

WAYNE STATE UNIVERSITY  
Undergraduate Bulletin  
2001-2003

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# Academic Calendar 2001-2003

## *Spring/Summer Term, 2001*

Term begins . . . . . Wed., May 2, 2001  
 Open Registration . . . . . Mon., April 16 - Thur., May 3  
 Spring and Spring/Summer Classes begin . . . . . Mon., May 7  
 Last day for filing degree applications . . . . . Mon., May 7  
 Memorial Day recess . . . . . Mon., May 28  
 Day scheduled as Monday for Spring/Summer<sup>1</sup> . . . . . Fri., June 1  
 Classes end for Spring Session . . . . . Fri., June 22  
 Study Day for Spring Session . . . . . Sat., June 23  
 Final Examinations for Spring . . . . . Mon., June 25 - Tues., June 26  
 Summer Session begins . . . . . Wed., June 27  
 Independence Day recess . . . . . Wed., July 4  
 Day scheduled as Wednesday for Spring/Summer . . . . . Fri., July 6  
 Priority Registration for Fall Term . . . . . Mon., July 9 - Fri., Aug. 3  
 Classes end for Spring/Summer Session . . . . . Fri., July 27  
 Study Day for Spring/Summer Session . . . . . Sat., July 28  
 Final Examinations for Spring/Summer Mon., July 30 - Thurs., Aug. 2  
 Classes end for Summer Session . . . . . Tues., Aug. 14  
 Study Day for Summer Session . . . . . Wed., Aug. 15  
 Final Examinations for Summer Session Thurs., Aug. 16 - Fri., Aug. 17  
 Spring/Summer Term ends . . . . . Sat., Aug. 25, 2001

## *Fall Term, 2001\**

University year appointments begin<sup>2</sup> . . . . . Fri., Aug. 17, 2001  
 Term begins . . . . . Sun., Aug. 26  
 Open Registration . . . . . Mon., Aug. 13 - Thur., Aug. 30  
 Labor Day recess . . . . . Mon., Sept. 3  
 Classes begin . . . . . Tues., Sept. 4  
 Last day for filing degree applications . . . . . Tues., Sept. 4  
 Priority registration for Winter Term . . . . . Mon., Nov. 5 - Fri., Nov. 30  
 Day scheduled as Thursday<sup>1</sup> . . . . . Tues., Nov. 20  
 Day scheduled as Friday<sup>1</sup> . . . . . Wed., Nov. 21  
 Thanksgiving recess . . . . . Thurs., Nov. 22 - Sat., Nov. 24  
 Classes end . . . . . Wed., Dec. 12  
 Study Day . . . . . Thur., Dec. 13  
 Commencement . . . . . Thur., Dec. 13  
 Final Examinations . . . . . Fri., Dec. 14 - Thur., Dec. 20  
 Holiday recess . . . . . Tues., Dec. 25, 2001 - Tues., Jan. 1, 2002  
 Term ends . . . . . Mon., Dec. 31, 2001

## *Winter Term, 2002\**

Term begins . . . . . Tues., Jan. 1, 2002  
 Open Registration . . . . . Mon., Dec. 10 - Fri., Dec. 21, 2001  
 and Wed., Jan. 2 - Fri., Jan. 4, 2002  
 Classes begin . . . . . Mon., Jan. 7  
 Last day for filing degree applications . . . . . Mon., Jan. 7  
 Martin Luther King Holiday (no classes) . . . . . Mon., Jan. 21  
 Spring recess . . . . . Mon., Mar. 11 - Sat., Mar. 16  
 Priority Registration for Spring/Summer Term . . . . . Mon., Mar. 18 - Fri.,  
 April 5  
 Classes end . . . . . Mon., April 22  
 Study Day . . . . . Tues., April 23  
 Final Examinations . . . . . Wed., April 24 - Tues., April 30  
 Term ends . . . . . Tues., April 30  
 Commencement . . . . . Thurs., May 2  
 University year appointments end<sup>2</sup> . . . . . Wed., May 15, 2002

## *Spring/Summer Term, 2002\**

Term begins . . . . . Wed., May 1, 2002  
 Open Registration . . . . . Mon., April 15 - Thurs., May 2  
 Spring and Spring/Summer Classes begin . . . . . Mon., May 6  
 Last day for filing degree applications . . . . . Mon., May 6  
 Memorial Day recess . . . . . Mon., May 27  
 Day scheduled as Monday for Spring/Summer<sup>1</sup> . . . . . Fri., May 31  
 Classes end for Spring Session . . . . . Fri., June 21  
 Study Day for Spring Session . . . . . Sat., June 22  
 Final Examinations for Spring . . . . . Mon., June 24 - Tues., June 25  
 Summer Session begins . . . . . Wed., June 26  
 Independence Day recess . . . . . Thurs., July 4  
 Day scheduled as Thursday for Spring/Summer<sup>1</sup> . . . . . Fri., July 5  
 Priority Registration for Fall Term . . . . . Mon., July 8 - Fri., Aug. 2  
 Classes end for Spring/Summer Session . . . . . Fri., July 26  
 Study Day for Spring/Summer Session . . . . . Sat., July 27  
 Final Examinations for Spring/Summer Mon., July 29 - Thurs., Aug. 1  
 Classes end for Summer Session . . . . . Tues., Aug. 13  
 Study Day for Summer Session . . . . . Wed., Aug. 14  
 Final Examinations for Summer . . . . . Thurs., Aug. 15 - Fri., Aug. 16  
 Spring/Summer Term ends . . . . . Sat., Aug. 24, 2002

## *Fall Term, 2002\**

University year appointments begin<sup>2</sup> . . . . . Mon., Aug. 19, 2002  
 Term begins . . . . . Sun., Aug. 25  
 Open Registration . . . . . Mon., Aug. 12 - Thurs., Aug. 29  
 Labor Day recess . . . . . Mon., Sept. 2  
 Classes begin . . . . . Tues., Sept. 3  
 Last day for filing degree applications . . . . . Tues., Sept. 3  
 Priority registration for Winter Term . . . . . Mon., Nov. 4 - Wed., Nov. 27  
 Day scheduled as Thursday<sup>1</sup> . . . . . Tues., Nov. 26  
 Day scheduled as Friday<sup>1</sup> . . . . . Wed., Nov. 27  
 Thanksgiving recess . . . . . Thurs., Nov. 28 - Sat., Nov. 30  
 Classes end . . . . . Wed., Dec. 11  
 Study Day . . . . . Thurs., Dec. 12  
 Commencement . . . . . Thurs., Dec. 12  
 Final Examinations . . . . . Fri., Dec. 13 - Thurs., Dec. 19  
 Holiday recess . . . . . Wed., Dec. 25, 2002 - Wed., Jan. 1, 2003  
 Term ends . . . . . Tues., Dec. 31, 2002

## *Winter Term, 2003\**

Term begins . . . . . Wed., Jan. 1, 2003  
 Open Registration . . . . . Mon., Dec. 9 - Fri., Dec. 20, 2002  
 and Thurs., Jan. 2 - Wed., Jan. 8, 2003  
 Classes begin . . . . . Thurs., Jan. 9  
 Last day for filing degree applications . . . . . Thurs., Jan. 9  
 Martin Luther King Holiday (no classes) . . . . . Mon., Jan. 20  
 Spring recess . . . . . Mon., March 10 - Sat., March 15  
 Priority Registration for Spring/Summer Mon., March 17 - Fri., April 4  
 Day scheduled as Monday<sup>1</sup> . . . . . Thurs., April 24  
 Classes end . . . . . Thurs., April 24  
 Study Day . . . . . Fri., April 25  
 Final Examinations . . . . . Sat., April 26 - Fri., May 2  
 Term ends . . . . . Fri., May 2  
 Commencement . . . . . Tues., May 6  
 University year appointments end<sup>2</sup> . . . . . Thurs., May 15, 2003

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.

# GENERAL INFORMATION

This publication is for informational purposes and is neither a contract nor an offer to 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 undergraduate study at Wayne State University, as well as descriptions and locations of University student services. For additions, amendments, and specific applications of the following regulations, consult the individual school and college sections of this bulletin.

For graduate regulations, degree programs and curricula, consult the Wayne State University Graduate Bulletin.

It is the responsibility of the student to meet and satisfy all University, college and program requirements.

# University Administration

## *Board of Governors*

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and Assistant to the President  
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PHYLLIS I. VROOM, Ph.D., Interim Dean of the School of Social Work  
PAULA C. WOOD, Ph.D., Dean of the College of Education and Interim Dean of the College of Lifelong Learning  
ALMA H. YOUNG, Ph.D., Dean of the College of Urban, Labor and Metropolitan Affairs

## University Mission

Wayne State University is a national research university with an urban teaching and service mission. It is a constitutionally autonomous public university within Michigan's system of public colleges and universities.

As a national research university, Wayne State is committed to high standards in research and scholarship. In the arts, it fosters creativity and strives for excellence in performance and exhibition. Its first priority is to develop new knowledge and encourage its application. Because it is a national research university, Wayne State develops and maintains strong graduate and professional programs in many fields. To maintain its standards, Wayne State seeks to strengthen those programs that have achieved national recognition while, at the same time, fostering those programs which show promise for the future. Wayne State strives to maintain its performance ranking as measured by its funded research, the quality of its graduate programs as evaluated by national studies of graduate education, and the effectiveness of all academic programs as assessed by external evaluation.

As an urban teaching university, and because its graduates typically remain to live and work in the area throughout their lives, Wayne State seeks especially to serve residents of the greater Detroit metropolitan area, although it enrolls students from across the state and nation as well as foreign lands. It makes available high quality educational programs in more than six hundred fields of study or concentration leading to more than three hundred different degrees at the bachelor's, master's and doctoral levels. As a nationally ranked university, Wayne State holds high expectations for the educational achievements of its students and consequently maintains selective admissions standards; but as an urban university it recognizes an obligation to develop special avenues that encourage access for promising students from disadvantaged educational backgrounds. The University aspires to implement its curricula in ways that serve the needs of a nontraditional student population that is racially and ethnically diverse, commuting, working, and raising families. Its student body is composed of students of traditional college age together with many older students, and includes many who are from the first generation in their family or neighborhood to attend a university. In its teaching, the University strives to be sensitive to the special experiences, conditions, and opportunities presented by this diversity in its student body. To meet its obligations to its nontraditional students, the University attempts to schedule classes throughout the metropolitan area and during the evening as well as during the day.

Wayne State University recognizes its obligation to serve. Like other major universities, it strives to serve the disciplines and professions represented among its academic programs as well as public and private sector organizations and associations at local, state, and national levels. As an urban university, it makes a special commitment to the Detroit metropolitan area in three ways: first, it uses its metropolitan locale as a setting for basic and applied research and fosters the development of new knowledge of urban physical and social environments; second, it employs its locale as a teaching laboratory and incorporates metropolitan area materials into its curriculum; and third, it brings knowledge to bear to assist and strengthen the metropolitan area. In particular, Wayne State University contributes to the economic revitalization of southeastern Michigan through research programs that develop new technology and teaching programs that educate the citizens who will live and work in the region in the coming years.

Wayne State University respects and protects the personal and academic freedom of its students, faculty and academic staff. The programs and activities of the University are open to all qualified persons without regard to race, religion, marital status, sex, sexual orientation, age, national or ethnic origin, political belief, or physical handicap, except as may be required by law. The University seeks to demonstrate, through all its programs and activities, its appreciation of human diversity and to maintain an atmosphere of tolerance and

mutual respect that will nourish human liberty and democratic citizenship.

