current Basic Life Support certification; 6) submit three letters of recommendation; and 7) submit a narrative stating his/her personal and professional goals.

The GRE is not required for admission into this program.

Prerequisite Study: In addition to the above admissions criteria, the following prerequisites must have been successfully completed with a minimum grade of 'B' (3.0 on 4.0 scale). Those marked with an asterisk (*) must be completed within the six years prior to the date of application to this degree program. All prerequisites must be completed by December 31st of the year prior to which you are seeking admission.

PSY 2400 or equivalent (Developmental Psychology)

PSL 3220 or BIO 4120 or equivalent

(Advanced Human Physiology* course at 3000 level or higher)

RDT 3800 or equivalent (Cross-Sectional Anatomy as part of the accredited Radiologic Technology program; may also demonstrate by proficiency exam. Clinical practice may fulfill this prerequisite. It is recommended that students check with the Department Chairperson to determine if they have completed this prerequisite prior to submitting an application.)

STA 1020 or equivalent (Basic Statistics)

ENG 3050 or equivalent (Professional/Technical Writing: Reports)

Letters of recommendation are required as part of the departmental application package. One letter of recommendation must come from the immediate supervisor. One letter of recommendation must come from a radiologist with whom the student has worked.

Preliminary Interview: Applicants satisfying the above minimum requirements are expected to appear for a scheduled interview.

Program Deadlines: All prerequisite requirements, (with the exception of personal interview), must be completed by the end of the fall semester prior to admission in the spring/summer semester. Applicants must submit two separate applications: 1) to the Graduate School, and 2) to the EACPHS Academic Advising Office. Internet sites for these applications are:

WSU Graduate School:

<http://gradadmissions.wayne.edu/>

EACPHS (college) application:

http://www.cphs.wayne.edu/admission_process.php

Application deadline for the program is November 30 of the year prior to the one for which the applicant is seeking admission.

General Information Sessions are held at the Eugene Applebaum College of Pharmacy and Health Sciences the first Tuesday of each month at 6:00 p.m. at the College. Details can be found at <http://www.cphs.wayne.edu>

Degree Requirements

The Master of Science in Radiologist Assistant Studies is offered as a Plan C master's program requiring successful completion of forty-eight credits in coursework over two full consecutive years or six consecutive semesters. All course work must be completed in accordance with the academic procedures of the Graduate School governing graduate scholarship and degrees and the College; see the section of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Academic Regulations for the College of Pharmacy and Health Sciences, p. 540, respectively; and in accordance with the Radiologist Assistant Studies Program Student Policy and Information Manual. A grade of 'C' in any graduate course is unacceptable.

Radiologist Assistant Graduate Curriculum

YEAR 1: Spring/Summer Term

PAS 7000 – Anatomy for Physician Assistants I: Cr. 2

PAS 7001 – Anatomy for Physician Assistants II: Cr. 1

PAS 7070 – Health Care Issues I: Cr. 1

PAS 7500 – Pathophysiology I: Cr. 1

RAS 7400 – Patient Assessment for RAs: Cr. 3

YEAR 1: Fall Term Year 1

PAS 7080 – Health Care Issues II: Cr. 1

PAS 7100 – Pharmacology: Cr. 2

PAS 7510 – Pathophysiology II: Cr. 1

RAS 7410 – Clinical Correlation of Disease Processes: Cr. 1

YEAR 1: Winter Term Year 1

PAS 7090 – Health Care Issues III: Cr. 1

PAS 7110 – Pharmacology II: Cr. 2

RAS 7020 – Cross-Sectional Anatomy, Physiology, Pathol.: Cr. 3

RAS 7121 – Contrast Media: Cr. 1

RAS 7310 – Radiologist Mentored Experience I: Cr. 1

Note: The sequencing of clinical year two rotation is illustrative of a typical student schedule but may vary in individual cases.

YEAR 2: Spring/Summer Term

RAS 7320 – Radiologist Mentored Experience II: Cr. 5

RAS 7610 – Radiologic Procedures I: Cr. 1

YEAR 2: Fall Term

RAD 7000 – Imaging Physics I: Cr. 4

RAD 7070 – Radiation Safety: Cr. 2

RAS 7330 – Radiologist Mentored Experience III: Cr. 5

RAS 7620 – Radiologic Procedures II: Cr. 1

YEAR 2: Winter Term

RAS 7800 – Image Analysis: Cr. 2

RAS 7340 – Radiologist Mentored Experience IV: Cr. 6

Total Credits: 48

Manual, Student

A Student Manual is available containing policy statements that may pertain to admission, candidacy, competency, and degree requirements. Students should be sure to consult this manual as necessary. A hard copy of the manual will be provided upon acceptance to the program.

Financial Aid

For sources of financial aid for graduate students, see Financial Assistance, Graduate, p. 26.

Radiologist Assistant Studies Courses (RAS)

The following courses, numbered 7020-7800, are offered for graduate credit. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

7000 Physics of Imaging. Cr. 4

Prereq: admission to RAS M.S. program; RAS 7610, RAS 7070, RAS 7320. Survey course for the advanced practitioner in graduate radiologic sciences. (S)

7020 Cross-Sectional Anatomy, Physiology and Pathology. Cr. 3

Prereq: PAS 7090, PAS 7110, RAS 7120, RAS 7800, RAS 7310; acceptance in RAS program. Image correlation to anatomy, physiology, and pathology. (W)

7070 Radiation Safety. Cr. 2

Prereq: admission to RAS program; RAS 7610, RAS 7000, and RAS 7320. Operational safety and imaging of fluoroscopic equipment in the clinical setting; for advanced practitioners in graduate radiologic sciences. (S)

7121 Contrast Media. Cr. 1

Prereq: PAS 7090, PAS 7110, RAS 7120, RAS 7800, RAS 7310; acceptance in RAS program. Review of contrast media used during common radiographic procedures. (W)

7310 Radiologist Mentored Experience I. Cr. 1

Prereq: PAS 7090, PAS 7110, RAS 7120, RAS 7800, RAS 7020; acceptance in RAS program. Clinical knowledge and activities associated with radiology procedures. (W)

7320 Radiologist Mentored Experience II. Cr. 5

Prereq: PAS 7090, PAS 7110, RAS 7120, RAS 7800, RAS 7310; acceptance in RAS program. Continuation of RAS 7310. (Y)

7330 Radiologist Mentored Experience III. Cr. 5

Prereq: RAS 7620; acceptance in RAS program. Continuation of RAS 7320. (F)

7340 Radiologist Mentored Experience IV. Cr. 6

Prereq: RAS 7330; acceptance in RAS program. Continuation of RAS 7330. (W)

7400 Patient Assessment for RAs. Cr. 3

Prereq: PAS 7000, PAS 7001, PAS 7070, PAS 7500; acceptance in RAS program. Physical examination and assessment. (S)

7410 Clinical Correlation of Disease Processes. Cr. 1

Prereq: PAS 7080, PAS 7100, PAS 7510, RAD 7000; acceptance in RAS program. Collection of pertinent data about patient and procedure. (F)

7610 Radiologic Procedures I. Cr. 1

Prereq: RAD 7070, RAS 7320; acceptance in RAS program. Radiologic imaging procedural fundamentals. (S)

7620 Radiologic Procedures II. Cr. 1

Prereq: RAS 7330; acceptance to RAS program. Advanced radiologic procedures for the radiologist assistant. (F)

7800 Image Analysis. Cr. 2

Prereq: PAS 7090, PAS 7110, RAS 7120, RAS 7020, RAS 7310; acceptance in RAS program. Image post-processing fundamentals. (F)

School of Social Work

Dean: Cheryl Waites

Foreword to the School of Social Work

The mission of the School of Social Work at Wayne State University is to transmit, develop, critically examine, and apply knowledge to advance social work practice and social welfare policy for the promotion of social, cultural and economic justice for poor, vulnerable, and oppressed population groups and for society as a whole. This mission is accomplished in a learning environment designed to prepare ethical and competent social work practitioners, in primarily urban settings, for social work practice, for conducting research with particular relevance to urban populations; and for innovative leadership and service to the urban community and the social work profession. Both faculty and students serve the community by participating in professional organizations, civic and community groups, and human service organizations.

The School of Social Work is an integral part of Wayne State University, an urban university in a culturally diverse, industrialized, metropolitan area. The School demonstrates its commitment to addressing the problems of people living in this environment through its teaching, research, and service activities. Through applied research, work in the classroom and placements in human service organizations that are the sites for field education, students learn how to provide effective social services and to influence social policies.

The School prepares professionals to help alleviate the conditions of those affected by poverty, racism, sexism, ageism, homophobia, unemployment, or mental health challenges and physical and/or developmental impairments. Students learn evidence-based methods of intervention with individuals, families, groups, communities, and organizations. Doctoral students learn the advanced research competencies required to engage in applied research for social work practice and social welfare policy. In synchrony with its emphasis on serving people in the Detroit metropolitan area, the School shares with the University a commitment to recruit students of minority ethnic backgrounds.

Accreditation

The undergraduate program leading to the Bachelor of Social Work and the graduate program leading to the Master of Social Work are accredited by the Council on Social Work Education, the authorized national accrediting body for social work education. There is no accreditation process for doctoral programs in social work. However, the School is a member of the Group for the Advancement of Doctoral Education in Social Work, the professional body that provides guidelines and oversight for doctoral degree programs in this field.

Board of Visitors

The School of Social Work's Board of Visitors works with the faculty and staff to advance the goals of the School, focusing on fund development, external relations, alumni development, and facilitate the establishment and maintenance of collaborative working relationships between the School and local and national leadership both in the private and public sectors. The board consists of influential community leaders with varying backgrounds and ethnicity, many of whom are alumni or have other substantial connections to the goals and programs of the School. Members of the Board of Visitors are:

Alice G. Thompson Chair; Ivan Louis Cotman; Larmender Davis; Corey Faulkner WSUSSWAA, President; Annette S. Freedman; Jacquelin E. Washington; Eloise C. Whitten; Angela B. Wilson; Allan "Geli" Gelford; Shirley Mann Gray; Louise Guyton; Paul L. Hubbard; Susan H. Rogers; John H. Talick;

Programs

The School of Social Work prepares students at the undergraduate and graduate levels for entry level generalist practice or advanced practice in the profession. Its principal programs lead to the Bachelor of Social Work, the Master of Social Work, and the Doctor of Philosophy degrees. The Bachelor of Social Work program prepares students for entry level generalist professional practice. The Master of Social Work degree program prepares graduates for advanced professional practice. This program includes concentrations in interpersonal practice and innovation in community, policy and leadership. The Doctor of Philosophy in Social Work prepares social work educators and scholars whose research on pressing urban problems will advance social work practice and social welfare policy. The Doctor of Philosophy degree program includes rigorous training in qualitative and quantitative research methods, advanced course work in social work as well as completion of a cognate area in another discipline and mastery of specialized social work content areas.

Post-degree courses are available to graduates who have completed bachelor's and/or master's degrees. The School offers Dual Title and Graduate Certificate Programs, as well as special institutes and workshops for individuals employed in the field of social welfare and school social work. Continuing education in social work is also offered through the School's Continuing Education Program.

Graduate Degrees and Certificate Programs

MASTER OF SOCIAL WORK

MASTER OF SOCIAL WORK

with a Dual Title in INFANT MENTAL HEALTH

DOCTOR OF PHILOSOPHY IN SOCIAL WORK

DOCTOR OF PHILOSOPHY IN SOCIAL WORK

with a Dual Title in INFANT MENTAL HEALTH

GRADUATE CERTIFICATE IN SOCIAL WORK PRACTICE WITH FAMILIES AND COUPLES

GRADUATE CERTIFICATE IN DISABILITIES

GRADUATE CERTIFICATE PROGRAM IN ALCOHOL AND DRUG ABUSE STUDIES

GRADUATE CERTIFICATE IN GERONTOLOGY

GRADUATE CERTIFICATE IN SOCIAL WELFARE RESEARCH AND EVALUATION

School Social Work Approval Program

Students enrolled in the program leading to the Master of Social Work degree may qualify concurrently for Department of Education temporary approval for social work positions in Michigan school districts. Specific information on approval requirements for students and M.S.W. graduates may be obtained from the Office of Admissions and Student Services, School of Social Work.

Information Meetings: The School holds informational meetings every two weeks to introduce its undergraduate and graduate programs. Informational meetings for the Ph.D. Program are held monthly during the fall semester of each academic year. Potential applicants are encouraged to attend one of these meetings prior to applying. Meeting schedules for the B.S.W. and M.S.W. programs may be obtained by calling the School's Office of Admissions and Student Services (313-577-4409). Meeting schedules for the Ph.D. Program may be obtained by calling the Ph.D. Program Office (313-577-4419). Meeting schedules for all programs are also posted on our website: <http://www.socialwork.wayne.edu/>

Directory for the School of Social Work

Telephone Area Code: 313

Website: <http://www.socialwork.wayne.edu/>

DEAN

201 Thompson Home; Telephone: 577-4400; Fax: 577-6555

ASSOCIATE DEAN

240 Thompson Home; Telephone: 577-4401; Fax: 577-8770

GENERAL INFORMATION

105 Thompson Home; Telephone: 577-4409

ADMISSIONS AND STUDENT SERVICES

105 Thompson Home; Telephone: 577-4409; Fax: 577-4266

Degree Program Coordinators And Directors

BACHELOR OF SOCIAL WORK

236 Thompson Home; Telephone: 577-4433

MASTER OF SOCIAL WORK

Thompson Home; Telephone: 577-4400

SOCIAL WORK Ph.D.

335 Thompson Home; Telephone: 577-4419

DIRECTOR OF FIELD EDUCATION

144 Thompson Home; Telephone: 577-4479

RESEARCH CENTER DIRECTOR

402 Thompson Home; Telephone: 577-4439

Graduate Certificate Program Coordinators

ALCOHOL AND DRUG ABUSE STUDIES

136 Thompson Home; Telephone: 577-4445

DEVELOPMENTAL DISABILITIES

4809 Woodward Ave; 577-2654

GERONTOLOGY

136 Thompson Home; Telephone: 577-4423

SOCIAL WELFARE RESEARCH AND EVALUATION

337 Thompson Home; Telephone 577-4439

SOCIAL WORK PRACTICE WITH FAMILIES AND COUPLES

108 Thompson Home; Telephone 577-4444

Mailing address for all offices: School of Social Work, Thompson Home, 4756 Cass, Wayne State University, Detroit, Michigan 48202.