A relatively youthful state university — part of Michigan's state supported system of higher education only since 1956 — Wayne State University has developed rapidly as a national research university with urban teaching and service missions. Nevertheless, it recognizes that much must be achieved before the goals it holds for itself are fully attained. It is pursuing those goals with pride in its progress and confidence in its future.

## History of the University

Wayne State has more than 202,008 living alumni. More than 148,353 of them live in the state and more than 127,258 live in the Detroit metropolitan area. Over thirty percent of all degree holding adults in the metropolitan area are Wayne State University alumni.

The early history of the University is an account of originally unrelated colleges and schools which were united in 1933 into a single institution, Wayne University, under the control of the Detroit Board of Education. In 1956, this institution became Wayne State University by formal action of the Governor and Legislature of Michigan. The following specific events are among the most significant in the University's first century of development.

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 Colleges 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.

1974 -- The College of Pharmacy and Allied Health Professions was formed from merger of the College of Pharmacy and the Division of Allied Health Professions, School of Medicine.

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.

## Location

Over 100 buildings provide housing for the service, 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 the heart of Detroit, largely bounded by York Street on the north, Woodward Avenue on the East, Forest Avenue on the south and Trumbull Avenue on the west. The major classroom, laboratory, library and other academic buildings are located east of the Lodge Expressway while the athletic and recreational facilities are mostly on the west side of the Expressway. (For maps, see the section of this bulletin beginning on page 488.)

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 downtown campus, with its principal building at 1400 Chrysler, provides facilities for the College of Pharmacy and Allied Health Professions. Certain smaller instructional and service units are located in other parts of the metropolitan area.

## Organization

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.

School of Business Administration  
College of Education  
College of Engineering  
College of Fine, Performing and Communication Arts  
Graduate School  
Law School  
College of Liberal Arts  
College of Lifelong Learning  
School of Medicine  
College of Nursing  
College of Pharmacy and Allied Health Professions  
College of Science  
School of Social Work  
College of Urban, Labor, and Metropolitan Affairs

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 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 graduate certificate programs, and the graduate degrees of the Library and Information Science Program.

The College of Lifelong Learning provides, in addition to its own credit courses, extension services for the off-campus credit programs of the other colleges and schools, as well as University-wide Spring/Summer sessions. Since the University does not have a separate evening program, the colleges, schools and instructional divisions have comprehensive responsibility for degrees and degree programs whenever they are offered.

Non-credit courses, seminars and programs are offered primarily through the College of Lifelong Learning, the McGregor Memorial Conference Center, and the various schools, colleges, centers and institutes.

Centers and institutes are established by the Board of Governors on recommendation of the President for the purpose of conducting college- or University-wide interdisciplinary teaching, research and service activities. The principal centers and institutes are:

Addiction Research Institute  
 Asthma and Related Lung Disorders Research Center  
 Bioengineering Center  
 Center for Automotive Research  
 Center for Chicano-Boricua Studies  
 Center for Health Care Effectiveness Research  
 Center for Health Research  
 Center for International Business Studies  
 Center for Legal Studies  
 Center for Molecular Medicine and Genetics  
 Center for Peace and Conflict Studies  
 Center for the Study of Arts and Public Policy  
 Center for Urban Studies  
 Cohn-Haddow Center for Judaic Studies  
 Detroit Neurotrauma Center  
 Developmental Disabilities Institute  
 Douglas Fraser Center for Workplace Issues  
 Humanities Center  
 Institute for Manufacturing Research  
 Institute for Scientific Computing  
 Institute of Environmental Health Sciences  
 Institute of Gerontology  
 Institute of Maternal and Child Health  
 Barbara Ann Karmanos Cancer Institute  
 Labor Studies Center  
 Ligon Research Center for Vision  
 Merrill-Palmer Institute for Family and Human Development  
 Michigan Small Business Development Center  
 C. S. Mott Center for Human Growth and Development  
 Race Relations Institute  
 Skillman Center for Children

## Accreditation

Wayne State University as a whole is accredited as a doctoral degree-granting institution by the regional accrediting agency, the North Central Association of Colleges and Schools, 30 N. LaSalle St., Suite 2400, Chicago, Illinois 60602-2504. In addition, more than forty specific programs and curricula are accredited individually by specialized or professional accrediting agencies. A report is pro-

duced 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. The principal accreditation agencies are as follows:

### **BUSINESS ADMINISTRATION**

*Accreditation Council of the American Assembly of Collegiate Schools of Business*

### **EDUCATION**

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

Rehabilitation Counseling and Community Inclusion (graduate only): *Council on Rehabilitation Education, Inc.*

Teacher Education Programs: *National Council for the Accreditation of Teacher Education*

### **ENGINEERING**

Division of Engineering (undergraduate): *Accreditation Board for Engineering and Technology, Inc. — Engineering Accreditation Commission*

Division of Engineering Technology: *Accreditation Board for Engineering and Technology, Inc. — Technology Accreditation Commission*

### **FINE, PERFORMING and COMMUNICATION ARTS**

Music: *National Association of Schools of Music; National Association of Music Therapy*

Theatre: *National Association of Schools of Theatre*

### **LAW**

*American Bar Association and American Association of Law Schools (Joint Committee)*

### **LIBERAL ARTS**

Political Science (Master of Public Administration): *National Association of Schools of Public Affairs and Administration*

### **LIBRARY and INFORMATION SCIENCE**

*American Library Association*

### **MEDICINE**

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

Radiation Therapy Technology: *Joint Review Committee on Education in Radiation Technology and Committee on Allied Health and Accreditation of the American Medical Association*

Residency Programs: *Liaison Committee on Graduate Medical Education of the American Medical Association and various Residency Review Committees*

### **NURSING**

*National League for Nursing and Commission on Collegiate Nursing Education*

### **PHARMACY and ALLIED HEALTH PROFESSIONS**

Pharmacy: *American Council on Pharmaceutical Education*

Occupational and Environmental Health Sciences: *Accreditation Board of Engineering and Technology, Inc. — Related Accreditations*

Occupational Therapy: *American Occupational Therapy Association and Committee on Allied Health and Accreditation of the American Medical Association*

Pathologist's Assistant Program: *National Accrediting Agency for Clinical Laboratory Sciences*

Physical Therapy: *American Physical Therapy Association*



Physician Assistant: *Accreditation Review Committee on Education for the Physician Assistant (Commission on Accreditation of Allied Health Education Programs)*

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

Clinical Laboratory Science: *National Accrediting Agency for Clinical Laboratory Sciences and Committee on Allied Health Education and Accreditation of the American Medical Association*

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

Cytotechnology: *National Accrediting Agency for Clinical Laboratory Sciences*

## SCIENCE

Audiology and Speech-Language Pathology: *Council on Academic Accreditation of the American Speech-Language Hearing Association*

Chemistry: *American Chemical Society*

Nutrition and Food Science (dietetics): *American Dietetics Association*

Psychology (Clinical): *American Psychological Association*

## SOCIAL WORK

*Council on Social Work Education*

## URBAN, LABOR and METROPOLITAN AFFAIRS

Urban Planning: *Planning Accreditation Board*

## Equality of Opportunity

Wayne State University is an equal opportunity/affirmative action institution and 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, color, sex, national origin, religion, age, sexual orientation, marital status or handicap, and expressly forbids sexual harassment and discrimination 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 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.

Wayne State University complies with the Titles VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as Amended, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Vietnam Era Veterans Readjustment Assistance Act of 1974, and Michigan Public Act 453. Inquiries regarding equal opportunity and affirmative action policies or complaints may be directed to the Director of the Office of Equal Opportunity, 3008 Faculty Administration Building, Wayne State University, Detroit Michigan 48202; telephone (313) 577-2280.

## Non-Discrimination for the Handicapped

In accordance with federal requirements of the Rehabilitation Act of 1973, there shall be no discrimination on the basis of handicap 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 page 54 for description of services available to disabled students.

## Drug and Alcohol Free Workplace

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 and collective bargaining agreements, and in conformity with local, state and federal law, up to and including expulsion or termination. A student or employee who is found to have violated this policy may be required to participate in a drug or alcohol treatment program as a condition of further employment or enrollment.

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 Substance Abuse Hotline, at 577-1010. Access to this hotline is absolutely anonymous. The Substance Abuse Hotline provides information to the caller by means of recorded messages and no record is kept of the caller. Students may also seek referral assistance by contacting University Counseling Services, at 577-3398.

## Policy on Sexual Harassment

It is the policy of Wayne State University that no member of the University community may sexually harass another. Any employee or student will be subject to disciplinary action for violation of this policy.

The law of the State of Michigan prohibits discrimination in employment and in education and provides that discrimination because of sex includes sexual harassment, which means 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 relation-

ship, the more 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)

## Academic Programs and Degrees — Symbols and Abbreviations

The table on the following pages lists the major academic programs and degrees offered by Wayne State University. Academic programs are defined as any combination of courses leading to a specialization, 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. The following index identifies standard abbreviations for University degrees and certificates, and the columns (Roman numerals) in the table indicating degree categories.

BA.....	Bachelor of Arts
BAS .....	Bachelor of Applied Studies
BFA.....	Bachelor of Fine Arts
BIS.....	Bachelor of Interdisciplinary Studies
BM .....	Bachelor of Music
BPA.....	Bachelor of Public Affairs
BS .....	Bachelor of Science
BSAHS .....	Bachelor of Science in Allied Health Sciences
BSCT .....	Bachelor of Science in Computer Technology
BSET .....	Bachelor of Science in Engineering Technology
BSMS.....	Bachelor of Science in Mortuary Science
BSN .....	Bachelor of Science in Nursing
BSW.....	Bachelor of Social Work
BTIS.....	Bachelor of Technical & Interdisciplinary Studies
EdD.....	Doctor of Education
ESC.....	Education Specialist Certificate
GC.....	Graduate Certificate
JD.....	Juris Doctorate
LLM.....	Master of Laws
MA.....	Master of Arts
MAIR.....	Master of Arts in Industrial Relations
MAT.....	Master of Arts in Teaching
MBA .....	Master of Business Administration
MD.....	Doctor of Medicine
MEd.....	Master of Education
MFA.....	Master of Fine Arts
MIS.....	Master of Interdisciplinary Studies
MLIS.....	Master of Library and Information Science
MM .....	Master of Music
MPA.....	Master of Public Administration
MPT.....	Master of Physical Therapy
MS .....	Master of Science
MSET.....	Master of Science in Engineering Technology
MSN.....	Master of Science in Nursing
MST .....	Master of Science in Taxation
MSW.....	Master of Social Work
MUP.....	Master of Urban Planning
PBC.....	Post-Baccalaureate Certificate
PharmD.....	Doctor of Pharmacy
PhD.....	Doctor of Philosophy
PMC.....	Post-Master Certificate
SCP.....	Specialist Certificate Program
SPL .....	Specialist in Library and Information Science
TC .....	Teaching Certificate Available in Field
<i>I.....</i>	<i>Baccalaureate or First Professional Degree</i>
<i>II.....</i>	<i>Post-Bachelor or Graduate Certificate</i>
<i>III.....</i>	<i>Teaching Certificate</i>
<i>IV.....</i>	<i>Master's Degree</i>
<i>V.....</i>	<i>Specialist Certificate</i>
<i>VI.....</i>	<i>Doctoral Degree</i>

# Academic Programs and Degrees

For interpretation of symbols and abbreviations used in this table, see preceding page.