Faculty and Administration

Dean: Cheryl E. Waites

Interim Associate Dean for Academic Affairs: Jerrold Brandell

Associate Dean for Research and Director of the Center

for Social Work Research: Joanne Sobeck

B.S.W. Program Coordinator: Cassandra Bowers

M.S.W. Program Coordinator: Shirley Thomas

Ph.D. Program Director: Arlene Weisz

Assistant to the Associate Dean: Marilyn Knall

Office of Admissions and Student Services: Julie Alter-Kay

Academic Services Officer: Shantalea Johns

Academic Advisor: Sarah Doyle

Academic Advisor: Tamarie Willis

Administrative Assistant II,: Juanitta D. Hill

Professors

Jerrold Brandell (Distinguished), Cheryl Waites, Arlene Weisz

Associate Professors

Ann Alvarez, E. Delores Dungee-Anderson, Antonio Gonzalez-Prendes, Kim Jaffee, Faith Hopp, Poco Kernsmith, Fayette Martin (Clinical), Durrenda Onolemhemen, Joanne Sobeck

Assistant Professors

Cassandra Bowers (Clinical), Suzanne Brown, Angelique Day, Carolyn Dayton, Anwar Najor-Durack (Clinical), Jun Sung Hong, Jamey Lister, Debra Patterson, Tam Perry, Megan Piel, Stella Resko, Richard Smith, Joanne Smith-Darden (Research), Shirley Thomas (Clinical)

Emeriti Professors

Creigs Beverly, Leon W. Chestang (Distinguished), Betty Rusnack, Betty Welsh

Emeriti Associate Professors

Ralph Abramowitz, Theodore Goldberg, Carl Hartman, Alice E. Lamont, Edna P. Miller, Sandy G. Reid, Mavis M. Spencer, Phyllis I. Vroom (Dean Emerita)

Lecturers

Lauree Emery, Takisha Lashore, Susan Lebold, Karen Weiner, Judith Weinman

Social Work (M.S.W. Program)

The School offers full-time and planned part-time study programs leading to the Master of Social Work. This program prepares graduates for advanced professional practice in social work. The full-time degree program consists of four semesters of study in which field work is concurrent with class work. Students spend two full days a week in the field and two days in classes for two consecutive years. With approval of the graduate officer, students in the second year may elect to have three full days a week in the field. Required classes in the full-time program may be offered in day, evening, and Saturday sessions. Web-based online courses are also offered.

The planned part-time program permits students to complete degree requirements over a three-year or a four-year period. Part-time study is open only to students who have been formally admitted to the program by the Admissions Director. Details of the several phases of class and field work involved in this program, as well as specific information on admissions requirements, may be obtained from the Office of Admissions and Student Services, School of Social Work.

Admission

Eligibility for admission requires a bachelor's degree from an accredited undergraduate program and an earned minimum g.p.a. of 3.0 or above. A g.p.a. of 2.75 to 2.9 may be considered based on program capacity and strength of application. Admissions applications are reviewed when all required supporting materials have been received by the program. New students admitted into the foundation (core) year of the Master of Social Work program begin in the Fall term of each academic year. Applicants admitted into the advanced standing program begin in the summer semester of the academic year. All applicants are encouraged to submit applications as soon as possible as admissions will close once program capacity has been reached. Applications to the program may be submitted up to one year prior to the start of the beginning term of the selected program. Applicants are encouraged to apply and submit all application materials to the program by the priority processing date of October 1st. All application materials must be submitted by the admissions deadline of April 1st.

Applicants to the full-time or part-time program leading to the Master of Social Work must complete the online application and submit payment of the application fee, see <http://www.gradadmissions.wayne.edu/apply.php>. All application documents are submitted online. Official transcripts are to be submitted to the Office of Graduate Admissions, Wayne State University, directly from all previous college(s) or universities where college credits have been earned. A resume, personal interest statement, and three references are included in the online application documents to WSU. Applicants must (1) hold a four year baccalaureate degree from an accredited institution; (2) have completed thirty semester credits in academic work distributed in the social, behavioral, and biological sciences, and in English and the humanities; (3) show evidence of suitability and fitness for the profession and the ability to successfully undertake graduate professional education in social work

Applications for admission to the School of Social Work for the Master of Social Work degree are given careful review in order to select those students best able to fulfill the requirements for professional social work education. The School reserves the right to make the final determination about all admissions decisions..

Admission to the Advanced Standing Program

An applicant for admission to the Master of Social Work program who holds a baccalaureate degree from an undergraduate social work program accredited by the Council on Social Work Education (or accredited by the Canadian Association of Schools of Social Work (CASSW)) may be admitted with advanced standing. The School reserves the right to make the final determination about all Advanced Standing Program admissions decisions.

Students admitted with advanced standing status are required to complete eight graduate credits toward the M.S.W. degree during the summer term following admission. In order to complete the degree program, thirty additional credits are required in the advanced year of the curriculum as prescribed within the student's selected concentration area. Students must complete the summer curriculum courses (see below) before enrolling in the advanced concentration area curriculum courses.

SW 7070 – Social Work Practice with Micro, Mezzo and Macro Systems: Cr. 2

SW 7500 – Human Behavior Theory for SW Assessment: Cr. 2

SW 7620 – Social Welfare Policy: Cr.2

SW 7810 – Using and Conducting Research in Social Work: Cr. 2

Total credits: 8

Students may waive one or more of these summer courses by successfully completing a waiver exam. Successful completion of a waiver exam will signify the course is waived without graduate credit thus freeing the student to take other courses to meet degree requirements. Contact the Office of Admissions and Student Services for information.

Students admitted with advanced standing may be permitted to complete the requirements for the Master of Social Work on a part-time basis. Students admitted to such a planned part-time program are required to complete eight graduate credits toward the M.S.W. during the summer term immediately following admission. The additional thirty credits may be completed in subsequent semesters. The School does not grant credit for life experience or previous work experience.

Transfer of Graduate Credits

Credits for professional social work courses earned at other graduate programs accredited by the Council on Social Work Education may be accepted toward the Master of Social Work degree. Students, however, must meet all of the specific course requirements or equivalencies in the program leading to the Master of Social Work at this school. A maximum of thirty credits may have been completed in another accredited school of social work. Transfer students must be in good standing in the school from which they transfer, must meet all other requirements of this school, earn a minimum of thirty credits at this school, and must be in residence during the final semester prior to graduation.

A maximum of nine graduate credits from the social work curriculum or from curricula closely related to social work earned in an accredited graduate program may be accepted toward the Master of Social Work if, in the judgment of the faculty, the credits are appropriate as elective credits in the social work curriculum.

Transfer credit must be of a 'B' grade or better and certified as graduate level credit on an official transcript. Courses approved for transfer from outside or within the University cannot have been applied as credit toward a prior degree. Extension credits earned at institutions outside the State of Michigan cannot be applied toward a graduate degree.

Transfer credits do not alter the residency policy and time limitations governing School of Social Work degrees. Students may petition for the transfer of graduate credit only after they have been admitted to the M.S.W. degree program.

Nondiscrimination Policies

The School is bound by and actively endorses University policies of nondiscrimination respecting all persons regardless of race, color, sex, national origin, religion, age, sexual orientation, marital status, or physical or mental disability, and which expressly forbid sexual harassment or discrimination in hiring (see Equality of Opportunity Policy, p. 11 for these policies). The School prohibits discrimination against individuals because of political orientation. Copies of School and University nondiscrimination policies may be obtained in the Office of the Dean.

Withdrawal from the M.S.W. Program

A student who has been admitted to the Master of Social Work program shall be considered to have withdrawn from the program if the student is not enrolled in a course and/or field work during any semester of a planned program of study within the framework of the plan which has been approved. In order to withdraw in good standing, either permanently or temporarily, students must formalize their withdrawal with the Assistant Dean for Student Affairs. Under certain circumstances, with approval from the Coordinator, a student may be granted a leave of absence from the school for up to one calendar year. Copies of procedures for withdrawal or leaves of absence may be obtained from the Office of Admissions and Student Services, School of Social Work.

Readmission

Students who had been enrolled in a planned program leading to the Master of Social Work, who have withdrawn from the program and who wish to be considered for readmission to complete degree requirements, must follow regular procedures for admission to the School. Generally, students are required to complete two continuous terms of field work; readmitted students who had previously completed one term of field work will be required to repeat this term, and may be required to enroll concurrently in a course or courses in social work practice methods. Students who have withdrawn and wish to be readmitted may be required to obtain an assessment of their physical or mental health (or both) from a health professional approved and/or selected by the School.

Admission to Non-Degree Study

Students may enroll in certain classes as pre-master's registrants and will be permitted to accumulate a maximum of nine credits in this status. Pre-master's students may not enroll in the field work courses and certain other courses in which specific prerequisites and/or corequisites preclude their registration. If the student is subsequently admitted to a program leading to the Master of Social Work, credits earned in a pre-master's classification may be applied toward the degree.

Applicants for pre-master's, non-degree study must hold a baccalaureate degree from a college or university of recognized standing and have completed a minimum of thirty semester credits of academic work distributed in the social and biological sciences and in the humanities.

Applicants must complete the online application indicating non-degree status in the School of Social Work and payment of application fee. See: <http://www.gradadmissions.wayne.edu/apply.php> indicating non-degree status in the School of Social Work.

Students applying for pre-master's study in the School of Social Work who have already been admitted and registered in the Graduate School of Wayne State University should consult the School of Social Work Office of Admissions and Student Services regarding the procedure for a change of college and/or status.

Degree Requirements

The Master of Social Work degree requires a minimum of sixty credits of graduate course work, completed in accordance with the regulations of the Graduate School and the School of Social Work; see sections under Admission, Graduate School, p. 17 and Degree and Certificate Requirements, Graduate, p. 36, respectively. The program includes a foundation (core) curriculum at the first level, and at the second level, one of two concentrations: Interpersonal Practice or Innovation in Community, Policy and Leadership. The core curriculum provides the foundation for the advanced curriculum.

Foundation (Core) Curriculum

The foundation (core) curriculum provides a knowledge base for later study of advanced practice in the concentration. The core curriculum has content in the five major curricular areas: social work practice, human behavior and the social environment, social welfare policy and services, research, and field education. The core curriculum stresses fundamentals and knowledge of social work practice as they relate to individuals, families, small groups, organizations, and communities. In field education, theory is translated into practice and includes micro, mezzo and macro practice experiences.

SW 7040 – Methods of Social Work Practice: Cr. 3
SW 7055 – Foundation Group Theory and Practice: Cr. 3
SW 7065 – Foundation Macro Theory and Practice: Cr. 3
SW 7560 – Human Behavior in Soc. Env't. I: Micro Theory: Cr. 3
SW 7660 – Human Behavior in Soc. Env't. II: Diversity in Multicultural Soc.: Cr. 3
SW 7720 – Introduction to Social Welfare Policy in the United States: Cr. 3
SW 7820 – Research Methods in Social Work I: Cr. 3
SW 7830 – Research Methods in Social Work II: Cr. 3
SW 7998 – Concentration Field Work for Social Workers I: Cr. 8

Total credits: 32

During the foundation (core) year, students declare their interest in an advanced curriculum concentration. Students must complete the core curriculum before enrolling in advanced curriculum courses. Students may waive one or more of these core courses by successfully completing a waiver exam. Successful completion of a waiver exam will signify the course is waived without graduate credit thus freeing the student to take other courses to meet degree requirements.

Advanced Curriculum

The advanced curriculum builds on the knowledge, values, and skills gained in the foundation (core) curriculum, with the objective of increasing the student's competence for dealing with greater complexities of social work practice by focusing on areas of social concern. This advanced portion of the M.S.W. program is designed to provide specific advanced knowledge and practice skills. Students choose one of two concentrations in the advanced year.

OPTION I: Advanced Interpersonal Practice:

Integrative HBSE/Practice Methods courses (see advisor): Cr. 8
SW 8770 – Advanced Policy Analysis: Cr. 3
SW 8998 – Concentration Field Work for Social Workers II: Cr. 8
Electives: Cr. Variable

Total credits: 28-30, depending on student's program

OPTION II: Advanced Innovation in Community, Policy and Leadership

Integrative HBSE/Practice Methods courses (see advisor): Cr. 4
Research Courses: Cr. 3
SW 8998 – Concentration Field Work for Social Workers II: Cr. 8
Electives: Cr. Variable

Total credits 28-30, depending on student's program

Students must meet the requirements for a concentration: (a) satisfactory completion of specific concentration courses in HBSE/Prac-

tice Methods; (b) satisfactory completion of a field education placement in the concentration for each of the semesters of the advanced curriculum.

Interpersonal Practice (IP): This concentration offers students a particular theoretical orientation and clinical method from among three theory "tracks": Family Systems, Cognitive-Behavioral, and Psychodynamic. Each track has a corresponding integrative practice methods and human behavior course incorporating content on clinical method and technique, developmental issues, and psychosocial pathology, and each is offered over two consecutive terms. Students select field placements in areas of their special interest: among these choices: families at risk, child welfare, substance abuse services, schools, mental health, health care, and gerontology.

Innovation in Community, Policy and Leadership (I-CPL): This concentration contextualizes student learning into three streams of practice including developing and sustaining effective communities, developing and sustaining effective policies and developing and sustaining effective organizations through leadership. I-CPL students will deepen their understanding of settings where this practice can take place through field placements which relate to urban social planning, community development, policy analysis and advocacy, program development and system coordination.

A full range of electives is offered to supplement the required sequence of courses in both advanced year concentrations, thus permitting students an opportunity to deepen and enrich their knowledge of particular areas of theory and practice.

Social Work and Infant Mental Health (M.S.W. Dual-Title Program)

Students in the master's program in Social Work can apply to earn a Dual-Title Master's Degree in Social Work and Infant Mental Health (IMH). This dual-title degree is designed to prepare Social Workers to support early social and emotional development especially in contexts in which parents or children suffer from developmental disabilities, physical health or mental health concerns. The dual-title program offers many advantages to M.S.W. students whose goal is to work with very young children and their families. Students who earn an IMH dual-title degree and become practitioners are well positioned to be competitive in the job market, are prepared to work in cross-disciplinary teams, understand evidence-based treatments and their importance, and have a solid understanding of both research and clinical work with infants and families.

Admission: Applicants must meet the admissions standards of the Graduate School and the School of Social Work (see above). Applicants can indicate interest in the dual-title option on their initial on-line application. Current students can discuss their interest in the dual-title option with their faculty advisor prior to spring semester of their core year.

DEGREE REQUIREMENTS

Students are required to complete 12-14 credits of IMH coursework. All students must complete and earn a 'B' or above in the following courses:

- ELE 7025 – Infant Mental Health: Theory to Practice in Early Childhood Cr. 2
- NUR 7880 – Infant/Family Mental Health Assessment: Cr. 2
- PSY 7425 – Psychology of Infant Behavior and Development: Cr. 3
- PSY 7430 – Development and Assessment of Infants and Toddlers: Cr. 3
- SW 7010 – Infant Mental Health Practice: Cr. 2
- SW 8883 – Infant Mental Health Seminar: Cr. 1

Master's students must also complete an IMH-related field placement in their second year. Advanced standing students must focus their year of fieldwork on an IMH-related placement.

Academic Regulations (M.S.W.)

For complete information regarding academic rules and regulations of the Graduate School, students should consult Academic Regulations, Graduate, p. 32. The following additions and amendments pertain to the School of Social Work.

Students in the School of Social Work are responsible for informing themselves of all rules, regulations, and requirements, complying with all official policies and procedures, and fulfilling all course and degree requirements in proper sequence with satisfactory scholarship. The student should consult the Academic Services Officer or the M.S.W. Academic Advisor concerning any academic matter. Students should consult the Academic Services Officer or the M.S.W. Academic Advisor when developing a Plan of Work or selecting electives. The primary responsibility for counseling with the Academic Services Officer or Academic Advisor and for seeking information on policies, procedures, degree requirements, and all academic matters rests with the student.

The faculty of the School of Social Work has the responsibility to require a student to withdraw at any time prior to receipt of the degree when, in its judgment, the student fails to do satisfactory work. Such decisions may be based on deficiencies in performance in class or field or in personal fitness for the profession. The faculty has adopted a set of criteria and procedures for academic termination. Every effort is made to assist students whose work suffers as a result of conditions beyond their control such as personal illness, serious illness in the immediate family, or similar emergencies. The School's Policies and Procedures for Academic Termination and Reinstatement and Grade Appeals Procedures are available in the Office of the Dean and the Office of Admissions and Student Services.

Degree Application

Application for the degree must be filed no later than the end of the fourth week of classes in the semester in which student expects to complete the requirements for the degree.

Time Limitation

Students have a six-year time limit to complete requirements for the Master of Social Work. For further information, see Degree and Certificate Requirements, Graduate, p. 36.

Attendance

Students are expected to attend all sessions of courses for which they are registered and to notify the instructor or the instructor's secretary prior to the class session, if possible, when the student may be absent due to illness or similar emergency. Each instructor may specify an attendance policy in the course syllabus, and announce it at the beginning of a course. Consistent or extended absences may jeopardize the student's grade in the course and, possibly, the student's enrollment in the School.

Field Education

All students enrolled in SW 7998 and 8998, Field Work for Social Workers I and II, are required to carry professional liability insurance (now provided by the school) as a condition of field placement. The Field Education Manual contains a description of the field education program, and the policies and procedures related to the program. Students are responsible for observing the procedures governing field work practice which are detailed in the manual. The Field Education Manual is posted on the School's website (<http://www.social-work.wayne.edu/>) and may be downloaded and saved.

Field Education Health Clearance Policy

The School may require students in field placement to obtain assessments of their physical or mental health from health or mental health professionals approved by the School. The School of Social Work reserves the right to refuse to place or direct a student in field education if the physical or mental health status of the student indicates such action is warranted in order to safeguard clients, agencies, the student, other students, or the School.

Graduate Certificate Programs

Alcohol and Drug Abuse Studies (Graduate Certificate)

The Wayne State University Certificate in Addiction, Alcohol and Drug Abuse Studies (CADAS) is designed to provide advanced students in education, health and human services with an integrated, learning experience that includes biological, psychological, social, cultural, and public health perspectives. The breadth and scope of the proposed program will allow students to accomplish their own specific objectives within a multidisciplinary context. The program attracts professionals currently working in social services, mental health, nursing, public health, education, and criminal justice who realize the need for the additional training and credentials. Adding the CADAS certificate to existing educational and /or work experience is likely to enhance an individual's career opportunities and options.

Admission: Applicants must meet the admissions standards of the Graduate School (see Admission, Graduate School, p. 17) and the School of Social Work (see Admission, p. 574). **Eligibility for admission to the Graduate Certificate is limited to those holding a graduate degree from an accredited educational institution or actively pursuing a graduate degree at Wayne State University.** There is a three-year time limit in which to meet certificate program requirements.

Applications are accepted throughout the year and students may begin the program during any semester. Application forms may be obtained by sending an email to the CADAS program advisor at cadas_cert@lists.wayne.edu or by calling 313-577- 4409.

CERTIFICATE REQUIREMENTS

Candidates must successfully complete twelve credits of approved courses for the CADAS program, including (in the order specified below) at least two introductory courses and two required courses.

During the personal interview the student and the advisor for the certificate program will develop the Plan of Work for coursework based on the student's background, areas of concentration, and career goals. Most students enroll in one or two courses per term. Courses are offered by departments throughout the University and most are offered at least once per year. Up to nine of the twelve credits may be applied to both the certificate and a graduate degree, subject to approval of the relevant academic department and the certificate program coordinator.

If the student has already completed a master's degree, the certificate is awarded when the student has met all the certificate requirements. If the student is earning the certificate concurrently with a master's degree, the certificate is awarded when all the requirements of the certificate and the degree have been met.

INTRODUCTORY COURSES (Offered all three terms. At least two of these need to be completed sequentially)

H E 5440 – Mental Health and Substance Abuse: Cr.3

SW 5720 – Social Services for Older Adults (ONLINE COURSE): Cr.3

SW 6540 – Effects of Drugs and Alcohol on Physical & Social Functioning: Cr.3

REQUIRED COURSES (Offered only in the Fall Term)

PHC 6500 – Drugs and the Addictive Process: Cr.3

SW 8690 – Interpersonal Practice in Substance Abuse: Cr.3

Disabilities (Graduate Certificate)

The Graduate Certificate in Disabilities prepares students to assume leadership positions as service providers, policy makers, administra-

tors or educators. Students learn to plan creatively and to implement activities that positively affect the lives of persons with disabilities. The program provides a useful educational experience to those committed to the full community inclusion of persons with disabilities. Course work reflects disability issues throughout the life-span and focuses specifically on disability issues in urban settings. The program is a collaborative effort of the Developmental Disabilities Institute (see Developmental Disabilities Institute, p. 63) and the following academic units: the Department of Audiology and Speech-Language Pathology and Department of Psychology, the College of Liberal Arts and Sciences; the College of Nursing; the Department of Occupational Therapy, Eugene Applebaum College of Pharmacy and Health Services; the vocational rehabilitation counseling program in the Theoretical and Behavioral Foundation division, and the special education program in the Teacher Education division, College of Education; and the School of Social Work.

Admission: Applicants must meet the admissions standards of the Graduate School (see Admission, Graduate School, p. 17) and the School of Social Work (see Admission, p. 574). Eligibility for the certificate is limited to persons possessing a master's degree from an accredited educational institution or persons actively enrolled in a graduate degree program at Wayne State University.

CERTIFICATE REQUIREMENTS

The graduate certificate in Disabilities program includes at least fifteen graduate credits taken in association with, or subsequent to, obtaining a master's degree. Ten credits are earned through completion of the three required courses and a minimum of five credits of electives. At least six credits must differ from the course requirements of the graduate degree being pursued concurrently. A master's degree within the student's discipline must be completed before the certificate is awarded. All course work must be completed in accordance with the academic procedures of the School of Social Work and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations (M.S.W.), p. 576 and Academic Regulations, Graduate, p. 32, respectively.

REQUIRED CERTIFICATE CURRICULUM:

- SW 6700 – Disabilities in Urban Society: Special Topics: Cr. 3
- SW 6740 – Seminar in Disability Studies: Directed Study: Cr. 3
- SW 6750 – Practicum in Disabilities: Research Topics: Cr. 4

Courses include ten credits in core courses and a minimum of five elective credits. The electives allow students to specialize in a particular area of practice or research, as well as in a particular age range of people with disabilities. At least six credits must differ from the course requirements of the graduate degree being pursued concurrently.

Social Work Practice with Families and Couples (Graduate Certificate)

The Social Work Practice with Families and Couples Certificate Program is designed to provide current knowledge and skills for social work practice in the Detroit metropolitan area. Research and practice innovations also will be explored. Historically, social workers have worked with families affected by social injustice and adverse conditions; this is a legacy of the profession. These families encounter difficult problems, fueled by issues such as poverty, racism, substance abuse, and domestic violence.

Admission: Applicants must meet the admissions standards of the Graduate School (see Admission, Graduate School, p. 17) and the School of Social Work (see Admission, p. 574). Eligibility for this certificate is limited to persons holding a Master of Social Work (M.S.W.) degree or persons actively enrolled in the advanced portion of the M.S.W. program.¹ For students concurrently enrolled in the degree and certificate programs, only nine of the fourteen graduate credits required for the certificate may be applied toward the M.S.W. Work to

complete a graduate certificate program extends beyond the time necessary to fulfill Master of Social Work requirements. Application materials and information may be obtained from the Office of Admissions and Student Services, School of Social Work.

CERTIFICATE REQUIREMENTS

Candidates for the certificate must hold a Master of Social Work degree, achieve a minimum grade point average of 3.0, and complete fourteen credits as outlined below in designated graduate courses. These courses include offerings in social work theory, social work practice, and social work ethics. The certificate must be earned within three years of entering the program. All course work must be completed in accordance with the regulations of the Graduate School and the School of Social Work; see the sections of this bulletin beginning under Academic Regulations, Graduate, p. 32 and Degree and Certificate Requirements, Graduate, p. 36.

THEORY COURSES

- SW 8380 – Applications of Family Systems Theories to Interpersonal Practice I: Cr. 4
- SW 8550 – Social Functioning: Human Sexuality: Cr. 2

PRACTICE COURSES

- SW 8390 – Applications of Family Systems Theories to Interpersonal Practice II: Cr. 4
- SW 8620 – Interpersonal Practice with Couples: Cr. 2

ETHICS COURSE

- SW 8710 – Ethical Issues in Interpersonal Practice: Cr. 2

Gerontology (Graduate Certificate)

The Graduate Certificate Program in Gerontology is designed to prepare graduate students and professional practitioners with graduate degrees to work in a variety of aging-related settings. The field of gerontology is multi-disciplinary, drawing on the best science and practice applications from a number of areas including biology, psychology, sociology, social work, health, and economics. The field of gerontology applies this knowledge to increase the understanding of aging and older adults and to meet the needs of the rapidly growing aging population. The gerontology field focuses on the needs and challenges of community dwelling older adults as well as on elders living in long-term care settings. Adding the gerontology certificate to existing educational and work experiences is likely to enhance an individual's career opportunities and options.

Admission: Applicants must meet the admissions standards of the Graduate School (see Admission, Graduate School, p. 17) and the School of Social Work (see Admission, p. 574). Eligibility for admission to the Graduate Certificate is limited to those holding a graduate degree from an accredited educational institution or actively pursuing a graduate degree at Wayne State University. There is a three-year time limit in which to meet certificate program requirements.

CERTIFICATE REQUIREMENTS

Candidates must successfully complete twelve credits of approved courses for the gerontology graduate certificate. Coursework consists of one core course, the Introduction to Gerontology (SW 7995), and nine additional credits in three other categories. During the personal interview the student and the advisor for the certificate program will develop the *Plan of Work* for coursework based on the student's background, areas of concentration, and career goals. Most students enroll in one or two courses per term. Courses are offered by departments throughout the University and most are offered once per year. Up to nine of the twelve credits may be applied to both the certificate and a graduate degree, subject to approval of the relevant academic

1. Individuals holding a master's degree in a related human service field may be permitted to enroll in some graduate certificate courses with the approval of the Graduate Officer, School of Social Work; these individuals may not apply for the graduate certificate.

department and the certificate program coordinator. All coursework must be completed in accordance with the academic procedures of the School of Social Work and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations (M.S.W.), p. 576 and Academic Regulations, Graduate, p. 32, respectively.

If the student has already completed a master's degree, the certificate is awarded when the student has met all the certificate requirements. If the student is earning the certificate concurrently with a master's degree, the certificate is awarded when all the requirements of the certificate and the degree have been met.

REQUIRED COURSES (ONE Course from EACH Category below must be chosen)

CATEGORY I: Seminar in Gerontology (Required)

SW 7995 – Introduction to Gerontology (ONLINE COURSE): Cr. 3

CATEGORY II: The Aging Individual: Psychological Aspects, Human Development and Expression

ENG 5480 – Topics in African Am. Lit.: Cr. 3

PSY 7490 – Developmental Psychology of Later Life: Cr. 3

SOC 7020/5020 – (NUR 7515) End-of-Life Issues (ANT 7430)(LIS 7635): Cr. 3

CATEGORY III: Aging in the Social, Political and Economic Context

SOC 5760 – Society and Aging: Cr. 3

SW 5720 – Social Services for Older Adults (online course): Cr. 3

CATEGORY IV: Aging Health, Biology, and Physiology

BIO 7750 – Biology of Aging: Cr. 3

ECE 6100 – Enabling Technology (BME 6500, OT 6620): Cr. 3-4

FPH 7240 – Epidemiology: Cr. 3

FPH 7370 – Health, Disease, and Aging: Cr. 3

NUR 7415 – Physical and Psychosocial Issues in Aging (online course): Cr. 3

Social Welfare Research and Evaluation (Graduate Certificate)

The certificate program in Social Welfare Research and Evaluation is designed to provide students with advanced research and evaluation skills necessary to assess the outcomes and efficacy of programs, services and interventions offered by social service organizations. In an era of increasing accountability, students will be equipped with the tools to engage in evidence-based practice and evaluation research at the micro, mezzo, and macro levels of practice.

Admission: Applicants must meet the admissions standards of the Graduate School (see Admission, Graduate School, p. 17) and the School of Social Work (see Admission, p. 574). Eligibility for this certificate is limited to persons holding a master's degree in social work, counseling or a related human services field and who have two or more years of post-master's professional experience in social work or a related human services field. Both full-time and part-time students will be permitted to enroll in the certificate program. Application materials and information may be obtained from the Ph.D. Program Office, School of Social Work.

CERTIFICATE REQUIREMENTS

Candidates for the certificate must achieve a minimum grade point average of 3.0 and complete eighteen credits as outlined below in designated advanced graduate courses. These courses include offerings in social work theory, advanced statistics and research methods. Further, students will complete an applied research practicum. The certificate must be completed within three years of entering the program. All course work must be completed in accordance with the academic procedures of the School of Social Work and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations (M.S.W.), p. 576 and Academic Regulations, Graduate, p. 32, respectively.