<i>School/College and Major</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
<b>School of Business Administration</b>						
Accounting .....	BA, BS					
Business Administration .....				MBA		
Business Logistics .....	BA, BS					
Finance and Business Economics .....	BA, BS					
Management and Organization Sciences .....	BA, BS					
Management Information Systems .....	BA, BS					
Marketing .....	BA, BS					
Taxation .....				MST		
Joint JD/MBA .....	JD/MBA			JD/MBA		
<b>College of Education</b>						
Art Education .....	BA, BS		TC	MEd		
Bilingual/Bicultural Education .....			TC	MEd		
Career and Technical Education .....	BA, BS		TC	MEd		
College and University Teaching .....		GC				
Counseling .....				MA, MEd	ESC	EdD, PhD
Curriculum and Instruction .....					ESC	EdD, PhD
Early Childhood Education .....				MEd		
Educational Leadership .....				MEd		
Educational Leadership and Policy Studies .....						EdD, PhD
Elementary Education .....	BA, BS		TC	MAT, MEd		
English Education (Secondary) .....	BA, BS		TC	MEd		
Evaluation and Research, Education .....				MEd		EdD, PhD
Foreign Language Education .....			TC	MEd		
General Administration and Supervision .....					ESC	
General Education .....					ESC	
Health Education .....			TC	MEd		
Instructional Technology .....				MEd	ESC	EdD, PhD
Leadership, Educational .....				MEd		
Mathematics Education .....	BA, BS		TC	MEd	ESC	
Physical Education .....	BA, BS		TC	MEd		
Psychology, Educational .....				MEd		EdD, PhD
Psychology, School and Community .....				MA		
Reading .....				MEd	ESC	
Reading, Language and Literature .....						EdD
Recreation and Park Services .....	BS			MA		
Rehabilitation Counseling and Community Inclusion .....				MA		
Science Education .....	BA, BS		TC	MEd		
Secondary Education .....				MAT		
Social Studies Education (Secondary) .....	BA, BS		TC	MEd		
Special Education .....	BA, BS		TC	MEd	ESC	EdD, PhD
Speech Education (Secondary) .....	BA, BS		TC			
Sports Administration .....				MA		
<b>College of Engineering</b>						
Biomedical Engineering .....				MS		PhD
Chemical Engineering .....	BS			MS		PhD
Civil Engineering .....	BS			MS		PhD
Computer Engineering .....				MS		PhD
Computer Technology .....	BSCT					
Electrical Engineering .....	BS			MS		PhD

**College of Engineering (continued)**

Electrical/Electronic Engineering Technology .....	BSET					
Electromechanical Engineering Technology .....	BSET					
Electronics and Computer Control Systems .....					MS	
Engineering Management .....					MS	
Engineering Technology .....					MSET	
Environmental Auditing .....		GC				
Hazardous Materials Mgt. on Public Lands .....		GC				
Hazardous Waste Control .....		GC				
Hazardous Waste Management .....					MS	
Industrial Engineering .....	BS				MS	PhD
Manufacturing Engineering .....					MS	
Manufacturing Engineering Technology .....	BSET					
Materials Science and Engineering .....					MS	PhD
Mechanical Engineering .....	BS				MS	PhD
Mechanical/Industrial Engineering Technology .....	BSET					
Operations Research .....					MS	
Polymer Engineering .....		GC				
Product Design .....	BSET					

**College of Fine, Performing and Communication Arts**

Art .....	BA, BFA				MA, MFA	
Art History .....	BA				MA	
Communication* .....	BA				MA	PhD
Dance .....	BA, BS		TC			
Design and Merchandising .....	BA, BS				MA	
Film Studies .....	BA					
Journalism* .....	BA					
Music .....	BA, BM		TC		MA, MM	
Orchestral Studies .....		GC				
Public Relations .....	BA					
Radio-Television-Film* .....	BA					
Theatre .....	BA, BFA				MA, MFA	PhD

**Graduate School**

Alcohol and Drug Abuse Studies .....	GC					
Archival Administration .....	GC					
Developmental Disabilities .....	GC					
Gerontology .....	GC					
Infant Mental Health .....	GC					
Interdisciplinary .....						PhD Library
and Information Science .....					MLIS	SPL
Molecular and Cellular Toxicology .....					MS	PhD Molec-
ular Biology and Genetics .....					MS	PhD,MD/PhD
Scientific Computing .....	GC					

**Law School**

Corporate Finance Law .....					LLM	
Joint JD/MA in Dispute Resolution .....	JD/MA				JD/MA	
Joint JD/MA in History .....	JD/MA				JD/MA	
Joint JD/MA in Political Science .....	JD/MA				JD/MA	
Joint JD/MBA .....	JD/MBA				JD/MBA	
Labor Law .....					LLM	
Law .....	JD				LLM	
Taxation .....					LLM	

*School/College and Major*

*I II III IV V VI*

**College of Liberal Arts**

Africana Studies .....	BA					
American Studies .....	BA					
Anthropology* .....	BA			MA		PhD
Anthropology and Sociology .....	BA					
Art History .....	BA			MA		
Classics* .....	BA			MA		
Comparative Literature.....				MA		
Criminal Justice* .....	BS			MS		
Economics* .....	BA			MA		PhD
English* .....	BA			MA		PhD
Studies .....	BA					Film
French*.....				MA		
French Studies*.....	BA					
Geography* .....	BA					
German* .....	BA			MA		
History*.....	BA			MA		PhD
History/Law (joint JD/MA).....	JD			MA		
Honors, College (Co-Major) .....	BA					
International Studies (Co-Major Program).....	BA					
Italian* .....	BA			MA		
Language Learning .....				MA		
Languages, Modern .....						PhD
Linguistics .....	BA			MA		
Near Eastern and Asian Studies .....	BA					
Near Eastern Languages .....	BA			MA		
Philosophy* .....	BA			MA		PhD
Political Science .....	BA			MA		PhD
Political Science/Law (joint JD/MA).....	JD			MA		
Public Administration .....				MPA		
Public Affairs .....	BPA					
Russian .....	BA					
Slavic.....	BA					
Sociology.....	BA, BAS			MA		PhD
Sociology and Anthropology .....	BA					
Spanish* .....	BA			MA		
Women's Studies (Co-Major Program).....	BA					

**College of Lifelong Learning**

Interdisciplinary Studies .....	BIS, BTIS.....	MIS
Non-Profit Sector Studies.....	PBC	

**School of Medicine**

Anatomy and Cell Biology .....	MS.....	PhD,MD/PhD
Basic Medical Sciences .....	MS	
Biochemistry and Molecular Biology .....	MS.....	PhD,MD/PhD
Cancer Biology.....	MS.....	PhD
Cellular and Clinical Neurobiology .....		PhD
Community Health Services.....	MS	
Community Health Services Research and Evaluation.....	GC	
Genetic Counseling.....	MS	
Immunology and Microbiology .....	MS.....	PhD,MD/PhD
Medical Physics .....		PhD
Medical Research .....	MS	
Medicine.....	MD	
Pathology .....		PhD
Pharmacology .....	MS.....	PhD,MD/PhD
Physiology.....	MS.....	PhD,MD/PhD
Psychiatry and Behavioral Neurosciences.....	MS	
Radiation Therapy Technology.....	BS	
Radiological Physics .....		MS
Rehabilitation Sciences.....		MS

*School/College and Major*

*I II III IV V VI*

**College of Nursing**

Adult Acute Care Nursing.....						MSN
Adult Primary Care Nursing .....						MSN
Advanced Practice Nursing: Women, Neonates, Children.....						MSN
Child and Adolescent Psychiatric Nursing .....						MSN
Community Health Nursing .....						MSN
Nursing.....	BSN					PhD
Nursing Education.....		GC				
Psychiatric Mental Health Practitioner Nursing .....						MSN
Transcultural Nursing .....		GC				

**College of Pharmacy and Allied Health Professions**

Allied Health Sciences .....	BSAHS					
Anesthesia .....						MS
Clinical Laboratory Sciences.....	BS	PBC				MS
Forensic Investigation .....		PBC				
Health Systems Pharmacy Management.....						MS
Mortuary Science .....	BSMS					
Occupational and Environmental Health Sciences .....						MS
Occupational Therapy .....	BS					MS
Pathologist Assistant.....	BS					
Pharmaceutical Sciences.....						MS..... PhD
Pharmacy.....	BS, PharmD					
Physical Therapy.....						MPT
Physician Assistant Studies .....						MS

**College of Science**

Audiology .....						MS
Biological Sciences*.....	BA, BS				MA, MS.....	PhD Chem-
istry* .....	BA, BS				MA, MS.....	PhD
Computer Science* .....	BA, BS	PBC			MA, MS.....	PhD
Dietetics .....	BS	PBC				
Geology.....	BA, BS					MS
Honors, College (Co-Major) .....	BA					
Human Development (Psychology).....	BA					MA
Information Systems .....	BA					
Linguistics .....	BA					MA
Mathematical Statistics.....						MA
Mathematics* .....	BA, BS					MA..... PhD
Mathematics, Applied.....						MA
Molecular Biotechnology.....						MS
Multidisciplinary Science .....						MA
Nutrition and Food Science* .....	BA, BS				MA, MS.....	PhD
Physics.....	BA, BS				MA, MS.....	PhD
Psychology* .....	BA, BS				MA.....	PhD
Speech-Language Pathology .....	BA				MA.....	PhD

**School of Social Work**

Social Work .....	BSW.....					MSW
Social Work Practice with Families and Couples .....		GC				

**College of Urban, Labor, and Metropolitan Affairs**

Chicano-Boricua Studies (Co-Major Program).....	BA					
Dispute Resolution .....		GC				MA
Dispute Resolution/Law (Joint JD/MA).....	JD					MA
Economic Development .....		GC				
Geography .....						MA
Industrial Relations.....						MAIR
Labor Studies .....	BA					
Peace and Conflict Studies (Co-Major Program) .....	BA					
Urban Planning .....						MUP
Urban Studies (Co-Major Program).....	BA					

# UNDERGRADUATE ADMISSION

## Office of University Admissions

3 East, Helen Newberry Joy Student Services Center; 577-3577

The Office of University Admissions is located on 3 East, Helen Newberry Joy Student Services Center, Wayne State University, Detroit, Michigan 48202. Admissions counselors are available for personal conferences. Telephone: (313) 577-3577.

The Office of University Admissions has the primary function of recruiting, admitting, and enrolling new students to the University. The Office also helps to coordinate the recruitment activities of individual departments, alumni groups, and students; and it organizes visits to local high schools and community colleges. Services offered to students include walk-in advising for students interested in Wayne State.

**College of Lifelong Learning (CLL):** Undergraduate admission to degree programs and other programs offered by the College of Lifelong Learning, including the Interdisciplinary Studies Program and the Community Education Program, is governed by procedures of that College. See the College of Lifelong Learning section of this bulletin, beginning on page 320 .

## Application

An official *Application for Undergraduate Admission* with a \$20.00 non-refundable application fee must be filed in the Office of Admissions before any consideration regarding admissibility can begin. The application form may be secured from the Office of Admissions. High school students in Michigan can secure an application from their high school counselor. Michigan community college students may obtain an application at their community college. Students may also apply on-line at: <http://www.wayne.edu>

The completed application, including official transcripts and any other records necessary for admission consideration, must be in the Office of University Admissions six weeks before the start of the desired semester.