REQUIRED COURSES (Eighteen Credits)

Three credits of theory for practice and research:

SW 9230 – Theories for Research and Practice with Communities and Organizations: Cr. 3

Six credits of statistics:

SW 9100 – Social Statistics and Data Analysis: Cr. 3

SW 9300 – Applied Regression & Generalized Linear Models: Cr. 3

Six credits of research methods in social work, with specific content and training related to evidence-based practice research:

SW 9400 – Qualitative Research Methods in Social Work: Cr. 3

SW 9410 – Quantitative Research Methods in Social Work: Cr. 3

Three credits of a social work applied research practicum with specific content and training related to evidence-based practice research.

SW 9420 – Research Practicum: Cr. 3

Graduation from the certificate program will require a minimum g.p.a. of 3.0. In consonance with the grading policy of the Graduate School, a grade of 'B' minus or below is considered unsatisfactory. The School will place a limitation on the number of 'B' minus grades that students may receive, even if they maintain an overall g.p.a. of 3.0. Students receiving two grades of 'B' minus will be terminated from the program. All students must have a *Plan of Work* that is developed upon admission. Progress toward certificate completion will be chronicled in the student's annual review.

Social Work (Ph.D. Program)

The School offers full-time and part-time study programs leading to the Doctor of Philosophy (Ph.D.) degree. The doctoral curriculum is intended to provide social work educators with rigorous training in social work theory and research methodology to address contemporary issues associated with social work practice or social welfare policy at all levels. In addition, the doctoral program offers students the option of enrolling in a clinical scholarship track. The clinical scholarship track is designed to prepare graduates for important careers in clinical social work teaching, scholarship and research, as well as for leadership positions in the greater clinical social work community. A minimum of ninety credits beyond the foundation year of the M.S.W. are required for graduation.

Admission Requirements

All applicants must meet the admissions standards of the Graduate School (see Admission, Graduate School, p. 17) and the School of Social Work (see Admission, p. 574). The doctoral degree in social work indicates not merely superior knowledge of the discipline but also intellectual initiative and the ability to design and conduct independent research and evaluation of social work practice and/or social welfare policy. Students in pre-candidacy will be evaluated on the basis of these attributes as well as on their grade-point performance. The doctoral program is open only to highly qualified students and all applications for admission to the program must have the approval of the School's Doctoral Program Committee.

DOCTORAL PROGRAM ADMISSION REQUIREMENTS

In addition to the requirements for admission to the Graduate School, it is strongly preferred that candidates have:

- 1. Grade Point Average:** A minimum undergraduate and graduate grade point average of 3.5 (on a 4.0 scale)
- 2. Prior Degree:** An M.S.W. degree from a CSWE accredited institution. Applicants not having an M.S.W. must complete the M.S.W. degree while working towards the Ph.D.)
- 3. Practice Experience:** Two years post B.S.W. or post M.S.W. social work practice experience
- 4. Graduate Record Examination:** A combined score of 1000 or higher on the Verbal and Quantitative components of the Graduate Record Examination. The GRE needs to have been taken within the last three years.
- 5. English Proficiency:** For students where English is a second language, applicants to the Ph.D. Program must have a score of 550 or higher (paper-based test), 213 or higher (computer-based test), 79 or higher (internet-based test) on the TOEFL.
- 6. References:** Applicants should submit three references (instructions provided) from social work faculty, researchers and/or practitioners holding the Ph.D. degree who will be asked to evaluate the applicant's scholarship and aptitude for research.
- 7. Statement of Professional Goals:** Applicants should write a brief statement (instructions provided) describing their motivation for doctoral study, career goals, potential research area and how that research interest is consistent with one or more of the research programs of the Doctoral Program faculty in the School of Social Work. In order to determine a potential fit of research interests with faculty research programs, applicants are encouraged to view faculty interests at: <http://www.socialwork.wayne.edu>.
- 8. Academic Scholarship:** Applicants should submit a Summary of Relevant Research and Professional Experience form (available at: <http://www.socialwork.wayne.edu> or in the Ph.D. School Office) as

well as one example of scholarly writing (published or unpublished). The writing example should be selected to demonstrate the applicant's ability to critique, synthesize, and make conclusions about key social work issues or problems.

9. Interviews: Complete an in-person interview with the Doctoral Program Committee for final consideration after the above requirements have been completed.

10. Applications: Applicants must submit the School of Social Work Application for Admission to the online Graduate Application, specifying that they are applying for fall admission to the Social Work Ph.D. Program.

Application Deadline: Completed application packets must be received by **December 19** prior to the fall term of desired admission.

Admission decisions are based upon all materials submitted and reflect careful consideration of the applicant's professional goals, research interests, and the resources of the School of Social Work. Although an applicant may meet all minimum requirements, admission may not be granted because of: 1) program space limitations, and/or 2) inadequate School resources relevant to the applicant's specific interests.

Readmission: Students who are inactive and desire readmission must submit a written request to the Director of the Doctoral Program of the School of Social Work, four months prior to the beginning of the semester for which they wish to register. Readmission decisions are based on recommendations of the Doctoral Program Committee and the Graduate School.

Degree Requirements

Candidates for the Doctor of Philosophy must complete a minimum of ninety graduate credits beyond the core year of the M.S.W., thirty of which are earned through the dissertation. The thirty-credit dissertation registration requirement is fulfilled by registering for SW 9991, 9992, 9993 and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively) in consecutive academic year semesters upon attaining doctoral candidate status (see below). All course work must be completed in accordance with the academic procedures of the School of Social Work and the Graduate School governing graduate scholarship and degrees; see sections beginning under Academic Regulations (M.S.W.), p. 576 and Academic Regulations, Graduate, p. 32, respectively.

Plan of Work: Doctoral students structure their course work in terms of an area of specialization within the discipline of social work. Early in his/her program the doctoral applicant, with the assistance of his/her academic advisor, plans a sequence of studies. The Plan of Work, approved by the academic advisor and the Ph.D. Program Director, should be filed by the end of the first month in the program. Petitions for the Transfer of Credits should be attached to the Plan of Work. It is the responsibility of the student to file any changes in the Plan of Work with the doctoral program.

Annual Review: Student progress toward degree completion will be monitored annually by the Steering Committee and Director of the Doctoral Program.

Residency: The Ph.D. requirement of one year of residence is met by completion of six graduate credits in course work (not dissertation) over two successive semesters.

Candidacy: Admission to candidacy for the doctoral degree will usually require two years of full-time graduate study beyond the M.S.W. It is granted upon fulfillment of the following requirements:

1. Completion of School and Graduate School residence and course requirements.
2. Filing of an approved Plan of Work with the Graduate School.
3. Completion of all research methods and statistics requirements.
4. Completion of the qualifying examination.

5. Selection of the dissertation advisor and committee

Qualifying Examinations must be applied for following completion of all of the required social work courses in the doctoral curriculum. The Qualifying Examination requires of students critical analysis of the state of research, practice, and knowledge in their substantive and cognate areas, and for the reflective presentation of innovations in perspectives, theory, knowledge, and research design, methods and strategies that will advance social work practice and/or policy. By the end of the qualifying examination process students will be well grounded in their substantive areas of research and demonstrate an independent and original perspective regarding inquiry into social work practice. The subject of the Qualifying Examination is selected in consultation with the Doctoral Program Steering Committee.

Approval of Dissertation Prospectus: The candidate is required to prepare a Dissertation Prospectus and have it approved by the Doctoral Program Committee prior to beginning work on the dissertation. The Prospectus and Committee form must be submitted to and approved by the Graduate School.

Submission of Dissertation: The candidate is required to submit a doctoral dissertation on a topic satisfactory to his/her Dissertation Committee, designed to demonstrate proficiency in social work analysis, a capacity for independent and creative research, and the ability to perfect and follow through on an appropriate research or evaluation design.

Dissertation Defense: Upon completion of the dissertation, the candidate is required to make a public presentation of his/her research. The Dissertation Public Lecture-Defense form (Part I) must be completed by the candidate and the Dissertation Committee indicating readiness for public presentation of the candidate's research and dissertation. This form must be submitted to the Graduate School at least two weeks prior to the date of the defense. The Dissertation Public Lecture-Defense includes the public lecture and defense where the candidate presents the results of the dissertation research with the audience and the dissertation committee, a private meeting between the dissertation candidate and the committee, and the evaluation by the dissertation committee whereby it is determined whether the candidate has passed the dissertation defense. Upon completion of this process, the Dissertation Public Lecture-Defense form is returned to the Graduate School with the recommendations of the Dissertation Committee.

Time Limitations: Students have a seven year time limit to complete all requirements for the Ph.D. The seven-year period begins with the end of the semester during which the student is admitted to doctoral study and commences working toward meeting requirements for the degree.

Doctoral Program Curriculum

Social Work Transfer Courses: (up to twenty-three advanced year M.S.W. or post-M.S.W. certificate credits relevant to the student's proposed area of research) approved by the Director of the Doctoral Program.

THEORY (9 credits)

- SW 9210 – Theories for Practice & Research with Individuals: Cr. 3
- SW 9220 – Theories for Practice & Research with Groups & Families: Cr. 3
- SW 9230 – Theories for Practice & Research with Communities & Orgzns.: Cr. 3

RESEARCH AND STATISTICS COURSES (16 credits)

- SW 9100 – Social Statistics and Data Analysis: Cr. 3
- SW 9300 – Applied Regression Analysis & Generalized Linear Models: Cr. 3
- SW 9400 – Qualitative Research Methods in Social Work: Cr. 3
- SW 9410 – Quantitative Research Methods in Social Work: Cr. 3
- SW 9420 – Research Practicum: Cr. 3
- SW 9430 – Dissertation Seminar: Cr. 1

CLINICAL SCHOLARSHIP TRACK COURSES (13 credits)

- SW 9500 – Advanced Clinical Social Work Theory: Cr. 3
- SW 9510 – Applied Clinical Social Work Practice I: Cr. 3

SW 9520 – Applied Clinical Social Work Practice II: Cr. 3

SW 9550 – Advanced Clinical Practicum I: Cr. 2

SW 9560 – Advanced Clinical Practicum II: Cr. 2

SOCIAL WORK ELECTIVE (3 credits)

SW 9000 – Directed Study: Doctoral: Cr. 2-6 (Max. 6)

SW 9240 – Social Work Education: Cr. 3

SW 9250 – Philosophical Foundations for the Science of Social Work: Cr. 3

Cognate Courses (8 credits): Courses other than Social Work that support the candidate's area of research.

Full-Time Program

Full-time students complete the degree requirements in four years. During the first two years of the program, students receive advanced training in social work theory, statistics and research methodology. Students in the research track also complete at least nine credits of coursework in a cognate discipline (e.g., psychology, sociology, education, health, gerontology) associated with their area of research. Students will complete their Comprehensive Qualifying Examination after they complete the relevant coursework. During the third and fourth years of the program, students will complete a one-credit Dissertation Seminar, any remaining elective courses and all of their dissertation credits.

Part-Time Program

The part-time study program is designed to permit students to complete degree requirements over an extended period of time. The part-time option makes it possible for students to work or engage in other activities during much of the time they are enrolled, and complete all degree requirements within a five-year period.

All required courses in social work and the student's cognate area are completed within the first three years of the program. In Year three, students will take the Research Practicum (SW 9420) in the Fall Semester, and they will complete their Comprehensive Qualifying Examination after completing the relevant coursework. During the fourth and fifth years of the program, students will complete a one-credit Dissertation Seminar, any remaining elective courses and all of their dissertation credits.

Elective Coursework

In addition to the required coursework identified above, all students will be required to complete twenty-three credits in elective courses. Students may be eligible to transfer up to twenty-three M.S.W./post-M.S.W. credits of coursework. Courses that may be eligible for transfer include those taken during the Advanced Year of the M.S.W. program and/or post-master's certificate program that are relevant to the student's proposed area of research. Transfer credit must be approved by the Director of the Doctoral Program.

Social Work and Infant Mental Health (Ph.D. Dual-Title Program)

The School also offers a Ph.D. dual-title degree in Social Work and Infant Mental Health (IMH). The dual-title degree requires coursework additional to the conventional social work doctoral program as outlined above: twelve credits that focus on the social emotional capacities of young children birth to five years and in the primary relationships that support these capacities. IMH expertise thereby gained should be reflected in a substantive research paper and a dissertation that addresses IMH issues and concepts. Students' studies and scholarly productions will be mentored by Social Work faculty members as well as IMH faculty members from other University schools and colleges.

Social Work and Gerontology (Ph.D. Dual-Title Program)

The school offers a Dual-Title Degree in Gerontology. Gerontology is a multi-disciplinary field that integrates theory, practice knowledge, and research methodology to benefit older adults. Gerontologists trained at the Ph.D. level have the opportunity to play a key role in developing gerontological practices and in training new generations of practitioners and researchers in the field. The dual-title degree requires coursework in addition to the conventional social work doctoral program as outlined above. Twelve credits are required for the dual-title that focuses on gerontological content in lieu of a cognate.

Required coursework includes the following:

- SW 7995 – Introduction to Gerontology: Cr. 3
- SW 9420 – Research Practicum: Cr. 3

Two additional 3-credit courses, selected from the following:

- FPH 7370 – Health, Disease, and Aging: Cr.
- NUR 7415 – Psychosocial Issues in Aging: Cr.
- PSY 7490 – Developmental Psychology in Later Life: Cr.
- SOC 7020 – End of Life Issues: Cr.

Faculty with gerontological expertise from the School of Social Work and other university schools and colleges will serve as mentors for students in the program. Students are also required to incorporate gerontological content into the research practicum and the substantive comprehensive exam. They are also expected to make gerontological content a substantial component of their dissertation and to include a gerontology faculty member on their dissertation committee.

Social Work/Anthropology SWAN (Ph.D. Program)

Students can apply to earn a doctorate in Social Work and Anthropology (SWAN). The joint Social Work/ Anthropology Ph.D. program draws on the strengths of both fields in theory, social history, research, policy and practice. The SWAN program combines the approaches of each field to make use of its urban location to foster scholarship focusing on global issues of 21st century post-industrial cities and how these cities are being re-invented. Students will receive a thorough grounding in the theoretical and applied aspects of both Social Work and Anthropology and will apply this knowledge to pursue scholarship in areas of interest focusing on urbanism, internationalism, and social/cultural organization. SWAN students follow a curriculum that draws from existing courses in each field with the addition of one new core course that fully integrates the two disciplines. Specific new content combining the perspectives of both disciplines is included in the MA/MSW level practica, the qualifying exam requirements, and dissertation research to meet the educational requirements of this degree.

This program prepares scholars for work in several different occupations. Graduates are qualified for faculty positions in social work or anthropology. In addition, they are highly qualified for positions in governmental or non-profit agencies that work in urban or international development.

Academic Scholarship: All course work completed to satisfy the following degree requirements must be done in accordance with the regulations of the Graduate School; see Academic Regulations, Graduate, p. 32. All students are required to maintain a 'B' average. A grade of 'B-minus' or below in two courses will be sufficient reason to dismiss a student from a graduate program. For the purposes of evaluating this condition, a grade of 'WF' is considered to be a failing grade.

To repeat a course, a student will need to submit a "Petition to Repeat a Graduate Course" form to the Graduate Committee for consideration. Students may not repeat a class without prior approval.

The program only allows two course repeats for a class where a student receives an insufficient grade.

Admission to this program is contingent upon admission to the Graduate School; for requirements, Admission, Graduate School, p. 17. Only a limited number of applicants who have demonstrated superior ability can be accepted in this program.

In addition to the transcripts and other materials required by the Graduate School, Admission. Applicants must apply for admission to either the Social Work or Anthropology Ph.D. program and then request admission to the SWAN program. They must meet the admissions standards of the Graduate School and the SWAN program. Students who do not possess an MSW must also apply to the MSW program after alerting the SW doctoral chair of their application to the SWAN program. All application and admissions materials must be submitted to the Office of Graduate Admissions by January 15 to begin in the Fall semester.

The Plan of Work must be submitted before forty credits have been completed and before the qualifying examination is scheduled.

DEGREE REQUIREMENTS

The Doctor of Philosophy requires ninety credits beyond the baccalaureate degree, thirty of which must be earned as dissertation credit. The thirty credit dissertation registration requirement is fulfilled by registering for the courses SW 9991, 9992, 9993, and 9994 (Doctoral Dissertation Research and Direction I, II, III, and IV, respectively), in consecutive academic year semesters.

Once the student has attained candidate status, he/she is required to register for doctoral dissertation credits. Students must register for 9000-level credits (SW 9991, 9992, 9993, and 9994) through the Graduate Office and must fulfill 7.5, 9000-level credits each semester for four consecutive semesters (excluding spring-summer). All course work must be completed in accordance with the academic procedures of the School of Social Work and the Graduate School governing graduate scholarship and degrees: see the sections of this bulletin under Social Work (Ph.D. Program), p. 580 and Academic Regulations, Graduate, p. 32, respectively.

Coursework: The following courses, or their equivalents, must be completed by students without an MSW:

Social Work - Practice/Policy Courses (Foundation)

- SW 7040 - Methods of SW Practice: Cr. 3
- SW 7998 - Concentration Field Work I: Cr. 4-6 (Max. 12)
- SW 7055 - Foundations Group Theory & Practice: Cr. 3
- SW 7065 - Foundations Macro Theory & Practice: Cr. 3
- SW 7720 - Introduction to Social Welfare Policy in the United States: Cr. 3
- Social Work - Practice Courses (Community Concentration)
- SW 8048 Social Action Research and Evaluation: Cr. 3
- SW 8035 Techniques of Quantitative Data Analysis: Cr. 1
- SW 8045 Techniques of Data Interpretation and Presentation: Cr. 1
- SW 8075 Community Building/Development: Cr. 4

Coursework: The following courses, or their equivalents, must be completed by ALL students:

Social Work - Research/Theory

- SW 9100 - Social Statistics & Data Analysis: Cr. 3
- SW 9210 - Theories for Practice & Research with Individuals: Cr. 3
- SW 9220 - Theories for SW Research & Practice with Families/Groups: Cr. 3
- SW 9230 - Theories for Practice & Research w/ Communities/Organizations: Cr. 3
- SW 9300 - Applied Regression and Linear Models: Cr. 3
- SW 9410 - Quantitative Research in Social Work: Cr. 3

Anthropology - Research/Theory

- ANT 5060 - Urban Anthropology: Cr. 3
- ANT 5140 - Biology and Culture: Cr. 3
- ANT 5320 - Language and Society: Cr. 3
- ANT 5700 - Applied Anthropology: Cr. 3
- ANT 7010 - Anthropological Theory I: Cr. 3
- ANT 7020 - Anthropological Theory II: Cr. 3

ANT 7200 - Qualitative Research I: Cr. 4
ANT 7210 - Qualitative Research II: Cr. 3
ANT 7780 - Conceptualizing the Dissertation: Cr. 3
Two (2) ANT electives in the student's research area

SWAN - Theory

SW 9697 – Integrative Seminar in Social Work and Anthropology: Cr. 3

A minimum of thirty credits of graduate work must be at the 7000 level or above (excluding dissertation credits). Students must petition the Graduate Committee for course equivalents, substitutes, or any other exceptions to the Ph.D. requirements. Students who do not enter with program with an MSW will need to complete all the courses above.

Qualifying Exams: The SWAN steering committee will design and administer the SWAN qualifying examinations so that students can demonstrate the breadth, depth and mastery of their theoretical and empirical knowledge related to social work and anthropology theory, research methods and data analysis approaches as well as their substantive domain of knowledge. Students will demonstrate this knowledge through a written examination consisting of four sections: (1) statistics, (2) culture area, (3) research methods, and (4) a substantive paper demonstrating students' application of social science theory and SWAN knowledge to their intended research domain.

The statistics exam will be an in-school, open book exam developed by faculty teaching the required statistics courses. For the take home theory, topic area and substantive paper components, students will, in consultation with their academic advisers, select a three-person examination committee consisting of social work and anthropology faculty. These examination committee members will meet with students to develop reading lists and questions that students will then address in written take-home exams.

Students who fail one or more sections of the qualifying examination will be expected to retake only those sections that they failed. Students who fail one or more sections of the examination for a second time will be dismissed from the program.

Foreign Language Requirement: Students doing SWAN research fieldwork in non-English speaking settings will be expected to have 3 semesters of a foreign language or demonstrate fluency in their field language. These students need to take classes to complete the Anthropology Foreign Language requirement (3 semesters of the same foreign language at the undergraduate level; language credits do not count towards the 90 credits needed for a Ph.D.).

1. a grade of 'C' or better in one and one-half years of work in the language offered to meet the requirement (three semesters or five quarters of coursework at any accredited college or university);
2. satisfactory performance on a standardized (Educational Testing Services) examination; or
3. certification of competence to carry out research in the relevant language by a member of the graduate faculty of Wayne State or an equivalent university. The nature of the tools of research and requirements for satisfactory proficiency will be determined by each student's doctoral committee. Additionally mandated tools of research may include additional statistics, mathematics, computer science and/or a field language.

Additional Information: A more detailed discussion of the doctoral program is available from the School or on our website: <http://clas.wayne.edu/swan> See also Doctor of Philosophy Degrees (Ph.D.), p. 38, for information on the required minor, residency, and other University requirements.

Social Work Courses (SW)

The following courses, numbered 5000-9999, are offered for graduate credit. Courses numbered 5000-6999 that are offered for undergraduate credit only may be found in the undergraduate bulletin, as well as all other undergraduate courses (numbered 0900-4999). Courses in the following list numbered 5000-6999 may be taken for undergraduate credit unless specifically restricted to graduate students as indicated by individual course limitations. It is the responsibility of graduate students taking 5000-6999 level courses for credit accrual to a graduate degree to inform the instructor of their status, and to assume that graduate level course work will be expected of them. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations, p. 696.

5720 Social Services for Older Adults. Cr. 3

Identification, description and analysis of the problems associated with aging; development of social work services to address these needs. (Y)

5755 Introduction to Child Welfare. Cr. 3

Prereq: senior or graduate standing. Introduction and overview of child welfare services and practice with focus on a wide range of issues related to children and youth in care and those in need of protection from abusive and/or neglectful caretakers and environments. (Y)

6010 (ELE 6010) Family Centered Collaboration in Early Childhood Intervention and Special Education. (PSY 6010) Cr. 3-4

Prereq: senior or graduate standing. Theories, concepts and practices of family centered intervention services for young children with special needs. Team-building and cross-disciplinary communication and collaboration with families. (F)

6100 Child Welfare and Social Systems: Context for Case Management Practice. Cr. 3

Prereq: senior or graduate standing. knowledge base for Child Welfare practice within the context of mental health, education, juvenile justice and other social systems with a significant focus on the social problems of domestic violence and substance abuse. Core case management intervention skill sets utilized for effective child welfare practice will be taught. (T)

6500 Social Work and the Law. Cr. 2

Prereq: senior or graduate standing. Study of the relationship between law and social work practice. Emphasis on understanding the legal processes, the relationship and interdependence of law and social work practice and the knowledge and skill needed to help integrate law into social work practice. (W)

6535 Juvenile Delinquency: Social Functioning. Cr. 2-4

Prereq: senior or graduate standing. Causes of juvenile delinquency from an ecological perspective; assessment of delinquents and their environment as basis for social work intervention. (I)

6540 Effects of Drugs and Alcohol on Physical and Social Functioning. Cr. 3

Prereq: senior or graduate standing. Types of substances most frequently abused, their effects on physiological, psychological, social and physical functioning, and patterns of use among different age groups and populations. (T)

6700 Disabilities in Urban Society: Special Topics. Cr. 3

Prereq: senior or graduate standing. Offered for graduate credit only. Topics central to understanding living with disabilities across the life span in an urban society. Implications for persons with disabilities, their families and advocates, and their service providers. (F)

6740 Seminar in Disability Studies: Directed Study. Cr. 3

Enrollment in Graduate Certificate in Disabilities program. Offered for graduate credit only. Integration of theoretical and practical knowledge acquired in Graduate Certificate in Disabilities program within context of the discipline and area of interest of the student. (Y)

6750 Practicum in Disabilities: Research Topics. Cr. 4

Enrollment in Graduate Certificate in Disabilities program. Offered for graduate credit only. Supervision and direction of students as they apply their knowledge and skills in an interdisciplinary, service-oriented department. Work with professionals from other disciplines and consumers of disability-related services; development of leadership and teamwork skills. (Y)

6991 Special Topics in Social Work. Cr. 2-4

Prereq: senior or graduate standing. Topics of current interest to be announced in Schedule of Classes. (Y)

7010 Infant Mental Health Practice. Cr. 1-2

Prereq: graduate standing. Intervention strategies to enhance normal infant development as an aspect of parenting skills. (W)

7040 Methods of Social Work Practice. Cr. 3

Coreq: SW 7998. Basic theories and principles of practice including a strengths perspective with diverse individuals and families. Emphasis on basic values, roles, skills of generalist social work practice; and on ecological systems perspective and practice principles with at-risk and oppressed populations. Skills of empowerment to achieve individual and collective social and economic justice. (F)

7055 Foundation Group Theory and Practice. Cr. 3

Prereq: SW 7040; coreq: SW 7998. Ecological systems perspective used to critically assess influence of mezzo systems on human behavior and their consistency with social values and ethics. Use of strengths perspective with diverse groups within generalist practice. Group types, process, dynamics, leadership. Planning of groups, interventions, social and economic justice. (S)

7065 Foundation Macro Theory and Practice. Cr. 3

Prereq: SW 7040; coreq: SW 7998. Ecological systems perspective used to critically assess influence of macro system on human behavior and their consistency with social values and ethics. Generalist practice and strengths perspective. Practice with diverse communities and organizations, particularly at-risk populations. Needs assessment skills; promotion of macro change and social and economic justice in an urban context. (W)

7070 Social Work Practice with Micro, Mezzo and Macro Systems. Cr. 2

Prereq: B.S.W. degree and admission to a planned degree program in School of Social Work; coreq: SW 7620. Integrative summer bridge for advanced standing students. Practice principles guiding social work intervention at the micro, mezzo, and macro level; impact of diversity and unique concerns of populations at risk. (S)

7085 Social Work Leadership Strategies. Cr. 3

Prereq: graduate standing. Leadership theories, applications and skill development. (F)

7500 Human Behavior Theory for Social Work Assessment. Cr. 2

Prereq: B.S.W. degree and admission to planned program in School of Social Work; coreq: SW 7810. Integrative summer bridge course for advanced standing students. Major micro, mezzo, and macro theories of human behavior; theoretical approaches that guide social work assessments. (S)

7560 Human Behavior in the Social Environment I: Micro Theory. Cr. 3

Prereq: graduate standing. Ecological systems perspective presented. Critical analysis of knowledge and theories of human development across the life span. Human behavior studied within the

context of the social systems in which people live including families, peer groups, organizations and communities. Emphasis on how social systems promote and deter human development and the influence of diversity on human development. Focus on social work assessment. (F)

7570 Women's Roles and Issues in Contemporary Contexts. Cr. 3

Prereq: graduate standing. Web course. Focus on women's issues from the perspective of human behavior theory, practice theory (as it relates to human behavior), and policy. The historical, political, and socioeconomic forces that maintain gender inequities in society and in the practice of social work. Implications of environmental influences examined in terms of social justice, social work values, knowledge and skills, as well as in terms of the structural and systematic arrangement and delivery of social welfare services at the micro, mezzo, and macro levels. (F)

7620 Advanced Standing Social Welfare Policy. Cr. 2

Prereq: B.S.W. degree and admission to planned degree program in the School; coreq: SW 7070. Integrative summer bridge course that covers fundamental principles of social welfare policy. Students develop a deeper understanding of how policy impacts social services, the community, and vulnerable groups. (S)

7660 Human Behavior in the Social Environment II: Diversity in a Multicultural Society. Cr. 3

Prereq: SW 7560. Emphasizes the interconnectedness of oppressions with a special focus on racism, sexism, heterosexism, ableism, and classism. Presents a conception of social justice and a framework for developing a social change orientation to combat discrimination, oppression, and economic deprivation and work toward social justice. Course uses the ecological systems perspective to understand human behavior within diverse families. (W)

7700 Trauma-Informed Social Welfare Practice. Cr. 3

Prereq: SW 7810 or 7830. Introduces students to the core concepts informing evidence-based assessment and intervention for traumatized children and adolescents who are in the child welfare system. (W)

7720 Introduction to Social Welfare Policy in the United States. Cr. 3

Prereq: graduate standing. Historical development of social welfare viewed dynamically as a function of social, economic, political and cultural transitions. Evolution of professional social work. Framework of analysis for social welfare policies, programs and agencies. (Y)