## When to Apply for Admission

1. Students still in high school may apply after completion of their junior year.
2. Out-of-state applicants (including transfer students not currently attending another college) who do not plan to enroll in another college or university before entering Wayne State may apply up to eleven months in advance of the term desired.
3. Applicants presently registered at another college or university should apply early in the last term prior to transfer.

## Admission Requirements

Admission to Wayne State is selective. In order to qualify for admission an applicant must present scholastic records indicating college preparation in accordance with the Presidents' Council guidelines, and ability to undertake a college degree program. Graduates of accredited high schools can qualify for admission in two ways: (1) admission is assured if the cumulative high school grade point average is 2.75 ('B-minus') or above; and (2) admission is granted if the high school grade point average is between 2.00 and 2.74, providing the American College Test (ACT) standard composite score is at least 21 or a Scholastic Aptitude Test (SAT) aggregate score of at least 970 is achieved.

Transfer students who have completed at least twelve transferable hours of college work (twelve semester credits or eighteen quarter

credits) at an accredited institution with a 2.00 ('C') cumulative grade point average will be considered for admission on the basis of that work. For those students who have completed less than twelve transferable academic credit hours with a 'C' average at another institution, the high school record will be used as an additional factor in determining admissibility.

**Project 350:** Special admissions criteria and procedures apply under this program. Contact the special counselor in the Office of University Admissions for information. See also descriptive information under Special Student Service Programs, page 56.

## Recommended High School Preparation

**1. English (four years recommended):** Students entering the University should be able to (1) comprehend the main and subordinate ideas in written works, lectures and discussions; and (2) conceive ideas about a topic and be able to organize them for presentation in both verbal and written forms using standard English sentences. Effective use of the English language is central to one's ability to succeed at the University and in the professions and occupations for which our students are preparing.

**2. Mathematics (four years recommended):** Entering students should be able to (1) add, subtract, multiply and divide using natural numbers; (2) use the mathematics of integers, fractions and decimals; (3) understand ratios, proportions, percentages, roots and powers; and (4) perform the mathematical operations of algebra and geometry.

While most careers for which University students are preparing require mathematical competency, an increasing number of careers in the science and technical curricula require advanced preparation in mathematics.

**3. Biological and Physical Sciences (three years recommended):** Students should be acquainted with (1) concepts of matter, energy, motion and force and the natural laws and processes of the physical sciences in general; (2) the science of life and living matter with special reference to growth, reproduction and structure; and (3) laboratory methods. A basic understanding of the physical and biological sciences is essential for many fields of University study, and is necessary if one is to comprehend our world and the impact of science and technology on it.

**4. Social Sciences/History (three years recommended):** Students should study different cultures and societies — their social systems, customs, communities, values, economies, governments, and politics. A knowledge of the main events and ideas that have shaped our nation and its place in the world should also be possessed by entering students. They should understand how the past bears upon the present condition and future course of mankind. As the social sciences improve one's appreciation of the scientific method and other approaches to critical analysis, an understanding of history is requisite to the informed exercise of citizenship in a free society.

**5. Foreign Languages (two years recommended):** Proficiency in a foreign language not only introduces students to non-English speaking cultures but also heightens awareness and comprehension of one's native tongue. Language is the basic instrument of thought, and the ability to read, speak and write a foreign language permits one to understand another culture in a more fundamental way. Foreign language competency will open up career opportunities denied to those without it.

**6. Fine Arts (two years recommended):** Students entering the University should be acquainted with the visual and performing arts, through study and/or participation. Several academic disciplines at the University require high levels of skill in the arts. Study in this area enriches life and heightens one's sense of beauty and aesthetic perception.

**7. Computer Literacy:** Some formal instruction in the logic and use of computers in problem solving and data retrieval is increasingly important in all fields of study.

## Transfer Admission

1. Transfer students are considered for admission if they meet the following minimum conditions:

(a) Completion of at least one semester of college work (twelve transferable semester credits or eighteen quarter credits) at an accredited college institution with a cumulative 'C' average (2.00).

(b) Students who have attended unaccredited institutions should consult with an admissions counselor to determine admissibility.

(c) For those students who have completed less than twelve transferable academic credit hours with a 'C' average at another institution, the high school record will be used as an additional factor in determining admissibility.

2. If an applicant has at least a 2.0 grade point average from both high school and college but lacks the completion of twelve hours of transferable credit, he/she may elect to take either the Scholastic Aptitude Test (SAT) or the American College Test (ACT). A minimum aggregate score on the SAT of at least 970, or a composite score on the ACT of at least 21, is required. Examination scores are not to be construed as an adequate substitute for good achievement in course work.

## Transfer of Undergraduate Credits

Wayne State University policy governing transfer credit from all accredited institutions of higher education will be applied equally to students transferring from community colleges and from baccalaureate-granting colleges and universities. With the exception of a credit-hour acceptance limit on non-baccalaureate-granting institutions (which basically have programs whose extent is not designed to replicate more than the first two years of traditional baccalaureate institutions), transfer credit policy will apply equally to all transfer students, regardless of whether or not such students have completed requirements for a two- or four-year college degree.

**General Rules Concerning Transfer of Credit:** Wayne State University will accept equivalent academic credit from accredited baccalaureate-granting institutions, and up to sixty-four semester credit hours from accredited institutions which offer Associate Degrees. Credits accepted for transfer must be for courses for which a course equivalence exists or which have been determined to be of a traditional academic nature.

**Transfer of Credit from Institutions NOT Accredited by a Regional Accrediting Agency:** Wayne State University may accept for transfer those credits for which a grade of 'A' or 'B' was earned from those institutions with candidacy status from a regional accrediting agency; or from other accredited institutions provided that the institution 1) grants a baccalaureate or associate degree, 2) is fully accredited by an agency recognized by the Council on Postsecondary Education (COPA), and 3) the courses presented for transfer are shown to have equivalency or are determined to be of traditional academic nature.

**Technical, Vocational and Applied Credit:** To facilitate transfer of students, Wayne State University will accept for transfer up to twelve semester hours of credit earned in technical, vocational and applied (TVA) courses at two- and four-year colleges if such courses are determined to be cognate or related to a student's intended program. For students transferring from associate degree granting institutions, the twelve TVA credits will be included in the sixty-four credit limitation.

**Transfer of Course Work Graded 'D':** Wayne State University will accept for transfer credit course work carrying the grade of 'D', provided the cumulative grade point average earned by the transfer student meets admission standards. (Acceptance of transfer credit carrying the grade of 'D' in fulfillment of major program requirements will follow the current policy governing acceptance of 'D' grade credits earned by native students.) No transfer grades apply in computing Wayne State grade point averages.

**Transfer of Remedial or Developmental Coursework:** Credit earned in courses designated remedial or developmental will not transfer.

**Transfer of Redundant or Duplicative Coursework:** Transfer credit will not be awarded for redundant coursework (i.e., courses with substantially duplicative content). Credit will be awarded for only one course in any set of redundant courses.

**Residency and Upper Division Requirements:** Transfer students will be required to meet the University and College residency requirements, and to obtain the same number of upper division credits in fulfillment of the baccalaureate degree as are required of native students in specific major programs.

**Junior Standing:** Wayne State University will award junior standing to all transfer students for whom fifty-five or more semester hours of transferable credit have been accumulated, whether they are transferred credits or credit earned at Wayne State University. Junior standing will not guarantee automatic entry to major and professional programs in the Schools and Colleges. Transcripts will be individually evaluated to determine whether all prerequisites for major and professional standing have been met by native and transfer students.

## Advanced Placement Tests

Superior performance in the College Board Advanced Placement Tests will entitle an entering freshman to consideration for advanced placement and/or advanced standing credit up to a maximum of thirty-two semester credits of work in the areas covered by the examination. These areas include American history, European history, art history, studio art, biology, chemistry, computer science, English, French, German, Latin, Spanish, mathematics, music literature, music theory, and physics. Advanced placement and/or advanced standing credit will be awarded and such credit may satisfy General Education Requirements in accordance with policies adopted by the appropriate department. Interested students should contact the Office of Admissions.

## College-Level Examination Program

The College Board sponsors the College-Level Examination Program (CLEP) which affords students and prospective students the opportunity to demonstrate their academic proficiency at the freshman-sophomore college level in various areas and in specific subjects whether or not they have had previous formal college instruction in materials covered by the tests. As described by the College Board, the General Examinations are intended to provide a comprehensive measure of undergraduate achievement in the five basic areas of the liberal arts: English composition, humanities, mathematics, natural sciences and social sciences. They are not intended to measure advanced training in any specific discipline, but rather to assess a student's knowledge of fundamental facts and concepts, his/her ability to perceive relationships and his/her understanding of the basic principles of the subject. The content of the General Examinations is similar to the content of those subjects ordinarily included in the program of study required of most general education students in the first two years of college.

The Subject Examinations are essentially end-of-course tests developed for widely taught undergraduate courses. They measure understanding of basic facts and concepts, as well as the ability to apply such understanding to the solution of problems and the interpretation of materials. Questions that require of a student only rote recall are avoided.

Superior performance in these examinations will be considered as a basis for granting advanced placement and/or advanced standing credit as well as for waiving parts of the General Education Requirements of the University. For further information, please consult advisers, school or college offices, or the University Counseling Services (577-3398).

For information on credit by Special Examination, see page 42.



## Special Requirements and Professional Admission

For additional undergraduate admissions information relating to special requirements and professional admission in certain colleges, please refer to the following school or college sections: *Business Administration* — page 65 ; *Education* — page 101; *Engineering* — page 127; *Engineering Technology* — page 153 ; *Lifelong Learning* — pages 322, 326; *Nursing* — page 345; *Pharmacy and Allied Health Professions* — pages 359 - 362 and 373; *Social Work* — page 457 .

## Guest Admission

Students currently attending an accredited institution of higher education who are interested in taking undergraduate courses at Wayne State for one semester, or who wish to register for courses concurrently, are eligible to apply for guest admission. Requirements include the completion of fifteen semester credits (credit hours) at the home institution and a minimum cumulative 'C' grade point average (equivalent to a 2.0 grade point average at Wayne State). Please contact the Admissions Office for further details and regulations regarding this status.

## Visitor's Program

The Visitor's Program allows any adult who is not currently enrolled for credit courses at Wayne State to attend a wide range of University courses for no credit. Provided space is available, 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 this noncredit program. Visitor-status students do not submit written work or take examinations. Tuition for courses enrolled under Visitor status is one-half of the freshman credit rate plus one-half of the registration fee; tuition must be paid in full at the time of registration.

Registration for both on-campus and off-campus classes takes place the first week of classes and is processed by the College of Lifelong Learning's Noncredit Programs unit, located on the main campus. Students may also register by mail or telephone, using a MasterCard or Visa credit card, by calling the Noncredit Programs unit at (313) 577-4665.

## International Students

This university is authorized under Federal law to enroll non-immigrant alien students. A student from another country desiring admission should file an *Application for Admission to Undergraduate Studies for Applicants from Other Countries*, with a \$30.00 non-refundable application fee, with the Office of University Admissions. Full instructions for admission procedures, academic requirements and language standards are included with the application forms. A student from a country in which English is not the native language must take an English Language Proficiency Examination prior to admission or have a minimum Test of English as a Foreign Language (TOEFL) score of 550 (213 on computerized version), and a Test of Written English score of 5.5. Arrangements should be made through the Office of University Admissions. Also see Office of International Students and Scholars, page 54. For information on international student admission to the Graduate School, see the Wayne State University Graduate Bulletin.