7810 Using and Conducting Research in Social Work. Cr. 2

Prereq: B.S.W. degree and admission to planned degree program in the School; coreq: SW 7500. Integrative summer bridge course for advanced standing students. Enhancement of ability to integrate research findings into evaluation of social work practice at the micro, mezzo, and macro levels. (S)

7820 Research Methods in Social Work I. Cr. 3

Prereq: graduate standing. First of two courses focused on basic concepts and methods of scientific inquiry as utilized in building knowledge for social work practice. (Y)

7830 Research Methods in Social Work II. Cr. 3

Prereq: SW 7820. Second of two courses focused on basic concepts and methods of scientific inquiry as utilized in evaluating service delivery and in enhancing the performance of social work practitioners. (Y)

7990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: graduate standing.; written consent of advisor and graduate officer. Individual direction in reading and research on selected topics. (T)

7995 Introduction to Gerontology. Cr. 3

Prereq: graduate standing. Required introductory course for Graduate Certificate in Gerontology. Multidisciplinary conceptual framework for study of gerontology. Students develop knowledge and skills needed to understand gerontological theory, research, and practice. (Y)

7998 Concentration Field Work for Social Workers I. Cr. 4-6 (Max. 10)

Coreq: one course in a social work method. Offered for S, M and U marks only. Open only to M.S.W. students. The ratio of clock hours to credits is 56.25 to 1. Practicum of M.S.W. program integrated with courses in social work method, human behavior and the social environment, social welfare organization and policy, and research. Field placements assigned by Coordinator of Field Education. Material Fee as indicated in Schedule of Classes. (T)

7999 Master's Research Essay Direction. Cr. 1-3 (Max. 3)

Coreq: SW 7830 or SW 7810. Two-semester course completed during the Advanced Year of the M.S.W. Program. Essay reflects an original synthesis of an already-published work, demonstrating a thorough understanding and mastery of a sub-area of social work, including the relevance of the problem and adequacy of intervention. (F,W)

8015 Intervention/Program Planning. Cr. 3

Prereq: SW 7065 and SW 7070 Strategies and approaches to comprehensive program development within the context of community and organizational practice. (W)

8025 Community Assessment and Evaluation. Cr. 1

Prereq: SW 7065 or SW 7070 and SW 7810 or SW 7830. The focus of this course is to prepare social workers to assess communities, organizations, neighborhoods, and other social groups through the use of empirically substantiated social science techniques. Using social justice-oriented, community-driven, data analysis, students will be able to contribute to an assessment and/or evaluation of any given community. (W)

8035 Techniques of Quantitative Data Analysis. Cr. 1

Prereq: SW 7065 or SW 7070 and SW 7810 or SW 7830. Focus on advanced analytic techniques with quantitative data. (W)

8045 Techniques of Data Interpretation and Presentation. Cr. 1

Prereq: SW 7065 or SW 7070 and SW 7810 or SW 7830. Presenting case, issue, or problem in context of public policy with a graphical presentation of data to a range of different audiences within the framework of social work values and ethics. (W)

8048 Social Action Research and Evaluation. Cr. 3

Prereq: SW 7065 or SW 7070 and SW 7810 or SW 7830. Concepts, practices, and methodological approaches that are central to empowerment and action-oriented research and evaluation. Students are prepared to intervene into communities, institutions, neighborhoods, and other social groups through the use of empirically substantiated social science techniques. (W)

8055 Program Evaluation and Social Action Research. Cr. 2

Prereq: SW 7065 or SW 7070 and SW 7810 or SW 7830. Concepts, practices, and methodological approaches central to empowerment and action-oriented research. (W)

8065 Advanced Systems Theories and Practices. Cr. 4

Prereq: SW 7065 or SW 7070; coreq: SW 8998. Applied systems approaches to achieve goals, explore planning, ensure fairness and social justice, and promote diversity. (F)

8075 Theories and Practice of Community Building and Development. Cr. 4

Prereq: SW 7065 or SW 7070; coreq: SW 8998. Best practice and theories on community development and engagement. (F)

8115 Application of DSM Assessment System in Social Work Practice. Cr. 2

Prereq: SW7055 or SW7070. Reviews the classification, epidemiology, etiology and course of a range of mental and behavioral disorders across the life span. Emphasizes the critical analysis of existing and emerging theory and provides guidelines for the critical application and limitations of the DSM diagnostic assessment and classification system of mental and behavioral disorders in clinical social work practice. (T)

8125 Therapeutic Storytelling with Children. Cr. 1

Prereq: SW 7055 or SW 7070. Therapeutic storytelling as a means for expressing and resolving conflicts, disappointments, and anxieties in children. Strategies for assisting children in creating their own story-narratives, focusing on reciprocal, collaborative, and other forms of storytelling. Applications to a variety of childhood disorders and clinical situations. (F)

8180 Social Services in the Schools. Cr. 3

Prereq: SW 7055 or SW 7070. Structure and history of education in relation to social work; implications of current legislation; identification of educational disabilities; programs and services to remediate disabilities and assist students. (Y)

8330 Psychosocial Assessment of Children and Youth. Cr. 3

Prereq: SW 7055 or SW 7070. Holistic approach to assessment of children and youth; focus on various aspects of assessment including interpretation of psychological test data; social work administration of behavioral scales; observation; interpretation of drawings; socialized assessment areas such as ADHD and autism. (Y)

8340 Application of Cognitive-Behavioral Theories to Interpersonal Practice I. Cr. 4

Prereq: SW 7055 or SW 7070; coreq: SW 8998. Building on the generalist foundation, this course furnishes cognitive-behavioral theories as background for understanding developmental derailments from birth through adulthood, and for structuring beginning stages of social work treatment. Focus on work with vulnerable populations. (F)

8350 Application of Cognitive Behavioral Theories to Interpersonal Practice II. Cr. 4

Prereq: SW 8340; coreq: SW 8998. Continuation of S W 8340; cognitive behavioral and behavioral treatment approaches to the middle and termination phases of social work treatment. Focus on work with vulnerable populations. (W)

8360 Application of Psychodynamic Theories to Interpersonal Practice I. Cr. 4

Prereq: SW 7055 or 7070; coreq: SW 8998. Building on the generalist foundation, this course furnishes an integrative framework for: intensive examination of psychodynamic theories of development from birth through adulthood; descriptive, etiological, and dynamic diagnosis of psychopathology; application to beginning phases of clinical social work treatment. Focus on work with vulnerable populations. (F)

8370 Application of Psychodynamic Theories to Interpersonal Practice II. Cr. 4

Prereq: SW 8360. Continuation of S W 8360. Course offers a psychodynamic integrative framework for evaluation of children, adolescents and adults; emphasis on the middle and termination phases of the clinical social work treatment process. Focus on work with vulnerable populations. (W)

8380 Application of Family Systems Theory to Interpersonal Practice I. Cr. 4

Prereq: SW 7055 or SW 7070; coreq: SW 8998. Overview of family systems theories as a foundation for diagnosing family problems and initiating treatment. Application of interpersonal practice theories in working with families throughout life cycle of family, from formation to

termination; transitional phases experienced by its members; obstacles to normal growth and development. Practices employed by social workers in family practice field, application of working paradigm for interpersonal practice in a variety of settings. (F)

8390 Application of Family Systems Theory to Interpersonal Practice II. Cr. 4

Prereq: SW 8380; coreq: SW 8998. The major family therapy models and family theories in social work; incorporating an expanded view of recognizing biculturalism and a dual perspective of specific minorities (e.g., Arabs, Asians, Blacks, Hispanics, Native Americans and other subcultures). Advanced application of theories and conceptual frameworks for change to social work intervention with diverse family structures. (W)

8550 Social Functioning: Human Sexuality. Cr. 2

Prereq: SW 7055 or SW 7070. Human sexuality as it affects individuals in their relationships to others in terms of development, orientation and dysfunction. (T)

8570 Dynamics and Intervention in Family Violence. Cr. 3

Prereq: SW 7055 or SW 7070. Examination of child abuse, partner violence, and elder abuse; theories of causality; dynamics and effects on social functioning. Social work practice methods in family violence. (F)

8580 Impact of Health and Disease on Social Functioning: Implications for Social Work Practice. Cr. 3

Prereq: SW 7055 or SW 7070. Study of biological, psychological, social, and environmental factors which influence health; social work interventions for at-risk populations in health care. (F)

8620 Interpersonal Practice with Couples. Cr. 2

Prereq: SW 7055 or SW 7070. Application of interpersonal practice theories in couples therapy utilizing behavioral and social science content in relation to marriage and committed relationships, to the functional and dysfunctional aspects of marital and couple relationships, and their effects on the couple and other affected family members. (Y)

8690 Interpersonal Practice in Substance Abuse. Cr. 3

Prereq: SW 7055 or SW 7070. Application of interpersonal practice theories to social work interventions with substance abuse related problems; procedures and strategies for assessment and planning; methods of intervention with individuals, families, and groups; prevention and education. (Y)

8710 Ethical Issues in Interpersonal Practice. Cr. 2

Prereq: SW 7055 or SW 7070. Graduate seminar on social work as a profession. Articulation of professional practice issues in such areas as: competencies, standards, professional organization, social sanction, ethics, autonomy, accountability, inter-professional practice, social action. (W,S)

8770 Advanced Policy Analysis. Cr. 3

Prereq: SW 7055 or SW 7070; and SW 7720 or SW 7620. Opportunity to conduct a policy analysis in an area of interest; e.g., welfare reform, corrections, homelessness, health, domestic violence. (T)

8860 Grief and Loss Issues in Social Work Practice. Cr. 3

Prereq: SW 7055 or SW 7070. Knowledge and skills needed to provide social work services to individuals, groups and families coping with a range of loss experiences, including those around death, dying and bereavement. (F,W)

8883 Infant Mental Health Seminar I. Cr. 1

Coreq: SW 8998. Open only to Infant Mental Health Dual Title students; students must also register for SW 8884 in the subsequent (Winter) semester. Understanding and integration of knowledge and skills developed through courses and field placement experiences focused on infant mental health. (F)

8884 Infant Mental Health Seminar II. Cr. 1

Prereq: SW 8883; coreq: SW 8998. Open only to Infant Mental Health Dual Title students. Supports Infant Mental Health Dual-Title students in the understanding and integration of knowledge and skills developed through courses and field placement experiences focused on infant mental health. (F)

8991 Advanced Special Topics in Social Work. Cr. 1-4

Prereq: SW 7055 or SW 7070. Topics of current interest for students in advanced year of M.S.W. program, Ph.D. program in social work or doctoral programs in related disciplines. Topics to be announced in Schedule of Classes. (T)

8996 Group Project Research and Direction. Cr. 1-4 (4 req.)

Prereq: SW 7810 or SW 7830. (T)

8998 Concentration Field Work for Social Workers II. Cr. 4-6 (Max. 12)

Coreq: one course in a social work method. Offered for S, M and U marks only. Open only to M.S.W. students. The ratio of clock hours to credits is 56.25 to 1. Practicum of M.S.W. program integrated with courses in social work method, human behavior and the social environment, social welfare organization and policy, and research. Field placements assigned by Coordinator of Field Education. Material Fee as indicated in Schedule of Classes. (T)

8999 Master's Thesis Research and Direction. Cr. 1-6 (6 req.)

Prereq: SW 7810 or SW 7830. (T)

9000 Directed Study: Doctoral. Cr. 2-6 (Max. 6)

Open only to doctoral students. Prereq: written consent of advisor and Ph.D. program director. Independent study under guidance of a faculty member. (T)

9100 Social Statistics and Data Analysis. Cr. 3

Prereq: master's level statistics in social, behavioral, health sciences; doctoral student, and written consent of advisor and doctoral director. Application of univariate and bivariate statistics and analysis of variance to analyze data obtained from social work practice settings. Students learn to formulate appropriate research questions and hypotheses before data collection, to use SPSS to conduct analysis, and to interpret analyses and communicate findings to academics and practitioners. (Y)

9210 Theories for Practice and Research with Individuals. Cr. 3

Prereq: admission to doctoral program in social work. Major theoretical systems currently used in clinical social work practices presently used with individuals, examined from six vantage points: model origin; conceptual framework; view of person-in-environment; philosophy of treatment; model effectiveness; practice controversies. (Y)

9220 Theories for Practice and Research with Groups and Families. Cr. 3

Prereq: admission to doctoral program in social work. Theories, models and perspectives guiding social work practice with families. (Y)

9230 Theories for Practice and Research with Communities and Organizations. Cr. 3

Prereq: written consent of advisor; doctoral student. Practice theory at the macro level. Two perspectives: how macro serves as a context of social work practice at levels of policy, community, organization; and theories of practice with macro systems. How a scholar imparts content and undertakes research at these levels. (Y)

9240 Social Work Education. Cr. 3

Open only to doctoral students. Prereq: written consent of advisor. Standards, trends and issues of contemporary and future social work education. Critical analysis of articulation among bachelor's, master's, doctoral education. Emphasis on course development, designing effective learning experiences. (B)

9260 Current and Historical Trends in U.S. Social Welfare Policy. Cr. 3

Prereq: successful completion of graduate-level policy course in social work or related field. Critical analysis in order to understand policy contexts that frame contemporary social work problems and practice. (B)

9300 Applied Regression Analysis and Generalized Linear Models. Cr. 3

Prereq: written consent of Ph.D. program director; SW 9100 with grade of B or above. Classic regression models, generalized linear models, including weighted least-squares, hierarchical linear models, logistic regression. Using SPSS to analyze social work practice data; interpretation of findings; communication of findings to scholars and practitioners. (Y)

9400 Qualitative Research Methods in Social Work. Cr. 3

Open only to doctoral students. Prereq: written consent of advisor. Examination of social work practice through case study, action research, and qualitative approaches to knowledge building. (Y)

9410 Quantitative Research Methods in Social Work. Cr. 3

Open only to doctoral students. Prereq: written consent of advisor. Understanding and application of knowledge and skills in quantitative research methods aimed at increasing knowledge for social work practice and social welfare policy; clear, researchable questions; use of appropriate theory; selection of design; drawing of sample; and development of appropriate measures and operations within person-in-environment framework. (Y)

9420 Research Practicum. Cr. 3

Prereq: written consent of advisor; doctoral student. Supervised hands-on research experience with a faculty member. Problem formulation, literature review, sample selection, sampling technique, formulation of design, development of instruments, data analysis, interpretation of results, writing a research report within the person-in-environment framework. (T)