## Re-Entry Following an Interruption in Attendance

Undergraduate students who were previously admitted and registered at Wayne State University and whose attendance has been interrupted need not reapply at the Office of University Admissions. It is strongly recommended that if the student left in good standing, he/she report to the college of his/her choice for any special instructions

regarding his/her return to classes. A copy of the student's last cumulative record should be obtained from the Records Office before meeting with college officials.

## Phoenix Program (Second Start)

The Phoenix Program gives undergraduate students who left Wayne State University on Probation or Dismissal the opportunity to petition for return under a second start policy. To be eligible for such petition, the student must not have enrolled at Wayne State University for at least five consecutive years. Petitions for re-entry are decided by the Dean of the School or College in which the student is matriculated or seeks to enter. With the approval of the Dean, the student and an academic adviser develop an academic contract and the adviser closely monitors the student through the first twelve credit hours of academic work.

To return to regular status, the student must complete twelve semester credit hours with a grade of 'C' or better, and satisfactorily complete the Mathematics Competency and English Proficiency requirements of the University General Education Requirements within two years from the time the first course is taken under the Phoenix Program. The student will be expected to complete degree requirements in effect at the time of his/her return to the University. Should the student earn any grade below 'C' in his/her first twelve credits in the Phoenix Program, the student will be excluded from the University. To maintain the integrity of the student's academic record, previous work will remain on the transcript; however, the credits and grade point average (g.p.a.) will be adjusted to reflect the grade point average earned since the start of the Phoenix Program.

For information about the Phoenix Program, students should contact the Dean's Office of the school or college in which the student is matriculated or seeks to enter.

# TUITION AND FEES

Listed below are the Tuition and Fees per semester in effect at the time of publication of this Bulletin. **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.

## Undergraduate Tuition and Fees

### *Freshmen and Sophomores:*

**Resident** . . . . . Registration Fee plus \$118.90 per credit.

**Non-Resident** . . . . . Registration Fee plus \$272.50 per credit.

### *Juniors, Seniors and Post-Bachelors:*

**Resident** . . . . . Registration Fee plus \$140.30 per credit.

**Non-Resident** . . . . . Registration Fee plus \$322.50 per credit.

## Student Fees

**Omnibus Fee:** Undergraduate students are assessed a \$10.70 fee per credit hour to a maximum of twelve credit hours per term. Graduate and Law School students are assessed a \$16.10 fee per credit hour per term. M.D. students are assessed a flat \$385.60 fee per year.

**Application Fees:** Applications for admission to any undergraduate, graduate or professional program must be accompanied by a \$20.00 non-refundable application fee. The non-refundable application fee for international students is \$30.00. 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 invited to submit additional material (secondary application), must pay a non-refundable fee of \$30.00 for the processing of the secondary application.

**Registration Fee:** There is a \$73.20 non-refundable registration fee, except that students enrolled in the Visitor's Program shall pay a \$36.60 non-refundable registration fee.

**Late Registration Fee:** Any student registering after the prescribed registration date (as indicated in the Schedule of Classes for the applicable semester) must pay either a \$35.00 or \$70.00 non-refundable Late Registration Fee.

**Late Payment Fees:** A student who does not satisfy his/her tuition and fee assessment by the prescribed dates on the invoices (and as indicated in the Schedule of Classes for the applicable semester) 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.

**Partial Payment Fee:** Students are expected to pay their full tuition and fee invoices by specified dates, depending upon when they register. Students may elect to pay only one-half of their assessments by the required dates, and these students will be assessed a \$20.00 Partial Payment Fee.

**Course Material and Breakage Fees:** Breakage fees and/or course material fees may be assessed, the latter in instances where a relatively large portion of instructional costs is due to the necessary use of consumable resources. These fees occur principally in courses with associated laboratory work or similar use of consumable resources. The imposition of such fees requires the approval of the President or his/her designee. Only in unusual circumstances, and only with the direct approval of the President, may fees exceed \$30.00 in any course.

**Intern-Resident Program Fee:** The fee for students registering in the Intern-Resident (GME) Program in the School of Medicine is \$1.00 for the twelve-month year beginning July 1. This fee is non-refundable.

**Examination Fee for Credit by Examination:** The fee for an examination taken to establish credit by examination is \$10.00 per credit hour. Such examinations are 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 \$79.00 for one credit hour. For three credit hours, the additional fee is \$157.00. 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 provided, but in all cases a minimum of \$5.00 will be retained by the University.

**Graduation Fee:** There is a \$15.00 fee for students who apply for a degree.

**Certificate Fee:** There is a \$15.00 fee for students who apply for a certificate.

**Transcript Fee:** There is a \$3.00 fee for an official transcript issued directly to the student, a \$2.00 fee for one that is mailed, and a \$1.00 fee for an unofficial transcript.

**Locker Fees:** Students registering for certain activity courses in physical education who wish to use locker facilities are charged for the facilities.

**Bowling Fee:** Students electing a course in bowling must pay a fee for bowling lane rental. This fee is paid at the first meeting of the class and is not refundable.

## Payment of Tuition and Fees

Checks or money orders must be made payable to Wayne State University. MasterCard and Visa credit cards are accepted for tuition payments only, by in-person payment or by telephone registration. For details, inquire at the Cashier's Office. The following Tuition and Fee Payment Policy is in effect:

*Students who do not officially drop their courses within the tuition cancellation period for the term are financially obligated to pay for the courses even if they have not attended any class sessions.*

*Please see the Schedule of Classes for tuition and fee deadline dates applicable to a particular term.*

Registration is not permitted beyond the second week of classes 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.

## Tuition Cancellation

Tuition, *not including the non-refundable Registration Fee*, may be canceled in accordance with the following schedule when students officially withdraw from classes by the telephone registration system, by submitting a properly-completed Register/Drop/Add form, or by sending a certified letter to Registration and Scheduling, 2 West, Helen Newberry Joy Student Services Center. A certified letter of withdrawal sent through the U.S. Postal Service shall be considered effective on the date of the postal cancellation, provided the date is legible. If the postal cancellation is dated Saturday or Sunday, it will be accepted as of the preceding Friday.

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 twenty-eight or more weeks* (not including final examination period): Students who officially withdraw from scheduled classes before the seventh week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

*Classes meeting sixteen to twenty-seven weeks* (not including final examination period): Students who officially withdraw from scheduled classes before the fourth week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

*Classes meeting nine to fifteen weeks* (not including final examination period): Students who officially withdraw from scheduled classes before the third week of classes are entitled to a 100% tuition cancellation and 0% thereafter. (Refer to the appropriate term Schedule of Classes for specific dates.)

*Classes meeting four to eight weeks* (not including final examination period): Students who officially withdraw from scheduled classes before the second week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

*Classes meeting fewer than four weeks* (not including final examination period): Students who officially withdraw from scheduled classes on or before the first day of classes are entitled to a 100% tuition cancellation and 0% thereafter.

**Special Adjustments:** The Registrar is authorized to make adjustments in the application of the policies stated in this section when unusual circumstances warrant. Circumstances which may warrant special consideration include non-attendance by the student or the death or serious illness of the student or of someone closely related. Students (or an authorized representative in the case of death or serious illness) must submit their applications and supporting documentation to Registration and Scheduling.

**Short-Term Courses:** Payment of full tuition and the non-refundable Registration Fee is required on the date of registration or no later than the first class meeting date.

**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 indebtedness to the University. While the hold is in effect, registration for a subsequent term will not be permitted, transcripts of academic work taken at the University will not be furnished, nor will a diploma be issued. Student grades may be recorded but are not considered as being earned nor is a degree earned until the student has satisfied all unpaid tuition as well as money borrowed from student loan programs.

## Residency

The following regulations and review procedures are established by Wayne State University for University tuition and fee purposes. The University recognizes that a variety of definitions exist for the term 'resident' and applicants are encouraged to give careful attention to these regulations which define residency for University purposes.

### — Regulations

1. No student is eligible for residence classification unless (s)he, or, if (s)he is a minor, the person from whom (s)he derives residence (pursuant to paragraph six below), meets the qualifications prescribed herein for residence and has lived in this state continuously for at least six months immediately prior to the first day of classes of the term for which resident classification is being sought, save for temporary absences as defined in paragraph two below.

2. For the purposes of these regulations, the terms 'residence' and 'domicile' are synonymous. In general, domicile is the place where a person actually resides with the intention of making it the person's true, fixed, permanent home and principal establishment and to which, whenever (s)he is temporarily absent, (s)he has the intention of returning. Full-time attendance at school outside Michigan and initial enlistment in a military service are examples of temporary absences. Other absences for more than six months will be presumed to be nontemporary. The fact of physical presence at the dwelling-place and the intention to make it a home must concur and the intention must be to make a home in fact in a certain place, and not an intention to acquire a domicile in order to obtain the benefit of the legal consequences of having a domicile there. A person may have but one domicile at a time, and a domicile, once established, continues until it is superseded by a new domicile.

3. Normally, the sojourn in this state of a student from another state for the primary purpose of attending school is not residence and it is presumed that a non-resident at the time of his or her enrollment continues in that classification throughout his or her presence as a student, except where it can be established that his or her previous domicile has been abandoned and a new one established. 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 term, within six months after arrival in Michigan, it is normally presumed that the student's sojourn is for the purpose of attending school and not to establish domicile.

4. The following facts, although not conclusive, have probative value in support of a claim for residence classification: acceptance of an offer of permanent employment in this state; former residence in the state and the maintenance of significant connections therein while absent; economic or social compulsion causing a person to abandon a former residence and acquire residence in the state with attendance at the University only an incident to such residence.

5. The following facts, standing alone, are not accepted as sufficient evidence of domicile: employment by the University as a fellow, scholar, assistant, or in any position normally filled by students; a statement of intention to acquire a domicile in this state; voting or registration for voting; the lease of living quarters; payment of local and state taxes; automobile registration; driver's license; or continued presence in Michigan during vacation periods.

6. For purposes of these regulations, the age of majority is 18 years. A minor does not have the capacity to establish his or her own domicile. Normally, the domicile of a minor follows:

- (a) That of the parents or surviving parent;
- (b) That of the parent to whom custody of the minor has been awarded by a divorce or other judicial decree; or
- (c) 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
- (d) That of an adoptive parent, where there has been a legal adoption, even though the natural parents or parent may be living; or
- (e) 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.
- (f) 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 (s)he continues to attend school regularly in this state.

7. Where a general guardian has been appointed by the state of the ward's domicile, at the time of appointment the ward's domicile presumption remains in that state. The appointment by a Michigan court of a resident guardian of a minor not domiciled in this state at the time of appointment has no effect upon the domicile of the ward.

8. A minor who has permanently left his or her parental home, and who has no reasonable expectation of substantial financial support from his or her parents or legal guardian, etc., may qualify for residency status as if (s)he were of majority age.

9. An alien student may apply for resident status under one or more of the following regulations in the same manner as a citizen, if he/she is in the United States for other than a temporary purpose. In order to demonstrate that he/she is here for other than a temporary purpose, the alien student must be either a permanent resident alien with an I-151 or I-551 Alien Receipt Card or an applicant for adjustment to permanent resident alien status whose application has been approved by the Immigration and Naturalization Service; OR an alien with a G-4 visa; OR an alien with an I-94 Arrival-Departure Record Card, endorsed either 'refugee' or 'applicant for adjustment'; OR an alien with documentation from the Immigration and Naturalization Service that he/she has been granted asylum in the United States; OR an alien with other documentation from the Immigration and Naturalization Service that reflects status equivalent to one of the above denominated categories.

## — Review Procedures

### 1. Initial Classification and Appeal

(a) Registering under proper residence and advising the Office of Admissions of changes in circumstances which might affect residence classification is the responsibility of the student. Questions concerning a student's residency should be raised initially with the Office of Admissions.

(b) A student may challenge the initial classification by filing an Application for Residence Classification with Registration and Scheduling, where such forms are available. Except for delays caused by University personnel, Applications for Residence Classification must be filed within the term for which resident classification is claimed.

(c) A student may appeal non-resident classification rendered by Registration and Scheduling by filing a written notice of appeal with the Registrar's Office *within* sixty calendar days after the student is notified of the administrative classification. 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 sixty calendar days shall constitute a waiver of the right to appeal non-resident classification.

(d) The Office of the General Counsel shall review the appeal and render a decision. A student may appeal an adverse decision by filing a written notice of appeal with the Office of the General Counsel within fifteen calendar days from the date of the decision. Failure to file a written notice of appeal with the Office of the General Counsel shall constitute a waiver of the right to appeal to the President or his designee. While the student has the right to consult the University Ombudsperson at any time, the student may particularly want to utilize the Ombudsperson's services at this point in the review procedure.

(e) After a student appeal, the President or his designee shall review the student's appeal on the record and render a final decision.

(f) If an erroneous classification has occurred, a refund for the appropriate period and amount will be made.

### 2. Reclassification and Appeal

(a) A student, having been initially classified as a non-resident and having decided that (s)he has since become a resident may initiate action in the same manner as for challenging an initial classification pursuant to 1(b) above.

(b) If the petitioner is dissatisfied with the finding of the Registrar's Office, (s)he may appeal to the Office of the General Counsel in the same manner as prescribed for appeals from administrative classification as in 1(c) above.

### 3. Erroneous Classification

If any student having been classified as a resident student shall be determined to have been erroneously so classified, (s)he shall be reclassified as a non-resident student, and 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 him or her at or before the time of his or her original classification, (s)he shall be required to pay all tuition fees which would have been charged except for such erroneous classification and shall be subject also to appropriate discipline in accordance with University policies. If it is determined that there is no such concealment of facts by the student, fees shall be adjusted only for current and future terms.

### 4. Classification Date

These procedures became effective November 9, 1979.

## OFFICE of SCHOLARSHIPS and FINANCIAL AID

3 West, Helen Newberry Joy Student Services Center;  
313-577-3378

Web: <http://es.wayne.edu/fa/new2/html/index/html>

The Office of Scholarships and Financial Aid (OSFA) assists students and parents in meeting their educational expenses. These educational expenses include items such as tuition, fees, books, supplies, room, board, and transportation. OSFA annually administers more than \$100 million in financial aid funds from federal, state, institutional, and private sources, based on both financial need and academic performance. Financial aid counselors are available to assist students on a walk-in basis, by telephone, or by appointment.

For financial aid eligibility purposes, 'financial need' is calculated by subtracting the individual student's expected family contribution from the average cost of attendance. Each student's financial need is determined by an analysis of the student and his/her family's financial statement and a standardized formula known as Federal Methodology. Federal Methodology is designed by the U.S. Department of Education and is used by all post-secondary institutions for the purpose of assessing financial need. Special circumstances of the individual applicant are considered on a case-by-case basis.

Wayne State University, in accordance with U.S. Department of Education regulations, assumes the student and his/her parents (if he/she is dependent) or spouse (if he/she is married) will contribute toward the student's educational expenses. The student bears primary responsibility for his/her educational costs. Financial aid is designed to supplement a student's contribution toward his/her educational expenses.

To be considered for need-based financial aid, students must complete the Free Application for Federal Student Aid (FAFSA). Undergraduate and graduate students are encouraged to complete the FAFSA by the Wayne State University institutional deadline of May 1 (prior to Fall classes). For additional information on applying for need-based financial aid, please see 'Financial Aid Application Procedures' below.

**Service Hours and Required ID:** Telephone counseling services are available Monday through Friday from 8:00 a.m. to 8:00 p.m. by dialing 313-577-3378. Front counter service is available at Helen Newberry Joy, 3 West, Monday through Thursday from 8:30 a.m. to 6:00 p.m., and Friday from 8:30 a.m. to 5:00 p.m. During the Spring/Summer semester (mid-May through mid-August) front counter service is available Monday through Friday from 8:30 a.m. to 5:00 p.m. To ensure confidentiality of student financial information, picture identification is required for front counter service.

**Types of Financial Aid:** There are four basic types of financial aid: scholarships, grants, loans, and employment. These types of aid are offered to the student either as a single fund or a financial aid package consisting of a combination of awards. The total amount of finan-

cial aid a student can receive can never exceed the demonstrated financial need, based on analysis of the financial statement.

**Scholarships:** A scholarship is gift assistance awarded on the basis of academic achievement, or other special ability or attribute, which requires no repayment. In some cases financial need may be a requirement for eligibility as well.

The State of Michigan offers two scholarship opportunities to undergraduate students obtaining their first bachelor's degree.

The Michigan Competitive Scholarship is gift aid for Michigan resident undergraduate students who demonstrate academic achievement and show financial need. Academic achievement must be demonstrated via the American College Test (ACT), which typically is taken while students are enrolled in high school. Priority consideration will be given to freshmen students who completed the Free Application for Federal Student Aid (FAFSA) by February 21 and to upperclassmen that complete the FAFSA by March 21.

The Michigan Merit Award is a merit-based program for high school seniors to reward student achievement and to make postsecondary education more affordable. Students who meet certain criteria based on academic achievement demonstrated via the MEAP (Michigan Educational Assessment Program) test will be eligible for a Michigan Merit Award of \$2,500 to be used at any approved postsecondary educational institution. Students should contact the Michigan Department of Education for application and deadline information at 1-888-4-GRANTS (1-888-447-2687) or (517) 373-3394.

The 2001-02 Application for Private Scholarships awarded by the Office of Scholarships and Financial Aid (OSFA) is available on-line <http://www.financialaid.wayne.edu> and the deadline to apply is February 1, 2001. Information on private scholarships administered by the Office is available at <http://www.financialaid.wayne.edu>

Private Scholarships awarded by academic departments other than the OSFA may have different application requirements and deadline dates. While general information about many of these scholarships may be found on the OSFA Web Site <http://www.financialaid.wayne.edu>, a student should contact the appropriate college or department for specific application and deadline information.

**Grants:** A grant is gift assistance awarded on the basis of financial need, which requires no repayment. Grants are generally available to undergraduate students working toward their first bachelor's degree. Federal grants available to undergraduate students are the Pell Grant and the Supplemental Educational Opportunity Grant (SEOG). State grants available to undergraduate students are the Michigan Educational Opportunity Grant (MEOG) and the Michigan Adult Part-Time Grant (MAPT). Wayne State University Institutional grants available to undergraduate students include the Board of Governor's Grant (BOGG). Amounts available are contingent upon the demonstrated financial need of the student and funding available at the time of awarding.

**Loans:** A loan is assistance, generally awarded on the basis of financial need, for the purpose of meeting educational expenses, which 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. Loans bear a five to eight-and-a-quarter percent interest rate on the unpaid balance during the repayment period. (Some loan programs also incur interest charges during periods of enrollment.) There are several types of loans available at Wayne State University, including Federal Perkins Loan, the Federal Direct Subsidized/Unsubsidized Loan, and various Private/Alternative Loans.

*The Federal Perkins Loan* is awarded on the basis of financial need. The actual amount a student may borrow in any year is dependent upon demonstrated need, funding, and Federal annual maximum limitations. A Federal Perkins Loan is offered to students only if they are eligible and requested loan consideration on the financial aid application by answering 'yes' to the appropriate question on the Free Application for Federal Student Aid (FAFSA).

*The Federal Direct Loan* program consists of two types of loans: subsidized and unsubsidized. A student's eligibility for a subsidized Federal Direct Loan is determined by the financial need of the student. Eligibility for a subsidized loan must first be determined before a student may be considered for an unsubsidized loan. Each program has both annual and cumulative maximum loan amounts stipulated by Federal regulation.

*The Subsidized Federal Direct Loan* has a low and variable interest rate and is need-based. The federal government pays the interest on the loan during: (1) a student's enrollment in school on at least a half-time basis; (2) a six-month grace period immediately following the student's separation from school; and (3) a deferment, which is an authorized period of time when loan payments may be temporarily postponed.

*The Unsubsidized Federal Direct Loan*, which also has a low and variable interest rate, is non-need-based (although the FAFSA must still be completed in order to be eligible). The federal government does not pay interest to the lender (The U.S. Department of Education) on an unsubsidized loan; the student is responsible for paying all interest. Interest is charged from the day the loan is made until the loan is paid in full. One may choose either to pay the accumulating interest while in school, during the grace period for the principal, and during a deferment of the principal; or to have the unpaid, accumulated interest added to the principal balance of the loan (capitalized).

**Employment (Work-Study):** Work-Study is an employment program of on- or off-campus jobs that involves a direct exchange of money (an hourly wage) for work performed. Work-Study jobs are available to undergraduate and graduate students on the basis of financial need. Work-Study aid is offered only to eligible students, who must request employment on the financial aid application by answering 'yes' to the appropriate question on the Free Application for Federal Student Aid (FAFSA).

There are two Work-Study programs available to undergraduate and graduate students: Federal Work-Study and Michigan Work-Study. Work-Study employees' hourly wage is at least the federal hourly minimum wage. Total earnings may not exceed the student's offered award amount. A student may work no more than 20 hours per week during each semester while enrolled in classes, and up to forty hours per week between terms. Michigan Work-Study is only available to students who have Michigan residency.

A Work-Study award is not an employment guarantee. If a student is interested in Work-Study, he/she should consult the Student Guide to On-Campus Employment, which explains the hiring process and the terms and conditions of employment. The Guide is available from University Placement Services, 1001 Faculty/Administration Building; and also from the Web Site: <http://www.stuaffrs.wayne.edu>.

**Financial Aid Application Procedures:** Financial aid program eligibility requirements, award amounts, and conditions for continuing awards after the initial year vary. Students must apply for financial aid each year.

*Application:* In order to receive federal student aid, a student's financial need must be established by filing the Free Application for Federal Student Aid (FAFSA). Students may use either the paper or the electronic FAFSA. The paper FAFSA may be obtained from OSFA, a high school counselor or the local public libraries. The electronic FAFSA is available at: <http://www.fafsa.ed.gov>. Students who have questions should feel free to contact the Office of Scholarships and Financial Aid at (313) 577-3378.

*Deadline to Apply:* The 2001-02 application deadline for Wayne State financial aid consideration (except for private scholarships) is May 1, 2001 for the upcoming Fall 2001 and Winter 2002 semesters. Be sure to request a copy of your completed FAFSA to be sent to Wayne State University. The Federal School Code for the main campus (required on the application) is 002329.