9430 Dissertation Seminar. Cr. 1

Offered for S and U grades only. Prereq: candidate status; written consent of Ph.D. program director. Development, presentation and critique of dissertation research questions, in context of social work practice or social welfare policy. (T)

9500 Advanced Clinical Social Work Theory. Cr. 3

Prereq: doctoral student; written consent of advisor. Broader and deeper mastery of several theories of development, personality, behavior, and psychopathology that have contributed to the knowledge base of social work. (Y)

9510 Applied Clinical Social Work Practice I. Cr. 3

Prereq: doctoral student; written consent of advisor. Structured in part as a didactic seminar and in part as a continuous case conference, this year-long course offers a balanced emphasis on the rational, technical, and ethical aspects of social work treatment and clinical supervision. (F)

9520 Applied Clinical Social Work Practice II. Cr. 3

Prereq: doctoral student, written consent of adviser. Structured in part as a didactic seminar and in part as a continuous case conference, this year-long course offers a balanced emphasis on the rational, technical, and ethical aspects of social work treatment and clinical supervision. (W)

9550 Advanced Clinical Practicum I. Cr. 2

Prereq: doctoral student, written consent of advisor. Required of clinical scholarship students with less than five years of postgraduate supervised practice experience. Practicum provides students with an intensive clinical placement experience in which they can further refine their clinical skills. (F)

9560 Advanced Clinical Practicum II. Cr. 2

Prereq: doctoral student, written consent of advisor. Required of clinical scholarship students with less than five years of postgraduate supervised practice experience. Practicum provides students with an intensive clinical placement experience in which they can further refine their clinical skills. (B)

9697 Integrative Seminar in Social Work and Anthropology. Cr. 3

Prereq: Written consent of social work doctoral program Director. Graduate-level integrative seminar that explores the intersection between social work and anthropology by critically analyzing relevant ethnographic scholarship. (B)

9990 Pre-Doctoral Candidacy Research. Cr. 1-8 (Max. 12)

Prereq: written consent of School of Social Work and approval by Ph.D. Officer of the Graduate School. Offered for S and U grades only. Preliminary research relevant to proposed area of dissertation research. (T)

9991 Doctoral Candidate Status I: Dissertation Research and Direction. Cr. 7.5

Prereq: Ph.D. candidate in School of Social Work and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following advancement to Ph.D. candidacy. Offered for S and U grades only. Dissertation research of a major social work or social welfare issue or problem. (T)

9992 Doctoral Candidate Status II: Dissertation Research and Direction. Cr. 7.5

Prereq: SW 9991 and approval by the Ph.D. Officer of the Graduate School. Required in academic-year semester following SW 9991. Offered for S and U grades only. Dissertation research of a major social work or social welfare issue or problem. (T)

9993 Doctoral Candidate Status III: Dissertation Research and Direction. Cr. 7.5

Prereq: SW 9992 and approval by the Ph.D. officer of the Graduate School. Required in academic-year semester following SW 9992. Offered for S and U grades only. Dissertation research of a major social work or social welfare issue or problem. (T)

9994 Doctoral Candidate Status IV: Dissertation Research and Direction. Cr. 7.5

Prereq: SW 9993 and approval of Ph.D. of the Graduate School. Required in academic-year semester following SW 9993. Offered for S and U grades only. Dissertation research of a major social work or social welfare issue or problem. (T)

9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction. Cr. 0

Prereq: approval by the Ph.D. Officer of the Graduate School; completion of 30 credits in SW 9991-9994. Offered for S and U grades only. Continuation of dissertation research. Ph.D. Candidate Maintenance Fee given in Schedule of Classes. (T)

Financial Aid

General sources of financial aid for graduate students may be found in the section on Graduate Financial Aid, beginning under Financial Assistance, Graduate, p. 26 of this bulletin.

Students should check the School website for current descriptions of scholarships and eligibility requirements: <http://www.social-work.wayne.edu>

Scholarships, fellowships and other financial aid options are available to social work students on a limited basis. The School expects students to utilize their own resources as much as possible to cover educational expenses, and financial aid through University resources should be considered as supplementary. For additional information, inquiries should be directed to the School of Social Work Office of Admissions and Student Services.

Applications for student aid are evaluated by the University Office of Student Financial Aid based on financial need as reflected in the information provided by the students and/or their families on the appropriate forms. All requests for applications should be sent to the Office of Student Financial Aid, Wayne State University. Information on Guaranteed Student Loans may be obtained by contacting that Office. Students seeking Graduate-Professional Scholarships should consult the Graduate School.

When financial aid is necessary, the School of Social Work will cooperate with the University Office of Student Financial Aid to develop the best possible student aid plan from the various scholarships, stipends, grants, or loans available. Such financial assistance will not be assigned or awarded until the student has confirmed his or her intention to enroll after being notified of admission. Some awards are administered directly by the School of Social Work Office of Admissions and Student Services, and a listing of scholarships currently available in the School of Social Work can be found on the web at: <http://socialwork.wayne.edu/current/scholarships.php>. Contact this office for specific information about the application process, forms, and deadlines. The following scholarships and awards apply to the School:

Scholarships

Shawn A. Abraham Memorial Endowed Scholarship
Art Antisdal Endowed Memorial Scholarship
Carol Barron Memorial Endowed Scholarship
Lena Bivens and Juanita Newton Memorial Endowed Scholarship*
Elizabeth N. Brehler Scholars Program
Anna Katz Brenner Endowed Scholarship
Arnette Burwell Memorial Endowed Scholarship
Emmie S. Chestang Memorial Scholarship
Rachel I. Coleman Endowed Scholarship
Dean's Scholars Program
Patricia L. Dillick Memorial Endowed Scholarship
Cecille Y. Dumbrigue and Shirley P. Thrasher Endowed Memorial Scholarship
Annette Sniderman Freedman Endowed Scholarship
Emmesia Mathews Frost and Kenneth M. Frost Scholarship Fund
Allan and Harriett Gelfond Endowed Scholarship
Fred and Freda Gentsch Scholarship
Ted and Arlene Goldberg Annual Scholarship in Interpersonal Practice
Annie Louise Pitts Handy Endowed Scholarship

Edwin H. Holmberg Endowed Fund
Anthony D. Holt Annual Scholarship
Joseph P. Hourihan Endowed Scholars Award
Shirley Doris Hupert Memorial Scholarship
Evangeline Sheibley Hyett Endowed Scholarship Fund
Rose Kaplan Endowed Scholarship
Vernon Edward Keye Memorial Endowed Scholarship
Charles (Chuck) Kramer Endowed Scholarship
Virginia Baumgartner King Endowed Scholarship
Alice E. Lamont Endowed Scholarship
James W. Leigh Scholarship Fund
Elizabeth and Reginald MacArthur Tribute Endowed Scholarship
Eileen M. Maceroni Endowed Scholarship
Maryann Mahaffey Endowed Scholarship
Lois J. McOsker Memorial Endowed Scholarship Fund
Edward J. Overstreet Endowed Scholarship
Parare Consulting, PLC Susan H. Rogers Annual Scholarship
Carolyn Purifoy Patrick-Wanzo Endowed Scholarship
Donald J. Roberts Memorial Endowed Scholarship
Harold and Carolyn Robison Memorial Scholarship
School of Social Work Alumni Association Endowed Scholarship
School of Social Work Scholarship
School of Social Work Futures Endowment Fund
Raymond Snowden, Ph.D., Endowed Memorial Scholarship
Mavis M. Spencer Endowed Scholarship Fund
Maldo Ellen Talick Memorial Scholarship
Mary Turner Scholarship Fund
Phyllis Ivory Vroom Endowed Scholarship
Waites Annual Scholarship
Jacquelin E. Washington Endowed Scholarship
Elizabeth Laverack White Endowed Scholarship
Beryl Zlatkin Winkelman Endowed Scholarship Fund
Ella Zwerdling Memorial Scholarship

School Activities

Student Organization

The Student Organization is a vital component of the programs of the School of Social Work. In existence since 1949, it is the voice of the students in matters regarding school and profession. It is involved with School issues as well as broader educational and social concerns. All students currently enrolled in undergraduate or graduate programs in the School of Social Work are members of the Student Organization. A student newspaper, monthly meetings, social and recreational activities, assistance in attendance at relevant conferences, and participation in the National Association of Social Workers are among student activities.

Coalition for Community Social Work (CCSW)

This group seeks to enhance the education and practice skills of its members while engaging in various community building, rebuilding and revitalization efforts.

Greater Detroit Association of Black Social Workers

Student Chapter which involves itself in educational, research and community service activities with a focus on assisting African American students in making the adjustment to the School of Social Work.

International Social Work Organization (ISWO)

Through engaging, educational events, and volunteer experiences, this organization unites social work students from diverse backgrounds and strives to raise awareness about social issues facing the global community. Contact Brigid Sweeney at ay8009@wayne.edu.

Jewish Social Work Student Association (JSWSA)

Promoting professional development and networking opportunities in conjunction with Hillel of Metro Detroit, which is an organization for Jewish college students and young adults who live in the metro Detroit area.

Phi Alpha National Honor Society of Social Workers

Nationally recognized organization that supports high standards in social work education. Open to all B.S.W.'s & M.S.W.'s that qualify and apply for membership with a focus on scholastic achievement and community service.

Sexual Orientation and Gender Identity: Social Work (SOGI-SW)

Supports the social, academic and advocacy concerns of all sexual orientations and gender identities (with a specific focus on the L.G.B.T.Q. community).

Student Fitness and Wellness Organization (SFWO)

Advocates the importance of health, wellness and fitness among social work students, faculty and staff. Contact Eric Wilkins at ec2600@wayne.edu.

Field Education

The following agencies and persons are representative of those who have worked with members of the Faculty in field instruction during recent academic years:

ACCESS: Abdallah Boamediene

ACTS 29 FELLOWSHIP: Sharon Buttry

ADULT WELL-BEING SERVICES: Sara Gleicher

AFFIRMATIONS: Jon Fitzgerald

AIDS PARTNERSHIP OF MICHIGAN: Hank Milbourne

AI-IKHLAS TRAINING ACADEMY: Nafessah Mahdi

ALGONAC COMMUNITY SCHOOLS: Lisa Maedel

ALTERNATIVES FOR GIRLS: Anna Weaver

ALZHEIMER SOCIETY OF WINDSOR & ESSEX COUNTY:
Rosemary Fiss

ALZHEIMER'S ASSOCIATION-GREATER MICHIGAN CHAPTER,
Caitie Morgowicz

AMERICAN RED CROSS: Jeff Hadwin

ANCHOR BAY SCHOOL DISTRICT: Mark Patyi

ANGELA HOSPICE: Rebecca DeRaud

ANN ARBOR CENTER FOR INDEPENDENT LIVING:
Carolyn Grawi

ARAB-AMERICAN AND CHALDEAN COUNCIL: Hala Meram

ARC OF NORTHWEST WAYNE COUNTY, THE: Christine Lerchen

ARC SERVICES OF MACOMB, INC.: Luanne DeGueisippe

AREA AGENCY ON AGING 1B: Natalie Pearce

BARBARA ANN KARMANOS CANCER INSTITUTE:
Larmender Davis

BAY ARENAC BEHAVIORAL HEALTH: David Garcia

BEHAVIORAL CENTER OF AMERICA - STONE CREST CTR.:
Carl Catanese

BEHAVIORAL CENTER OF MICHIGAN: Michael Harbson

BERKLEY SCHOOL DISTRICT: Dennis McDavid

BETHANY CHRISTIAN SERVICES: Kelila Anstett

BETHANY VILLA SENIOR APARTMENTS: Gladys Murphy

BIO-MED BEHAVIORAL HEALTHCARE: Kathleen Allin

BLACK FAMILY DEVELOPMENT, INC.: Kenyatta Stephens

BLUE CROSS BLUE SHIELD OF MICHIGAN: Margie Goslin

BLUE WATER CENTER FOR INDEPENDENT LIVING:
Valorie Hudgens

BRIDGING COMMUNITIES INC.: Phyllis Edwards

BRIGHTMOOR COMMUNITY CENTER: Peter Lisiecki

CANADIAN MENTAL HEALTH ASSOCIATION: Kofi Yeboah

CAPUCHIN SOUP KITCHEN: Denise Johnson

CARE HOUSE: Dorie Vazquez-Nolan

CARE HOUSE OF OAKLAND COUNTY: Yvonne Cameron

CARE MATTERS: Wendy Hooker

CAREFIRST COMMUNITY HEALTH SERVICES:
Daisy Barlow-Smith

CATHOLIC CHARITIES: Andrea Foley

CATHOLIC SERVICES OF MACOMB: Lori Ruppel

CEI COMMUNITY MENTAL HEALTH: Stephanie Tighe

CENTER FOR EXCEPTIONAL FAMILIES:
Michelle O'Conner-Teklinski

CENTER FOR RELATIONSHIP AND SEXUAL HEALTH: Joe Kort

CENTER FOR SENIOR INDEPENDENCE: Stephanie Hayes

CHANGE IS POSSIBLE COUNSELING SERVICES, LLC:
Cynthia Zitny

CHILDSAFE MICHIGAN: Ann Marie Lesniak

CHILDREN'S CENTER, THE: Charlotte Bush

CHILDREN'S HOSPITAL OF MICHIGAN: Karen Gall

CHIPPEWA VALLEY SCHOOLS: Charlene McGunn

CHRIST CHILD HOUSE (THE): Landon Hill

CITY CONNECT DETROIT INC.: Nikita Buckhoy

CITY OF SOUTHFIELD - HUMAN SERVICES: Harold Shriman

CITY OF SOUTHFIELD-OLDER ADULT SOCIAL WORKER:
Judith Ventura

CLARKSTON COMMUNITY SCHOOLS: Shelly Robertson

COMMON GROUND SANCTUARY: Barbara Broesamle

COMMUNITY & HOME SUPPORTS, INC.: Sharon Lapedes

COMMUNITY CARE SERVICES: Thom Stark, Lynn Turk

COMMUNITY HOUSING NETWORK, INC.: Jessie Korte

COMMUNITY PROGRAMS, INC.: Erik Rosencrants

COMPREHENSIVE YOUTH SERVICES, INC.: Jane Reams,
Sally Currie

CORNELL CENTER: Jane Diehl

COUNCIL ON AGING, INC.: Mary Taylor

COVENANT HOUSE MICHIGAN: Kathryn Douglass

CROSSROADS FOR YOUTH: Susan Ramage

CROSSROADS OF MICHIGAN: Nicole Harris

DADS AND MOMS OF MICHIGAN: John Langlois

DEARBORN PUBLIC SCHOOLS: Rola Bazzi-Gates, Clayton Burch

DEPARTMENT OF HUMAN SERVICES: Sylvia Brown Jones

DEPARTMENT OF HUMAN SERVICES-MACOMB COUNTY:
Karen Urquhart

DEPARTMENT OF HUMAN SERVICES-WAYNE CO.: Roger Christ

DEPARTMENT OF VETERANS AFFAIRS: Corey Buckley

DETROIT AREA AGENCY ON AGING: Faiza Najar

DETROIT BOARD OF EDUCATION: Kenneth Warren

DETROIT CENTRAL CITY CMH, INC.: Henriette Warren,
Sandra Ware

DETROIT CITY COUNCIL: Saunteel Jenkins

DETROIT RECOVERY PROJECT: Virdell Thomas

DEVELOPMENT CENTERS, INC.: Christel Danna

DMC-HARPER HOSPITAL: Dajuan Smith

DOCTORS' HOSPITAL OF MICHIGAN: Samantha Warren

DON BOSCO HALL: Wanda Gunn

EAST CHINA SCHOOL DISTRICT: Linda Bruckner

EASTER SEALS: Catherine McQuade

EASTWOOD CLINIC, ST. JOHN: Donald Healy

ENNIS CENTER FOR CHILDREN: Sharon Cooper

FARMINGTON PUBLIC SCHOOLS/FARMINGTON HIGH SCHOOL: Lynn Green

FIRST STEP: Ilene Hogan

FISCHER & CARDAMONE, LLC: Laura Cardamone

FLINT COMMUNITY SCHOOL DISTRICT: Angela Moore

FOREVER FAMILIES: Jean Stenzel

FOX COUNSELING & ASSOCIATES: Marie Fox

FOX RUN VILLAGE: Kristin Folino

FRASER PUBLIC SCHOOLS: Susan Waid

FRIENDS OF DETROIT & TRI COUNTY: Michael Wimberley

GENESEE COMMUNITY HEALTH CENTER: Tim Lawther

GENESEE COUNTY CMH: Nancy Kirsh

GILDA'S CLUB METRO DETROIT: Megan Trombka

GRANDMONT ROSEDALE DEVELOPMENT CORP.: Cathy Marshall

GREAT LAKES CARING: Sarah Thurston

GUIDANCE CENTER, THE: Steven Genden

HANDS ACROSS THE WATER: Kathleen Nelson

HARBOR OAKS HOSPITAL: Melissa Altomare

HARPER WOODS PUBLIC SCHOOLS: Jessica Zann

HAVENWYCK HOSPITAL: Carol Polly

HAWTHORN CENTER: Betty Esters

HAZEL PARK SCHOOLS: James Bellini

HEARTLAND HEALTHCARE CENTER: Britton Williams

HEGIRA PROGRAMS, INC.: Gale Chapman

HENRY FORD HEALTH SYSTEM: Kathy Ransome,

HENRY FORD HOSPITAL: Joi Johnson

HENRY FORD WYANDOTTE HOSPITAL: John Dubosh

HOTEL DIEU GRACE HOSPITAL: Terry Kuhn, Nancy Hebert

HURON VALLEY-SINAI HOSPITAL: Teri Sahn-Silver

INSIGHT RECOVERY CENTER: Henry Tidwell

JEWISH FAMILY SERVICE: Ellen Yashinsky Chute

JEWISH SENIOR LIFE OF METROPOLITAN DETROIT: Judy Rosner

JUDSON CENTER AUTISM CONNECTIONS: Sarah Bretz

JUDSON CENTER, INC.: Janet Flanegin

JVS SENIOR ADULT SERVICES: Peter Ostrow

LACASA: Elizabeth Stahl

LAKERIDGE VILLAGE: David Ballenberger

LINCOLN BEHAVIORAL SERVICES: Joy Kornspan

LUELLA HANNAN FOUNDATION: Cheryl Bukoff

MACOMB COUNTY COMMUNITY SERVICES AGENCY: Katherine R. Benford

MACOMB FAMILY SERVICES: Kenneth Schleicher

MACOMB INTERMEDIATE SCHOOL DISTRICT: Elizabeth Andrzejewski

MARINER'S INN: David Sampson

MATRIX HUMAN SERVICES: Marcella Wilson

MCLAREN HOSPITAL - MACOMB: Theresa Spano

MERCY EDUCATION PROJECT: Amy Amador

MERCY HOME CARE AND HOSPICE: Rosemary Insley

MEDICAL SOCIAL WORK REHAB MANAGEMENT LLC: Dorothy Strong-Stokes

MICHIGAN NATIONAL ORGANIZATION FOR WOMEN: Danielle Troia

MICHIGAN ROUNDTABLE FOR DIVERS: Steve Spreitzer

MONROE CO. INTERMEDIATE SCHOOL DISTRICT: Betsy Taylor

NATIONAL COUNCIL OF ALCOHOLISM & DRUG DEPENDENCE: Linda Woodward

NATIONAL COUNCIL OF ALCOHOLISM & DRUG DEPENDENCE, GDA: Benjamin Jones

NATIONAL KIDNEY FOUNDATION OF MICHIGAN, THE: Pamela Ross

NEIGHBORHOOD SERVICE ORGANIZATION: David Kozlowski

NEW CENTER COMMUNITY SERVICES: Rosie Colman

NEW HAVEN COMMUNITY SCHOOLS: Kathleen Brown

NORTHEAST GUIDANCE CENTER: Sherry McRill

OAKLAND COUNTY CHILDREN'S VILLAGE: Karen Wickline

OAKLAND LIVINGSTON HUMAN SERVICE AGENCY: Pamela Ross

OAKWOOD HOSPITAL: Ann Caulfield-Cook

OAKWOOD SOUTHSORE MEDICAL CENTER: Lulu Richards-Heller

ORCHARDS CHILDREN'S SERVICES: Trudy Fortino

ORDER OF THE FISHERMAN MINISTRY HEAD START, THE: Cleo Anthony

OZONE HOUSE: Brian Todorow

PONTIAC SCHOOL DISTRICT: Mary Rodgers

POSITIVE IMAGES: Maisha Kenyatta

PROVIDENCE CANCER INSTITUTE: Corey Faulkner

REPRIEVE WELL BEING CENTER: Kathy Morrow

RESIDENTIAL HOSPICE: Mary Parmentier

RICHMOND COMMUNITY SCHOOLS: Nancy Laratonda

ROCHESTER COMMUNITY SCHOOLS: Deborah Camphous

SACRED HEART REHABILITATION: Charlene Stier

SACRED HEART REHABILITATION CENTER: Rob Fetzer

SAGINAW COUNTY CMH: Lori Denter

SAGINAW PSYCHOLOGICAL SERVICES: Kris Curtis

SANILAC COUNTY INTERMEDIATE SCHOOL DISTRICT: Carla LeGere

SERVICES FOR OLDER CITIZENS: Sharon Maier

SERVICES TO ENHANCE POTENTIAL (STEP): Gia Feistel

SHAR, INC.: Dwight Vaughter

SINAI-GRACE HOSPITAL: Jennifer Tenorio

SOS COMMUNITY SERVICES: Sharon Lapides

SOUTH OAKLAND CITIZENS FOR THE HOMELESS: Roy Watson

SOUTHWEST COUNSELING SOLUTIONS: Roberta Walker

SPAULDING FOR CHILDREN: Jamie Bozarth

SPECTRUM CHILD AND FAMILY SERVICES: Jodi Luster

SPECTRUM JUVENILE JUSTICE SERVICES: Shannon Kozole

ST. CLAIR COUNTY COMMUNITY MENTAL HEALTH AUTHORITY: Sandra Kammer

ST. CLAIR COUNTY EARLY ON: Andrea Velez
ST. JOHN COMMUNITY HEALTH: Ambra Redrick
ST. JOHN MACOMB HOSPITAL: Carrie Laroche-Sinay
ST. JOHN MACOMB OAKLAND HOSPITAL: Steve Perrine
ST. JOSEPH MERCY OAKLAND HOSPITAL: Linton Matthews
ST. VINCENT AND SARAH FISHER CENTER:
Sister Marie Judith Haupt
STARFISH FAMILY SERVICES: Angela Brenz
STARR COMMONWEALTH: Ashley Gray
STATE COURT ADMINISTRATIVE OFFICE: James Novell
TAYLOR SCHOOL DISTRICT: Sandra Kluk
TEAM MENTAL HEALTH SERVICES: Cynthia Finnegan
THIRD JUDICIAL CIRCUIT COURT: Angela Asteriou
TRAINING & TREATMENT INNOVATIONS, INC.: Jean Pfaendtner
TROY SCHOOL DISTRICT: Stacey Schoenherr
TURNING POINT INC.: Deborah McPeek
TUSCOLA INTERMEDIATE SCHOOL DISTRICT: Rebecca Ducham
UNITED WAY FOR SOUTHEASTERN MICHIGAN: Emma Landgraf
UNIVERSITY PSYCHIATRIC CENTERS: Elese Hairston
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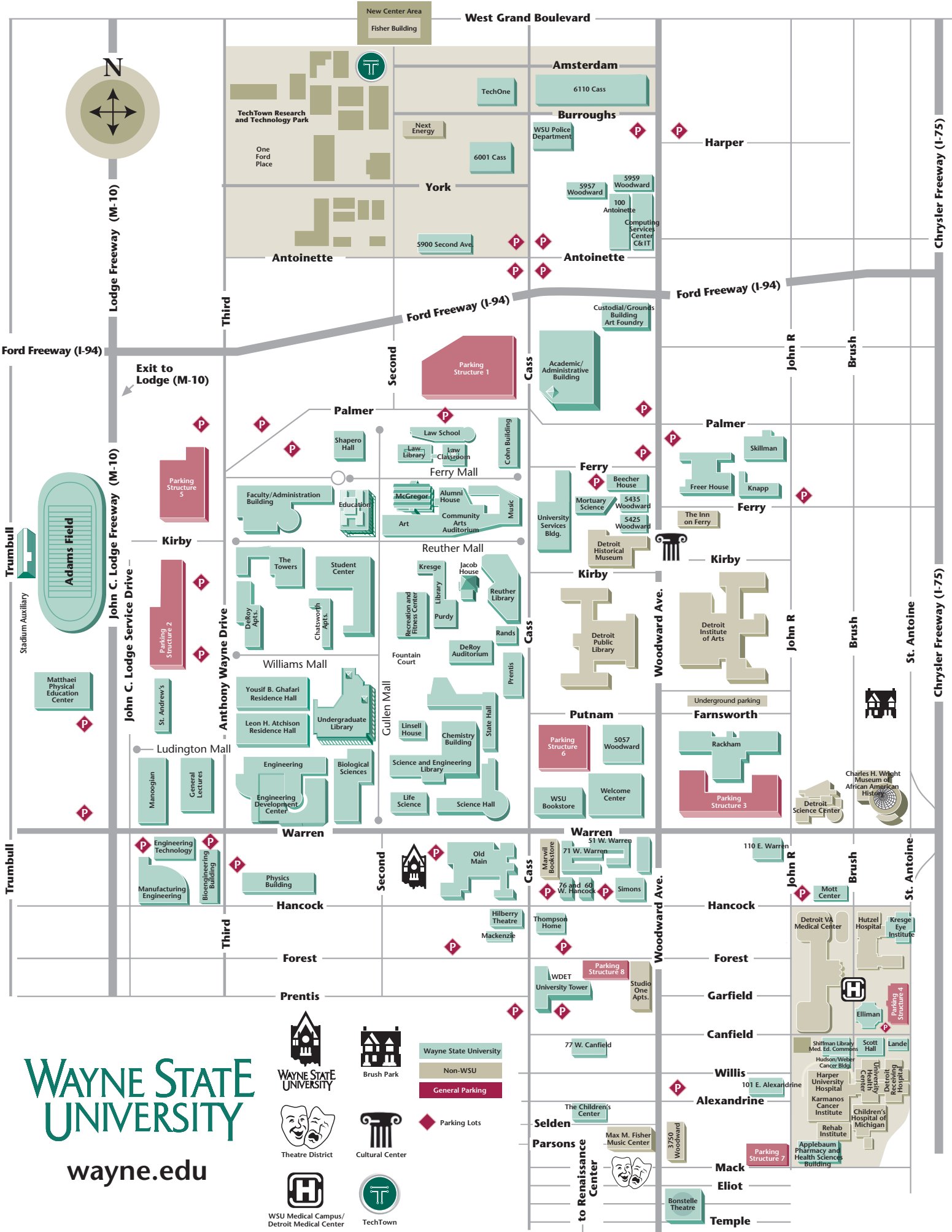
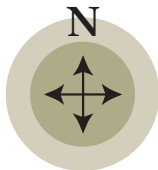
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Signs and Abbreviations

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COURSE NUMBERING SYSTEMS

— For the College of Education

- 5000-6999 — Undergraduate or graduate credit.
 7000-8999 — Open to graduate students exclusively.
 9000-9999 — Open to doctoral students exclusively.

— For the Faculty of Pharmacy

- 6000-6999 — Undergraduate/Graduate Courses.
 7000-8999 — Graduate Courses.
 9000-9999 — Ph.D. Courses.

— For all other Schools and Colleges

- 5000-6999 — Junior- and senior-level courses; also may be taken for graduate credit by students admitted to a graduate program, except where expressly prohibited.
 7000-8999 — Open to graduate/professional students exclusively.
 9000-9999 — Open to doctoral students exclusively.

COURSE SYMBOLS and ABBREVIATIONS

Course Offering Frequency: Parenthetical letters at the end of course descriptions identify the term and frequency courses will be offered.

- (B) — Offered every other year. (F) — Offered Fall Term
 (I) — Offered irregularly (S) — Offered Spring/Summer Term.
 (T) — Offered every term. (W) — Offered Winter Term.
 (Y) — Offered at least once every academic year
 (Fall or Winter, not Spring/Summer).

Cr. — Credit: The amount of credit indicated by the number or numbers following the abbreviation.

Max. — Maximum: Course may be re-elected to the maximum credit indicated

Prereq. — Prerequisite: Course must be preceded by the indicated course or courses or other requirements.

Coreq. — Corequisite: Course must be accompanied by the indicated course or courses.

Cross-listed courses — may be taken for major credit in more than one department, as indicated by cross-references which appear in parentheses either before or after the title. In registering for cross-listed courses, the student should be certain that he/she has designated the department and course number under which he/she wishes to earn the credit.

Faculty Roster

(FTA) — Full-Time Affiliate

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