*Student Aid Report and Expected Family Contribution:* The completed FAFSA should be sent to the federal processor. The processor

will in turn send the student a Student Aid Report (SAR). The SAR has assigned to it an Expected Family Contribution (EFC) number which reports the amount the federal government expects the student and/or family to be able to contribute toward the student's cost of education, including tuition, fees, room, board, books, transportation and personal expenses. The EFC is stated as a five-digit number (00000 to 99999) on the SAR. The SAR will also tell the student whether a student is eligible for the Federal Pell Grant. Students are responsible to review the SAR and follow any instructions given.

**Verification:** Verification is the process by which a college or university confirms the data on a student's SAR. If a student's application is selected for verification, he/she must provide the OSFA with documentation that the information reported on the application is accurate. For this purpose, he/she must submit documents such as a verification worksheet (provided by OSFA), a copy of his/her federal tax return (and that of a spouse, if married), a copy of his/her parents federal tax return (if the student is dependent), or a statement of certifying non-filer status for the student, spouse (if married), and/or parent (if the student is dependent).

**Applying for Direct Loans:** To request a Direct Loan, the student must answer 'yes' to question 33 on the FAFSA and ensure the FAFSA processing results (SAR) reach OSFA in accordance with the following schedule:

<i>Loan Period</i>	<i>Priority Due Date</i>
Fall Semester 2001 Only . . . . .	May 1, 2001
Fall Semester 2001 and Winter Semester 2002 . . . . .	May 1, 2001
Winter Semester 2002 . . . . .	October 1, 2001
Spring/Summer 2002 . . . . .	March 30, 2002

Separate application process exists for the Spring/Summer 2002 semester. A request form will be available for Spring/Summer loan request with a deadline of March 30, 2002.

To remain eligible for Federal Direct Loans, the student must be enrolled at least half-time at the time loan proceeds are disbursed.

The student's class ranking and whether he/she is dependent or independent, as follows, determine the amount a student is eligible to borrow annually in Federal Direct Loan funds:

**Dependent Undergraduates:**

Freshman year: . . . . .	\$2,625 (Subsidized + Unsubsidized)
Sophomore year: . . . . .	\$3,500 (Subsidized + Unsubsidized)
Junior year and above: . . . . .	\$5,500 (Subsidized + Unsubsidized)

**Independent Undergraduates:**

Freshman year: . . . . .	\$6,625 (Subsidized + Unsubsidized)
Sophomore year: . . . . .	\$7,500 (Subsidized + Unsubsidized)
Junior year and above: . . . . .	\$10,500 (Subsidized + Unsubsidized)
Graduate Students: . . . . .	\$18,500 (Subsidized + Unsubsidized)

**Aggregate Loan Limits:** The maximum amount of loan funds a dependent student may receive while working toward an undergraduate degree is \$23,000. The maximum amount of loan funds an independent student may receive while working toward an undergraduate is \$46,000. The maximum amount of loan funds a graduate student may receive while working toward a master's degree is \$138,500.

**Entrance Counseling:** The student who is a first-time borrower is required to complete entrance loan counseling. Federal regulations prohibit OSFA from paying loan funds to first-time borrowers until they have satisfied this requirement. A student may complete entrance loan counseling at the following Web Site: <http://www.ed.gov/directloan/counsel/index.html>.

**Cost of Attendance:** The cost of attendance (COA), also referred to as the 'student budget,' usually is the sum of costs or tuition and fees; room and board; books and supplies; transportation; and miscellaneous expenses.

The OSFA determines a student's financial need by subtracting from the Wayne State University's COA the amount of the student's Expected Family Contribution (EFC). As a state institution, Wayne State has a relatively low COA. Note that the following calculated COA amounts are estimated averages, which may not reflect a particular student's actual expenses. Dependent Student COA: The estimated average total cost for the nine-month 2000-01 academic year is \$10,385 for a Michigan resident who is an undergraduate, single, dependent, living with parents, and enrolled full-time (twelve credits or above):

Tuition and fees.....	\$4,032
Books and Supplies.....	\$615
Room and Board.....	\$2,390
Transportation & Miscellaneous.....	\$3,348
Total Cost of Attendance (budget).....	\$10,385

The budget estimated here may be adjusted to include loan fees (if applicable), costs related to a disability; reasonable costs for eligible study-abroad programs; and an allowance for reasonable costs connected with a student's employment as part of a cooperative education program. (The amount of tuition and fees is subject to change by the University Board of Governors without notice.)

**Independent Undergraduate Student COA:** The estimated total cost for the nine-month 2000-01 academic year is \$14,445 for a Michigan resident who is an undergraduate, single, independent, living away from parents, and enrolled full-time (twelve credits or above):

Tuition and fees.....	\$4032
Books and Supplies.....	\$615
Room and Board.....	\$6450
Transportation & Miscellaneous.....	\$3348
Total Cost of Attendance (budget).....	\$14,445

The budget estimated here may be adjusted to include loan fees (if applicable), dependent care directly related to attendance at Wayne State University; costs related to a disability; reasonable costs for eligible study-abroad programs; and an allowance for reasonable costs connected with a student's employment as part of a cooperative education program. (The amount of tuition and fees is subject to change by the University Board of Governors without notice.)

**Graduate Student COA:** The estimated total cost for the nine-month 2000-01 academic year is \$13,844 for a Michigan resident who is a graduate, single, living away from parents, and enrolled full-time (eight credits or above):

Tuition and fees.....	\$3431
Books and Supplies.....	\$ 615
Room and Board.....	\$6450
Transportation & Miscellaneous.....	\$3348
Total Cost of Attendance (budget).....	\$13,844

**Financial Aid Payments:** Federal Direct Loans are paid in two disbursements, regardless of the length of the loan period. All other financial aid is paid in two disbursements if the award is for the academic year (one scheduled for the Fall semester and the second for the Winter semester), or in one payment if the award is for only one semester.

**Financial Aid Eligibility Enrollment Requirements:** To receive consideration for the maximum award amounts under financial aid programs, the student must enroll full-time. At the undergraduate level, full-time enrollment is twelve credits or above. At the graduate level, full-time enrollment is eight credits or above. Undergraduate and graduate students must enroll at least half-time to receive most financial aid funds (including grants and loans). Students enrolled at least half-time but less than full time are eligible for financial aid in pro rata amounts. At the undergraduate level, half-time enrollment is a minimum of six credits. At the graduate level, half-time enrollment is a minimum of four credits.

**Standards of Satisfactory Academic Progress:** Federal regulations require institutions eligible to participate in federal financial aid programs to define and enforce satisfactory academic progress stan-

dards for students receiving federal assistance. The standards assure completion of degree or certificate objectives within an established time frame. The federally established time limit sets an upper limit on the period of time for which a student may receive federal financial aid. The Wayne State University standards of satisfactory academic progress govern all federal and state financial aid programs and Board of Governors scholarships and grants. Federal regulations establish the maximum time frame in which a student must complete his or her educational program as 150 percent of the published length of the program in which he or she is enrolled, a student should refer to the appropriate school/college and department section of this Bulletin, or consult with an academic adviser. To receive financial aid, otherwise eligible students must maintain satisfactory academic progress toward a degree or certificate. Students must complete two-thirds of their attempted credit hours each academic year (defined as Fall and Winter semesters) and maintain at least a 2.0 cumulative grade point average. Students with unsatisfactory academic progress may appeal for financial aid reinstatement. Students should contact OSFA for appeal forms and procedures. (Note: Graduate students, law students, and medical students should consult their academic advisers about the minimum acceptable cumulative grade point average for their programs.) Copies of the Standards of Satisfactory Academic Progress Policy are available from the OSFA and the OSFA Web Site <http://www.financialaid.wayne.edu>

**Eligible Program Exceptions:** A student must be enrolled as a regular student in an eligible program (one that leads to a degree or certificate) in order to receive consideration for financial aid funds. The two exceptions to the eligible program requirement are: 1) a student enrolled in prerequisite course work to gain admission to an eligible program, and 2) a student enrolled in the teacher certification program. A description of these exceptions are available from the OSFA and the OSFA Web Site: <http://www.financialaid.wayne.edu>

**Programs Ineligible for Financial Aid:** Students who meet any of the following admission criteria are not eligible for financial aid:

- 1) Admission to the University is granted with 'Guest Student' status, or 'Permit to Register' status, or undergraduate 'temporary' admit status.
- 2) Enrollment is not in an eligible program (leading to a degree or certificate) and none of the eligible program exceptions listed above apply.
- 3) Admission to the University or enrollment is in one of the following: (a) the English Language Institute; (b) Post-Bachelor's Rank 06, Curriculum 000; (c) College of Lifelong Learning non-matriculated graduate; or (d) graduate non-degree rank 60 (pre-master's), rank 53 (post-master's), or rank 69 (post-doctoral).

### **Refund Policy:**

#### **Return of Title IV Funds Policy for Students Who Withdraw:**

The Higher Education Amendments of 1998 set forth regulations governing the treatment of Title IV funds (Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loans, Federal Subsidized Direct Loan, Federal Unsubsidized Direct Loan, Federal PLUS and Federal Stafford Loans) when a student withdraws completely from an institution.

When a student withdraws during a period of enrollment in which they have begun attendance and have received federal Title IV financial aid, Wayne State University is required to determine the amount of earned and unearned Title IV aid. A student is only eligible to retain the percentage of Title IV aid disbursed or could have been disbursed that is equal to the percentage of the enrollment period completed by the student (calculated daily). Scheduled breaks or an official Leave of Absence of four days or more are excluded. The unearned Title IV aid must be returned to the appropriate federal aid program(s). If the student has completed more than 60% of the enrollment period, no Title IV aid needs to be returned.

The following steps will be followed when determining the amount of Title IV aid to be returned upon withdrawal:

1. Determine the percentage of enrollment period completed by the student. Divide the number of days attended by the number of days in the enrollment period. If the calculated percentage exceeds 60% then the student has earned all the Title IV aid for the enrollment period.
2. Calculate the amount of earned Title IV aid. Multiply the percentage of the enrollment period completed by the total Title IV aid disbursed (or could have been disbursed as defined by late disbursement rules). This is the amount of Title IV aid disbursed that the student will be allowed to retain.
3. Determine the amount on unearned Title IV aid to be returned to the appropriate Title IV aid program accounts. Subtract the amount of earned federal aid from the total amount of federal aid disbursed. The difference must be returned to the appropriate Title IV program(s).
4. Return of Title IV funds by the institution and the student. Wayne State University will return unearned Title IV aid up to an amount that is equal to the total allowable institutional charges for the payment period multiplied by the percentage of the Title IV aid that was unearned. The student will be responsible for the balance of unearned Title IV aid. In most cases this will be the amount of federal aid funds a student received in the form of a refund for non-institutional expenses multiplied by the percentage of Title IV aid that was unearned. If the student's portion of unearned aid to be returned is from a loan, the student is not immediately required to repay this amount. The terms and conditions of the original repayment agreement will apply. If the student's portion of unearned aid to be returned is from a grant (Federal Pell Grant or Federal Supplemental Educational Opportunity Grant), the student is only required to repay 50% of the grant overpayment. Wayne State University will return the student's portion to the appropriate federal account and the student will be required to repay WSU.
5. Unearned Title IV Funds will be returned to federal programs in the following order Unsubsidized Federal Stafford and Direct Loans Subsidized Federal Stafford and Direct Loans Federal Perkins Loans Federal PLUS Loans Federal Pell Grants Federal Supplemental Educational Opportunity Grants

#### **Return of Title IV Funds for Unofficial Withdrawals:**

The official withdrawal procedure for Wayne State University requires that a student properly complete the Drop/Add Form and submit it to the Registration and Scheduling Office, send a Certified Letter to the Registration and Scheduling Office or by using the Tartar Tone Registration system. If a student begins a period of enrollment, receives federal Title IV aid, then ceases to attend classes without providing official notification to the University, the federal regulations consider this to be an unofficial withdrawal. For Title IV purposes, the withdrawal date for students who do not officially withdraw is considered to be the mid-point of the enrollment period. However, if the University determines that a student did provide official notice of the intent to withdraw due to illness, accident, grievous personal loss or other circumstances beyond the student's control, the University may use a date related to that circumstance. The refund rules discussed above are then used to determine the unearned portion of Title IV aid that must be returned to the appropriate aid program(s).

#### **Example of a Title IV Return of Funds Calculation for a Student Who Officially Withdraws:**

<b>Institutional Charges:</b>	
Tuition and Fees .....	\$ 1,551
<b>Federal Aid Disbursed:</b>	
Title IV Pell Grant .....	\$ 1,563
Title IV Subsidized Direct Loan .....	\$ 970
Total Title IV Aid Disbursed .....	\$ 2,533

If the student withdrew on the 65th day of a 113-day enrollment period the earned and unearned portions of Title IV aid is calculated as follows:

Percent Earned.....65/113=57.50%  
Percent Unearned.....100% - 57.50% = 42.50%  
Amount of Title IV aid unearned ..\$2,533 x 42.50% = \$1,076.53

Wayne State University is responsible for returning the lesser of unearned Title IV aid (\$1076.53 from above) or unearned tuition and fees (\$1551 x 42.50% = \$659.18). WSU will return the unearned Title IV aid as follows:

Title IV Loans.....\$659.18

The student is responsible for the remaining portion of unearned Title IV aid (\$1076.53 - \$ 659.18 = \$ 417.35) and should be distributed as follows:

Title IV Loan Unearned:

\$ 970 (total disbursed) - \$ 659.18 (returned by WSU) = \$ 310.82

The amount of unearned Title IV loan to be returned by the student is not required to be returned immediately. The student will repay this amount based upon the original repayment terms as described in the loan promissory note.

Title IV Grant Unearned:

\$ 417.35 (total student portion to be returned)  
- \$ 310.82 (unearned portion returned to the loan program)  
= \$106.53 (remaining unearned Title IV aid)

The student is only required to repay 50% of unearned Title IV grant funds. WSU will return the amount the student is responsible for (\$106.53 x .50 = \$53.27) and the student will then be required to repay WSU.

For further information or other examples of this return of Title IV policy, please contact the Office of Scholarships and Financial Aid at 3 West, Helen Newberry Joy Student Services Center, (313) 577-3378.

It is strongly recommended that any student receiving financial aid who is contemplating a withdrawal from the University first contact the OSFA to determine the financial impact of that decision.

## Financial Assistance Available through Schools and Colleges, Programs, and Departments

Consult the individual school, college, program, and department sections of this Bulletin for financial aid available for financial aid available to undergraduate students in their specific disciplines. In addition, Offices of Deans, Directors, and Department Chairpersons may provide further information on institutional and departmental aid and awards.

## Financial Assistance Available through the Office of University Admissions

*Wayne State University Presidential Scholar Program (Competitive Scholarship):* The Presidential Scholar Program provides tuition scholarships for selected Michigan high school and community college students who have demonstrated scholastic ability as they graduate from their educational institutions. Award for high school graduates: tuition for eight semesters maximum (thirty-two credits per academic school year); award for Michigan community college graduates: tuition for four semesters maximum (thirty-two credits per academic school year). High school graduates' eligibility: minimum 3.50 grade point average. Michigan community college graduates' eligibility: having earned an Associate Degree or fifty-one transferable community college credits with a minimum 3.50 grade point average. Application deadline is May 1. Contact: Office of University Admissions, 3 East, Helen Newberry Joy Student Services Center, 313-577-3577.

## Financial Assistance Available through the Office of Scholarships and Financial Aid

Information about the programs listed below may be obtained by contacting the Office of Scholarships and Financial Aid (OSFA), 3 West, Helen Newberry Joy Student Services Center (313-577-3378).

*University Scholarships and Awards:* The University has a wide range of private scholarships and loan funds that are awarded on the record of academic performance and financial need. The Wayne State Application for Private Scholarships is available from the Office of Scholarships and Financial Aid as well as OSFA's Web Site <http://www.financialaid.wayne.edu> The student applicant is required to submit along with the application a personal statement, two letters of recommendation, and a copy of their previous high school and/or college academic transcript(s) for further consideration. The application deadline is February 1.

*Private Donors' Funds:* Many private donors have established funds to assist Wayne State students in their pursuit of higher education. Funds often have specific requirements related to a student's major academic area, enrollment status, and grade point average. Scholarships available from these funds are listed below.

*NOTE:* The Application for Private Scholarships is required for all scholarship awards through OSFA. (Separate addresses are given below when the application is to be made elsewhere.) Application deadline for all OSFA scholarships is February 1. (Different or additional requirements are stated below where applicable.)

**Ralph and Grace Ainsworth Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Alumni Association Annual Scholarship:** Amount depends on funds available; open to full-time undergraduate student, sophomore status or above, maintaining a minimum 2.7 g.p.a. and demonstrating financial need.

**Arab-American Endowed Scholarship:** Amount depends on funds available; open to full- or part-time student who has at least one parent of Arab descent; application must include written statement demonstrating student's interest in Arabic culture. Recipients selected on basis of scholastic achievement, desirable qualities of character and leadership, and financial need.

**Dr. C. Gary Artinian Scholarship:** Varying amounts, depending on funds available, open only to students engaged in full-time study at Wayne State. Students accepted for full-time study may apply. Recipients selected on the bases of scholastic achievement, qualities of leadership, and financial need.

**Michael W. Assarian Scholarship:** Amount depends on funds available; open to full-time undergraduate student of Armenian descent maintaining a minimum 3.0 g.p.a.

**Howard Baker Foundation General Scholarship:** Award of full-time (twelve credits) undergraduate tuition and books for at least two years, open only to undergraduate minority students at Wayne State. Students must be accepted for full-time study, or currently enrolled part-time, to apply.

**Barba Family Scholarship:** Amount depends on funds available; open to full-time student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Board of Governors Scholarship:** Amount depends on funds available; open to undergraduate student attending at least part-time, maintaining a minimum 3.0 g.p.a., and demonstrating financial need by filing the *Free Application for Federal Student Aid (FAFSA)*.

**Abraham Borman Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a.

**Warren E. Bow Memorial Scholarship:** Amount depends on funds available; open to full-time freshman student, who is a graduate of a Detroit high school, maintaining a minimum 3.0 g.p.a.



**Samuel and Mollie Burtman Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Sol Nathan Cohen Memorial Scholarship:** Amount depends on funds available; open to full-time undergraduate student majoring in the fine and performing arts, maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Edward Connor Memorial Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Albert C. Dames Trust Scholarship:** Two \$2500 scholarships open to any full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Gilbert R. and Patricia K. Davis General Endowed Scholarship:** Varying amounts, depending on funds available, open to students who are enrolled at least part-time in a degree program. Applicants must be Michigan residents who have completed at least fifteen credits in Wayne State course work. Recipients are selected on the bases of scholastic achievement (a minimum 3.0 g.p.a. is required) and merit. This award is renewable provided recipients maintain at least a 3.0 g.p.a. at the end of each academic year and continue to meet other stated criteria. This scholarship may be used for tuition, fees, and books.

**Mattel 'Mat' Dawson Jr. Endowed Multi-Year Scholarship:** Amounts vary depending on available funds. Open only to undergraduate students enrolled full-time. Students accepted for study in a full-time undergraduate curriculum may apply. This award is given during the fall and winter semesters of the academic year. Recipients are selected on the bases of financial need, scholastic achievement (a minimum 2.7 g.p.a. is required) and qualities of leadership. Recipients may retain this award each year for four years provided they meet the criteria. This scholarship must be used for tuition and other educational expenses.

**Dayton-Hudson Scholarship Endowment Fund:** Awards of various amounts, depending on funds available, open to students who maintain a minimum g.p.a. of 2.5.

**Detroit High School Students Endowed Scholarship Fund:** Awards of varying amounts, depending on funds available, for Detroit high school students who plan to attend Wayne State University on a Full- or part-time basis. Recipients are selected on the bases of scholastic potential, qualities of leadership, and financial need. Recognition is given to recipients at an annual scholarship event held to benefit the Detroit High School Students Endowment. By signing the Wayne State University Private Scholarships Application, recipients authorize the University to communicate their names and scholastic standing to the Wayne State Organization of Black Alumni.

**Eben L. Dunn Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a.

**Herman and Perry Feigenson Scholarship:** Amount depends on funds available; open to full-time undergraduate student majoring in Liberal Arts, maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Alice and Henry Feldman Scholarship:** Amount depends on funds available (minimum award \$150); open to full-time undergraduate student maintaining a minimum 3.0 g.p.a.

**Dorothy L. Fisher General Endowed Scholarship:** Tuition award for a minimum of twelve credits per semester for two semesters, open to full-time undergraduate students. Students accepted for full-time undergraduate study at Wayne State may apply. Recipients are selected on the basis of financial need, with preference given to students who attended the Dorothy L. Fisher Middle School. Documentation of attendance at the school (academic transcript) must be attached to the Wayne State University Private Scholarships Application. Recipients must have a minimum cumulative 2.5 g.p.a. at the time of selection. This award is renewable for four years provided

recipients maintain full-time enrollment, a minimum 2.75 g.p.a. at the end of each academic year, and satisfactory progress toward their degree.

**Ford EEOC Scholarship:** Amount depends on funds available; open to any minority or female student who is either a Ford Motor Company employee, or a spouse or child of a Ford Motor Company employee; certification of Ford employment required.

**Douglas and Winifred Fraser Chrysler Workers Scholarship:** Full tuition award open to any full-time student whose parent, legal guardian or spouse has worked for Chrysler Corporation within the past year and has belonged to the United Auto Workers (UAW) for at least five years. Student must submit letter of certification from the union local, and have maintained a minimum 3.0 g.p.a. Application deadline is August 1.

**Berry and Bertha Gordy Endowed Scholarship:** Tuition award up to \$2000 per year, open to any Project 350 sophomore or junior student attending Wayne State full time, maintaining a minimum 3.0 g.p.a. and demonstrating financial need. A written statement is required from the student on his/her Project 350 experience. Application deadline is July 31; contact: Office of Special Student Services Programs, 1 East, Helen Newberry Joy Student Services Center; 577-5050.

**Gerald and Glenda Greenwall Endowed General Scholarship Fund:** Awards full tuition to one undergraduate student. Applications are accepted from Wayne State University students enrolled full-time or part-time, or from students accepted for study at Wayne State. The recipient is selected on the bases of scholastic achievement and financial need. This scholarship is renewable for four years provided the recipient maintains a minimum 2.5 g.p.a. and demonstrated continued financial need.

**Alan Jay Guttenberg Memorial Scholarship:** Amount depends on funds available; open to full-time freshman student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Wilhelmina Harrison Memorial Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Helen Eugenia Hart General Scholarship Fund:** Awards of varying amounts, dependent on funds available; limited to undergraduate students. Applications are accepted from Wayne State students enrolled full- or part-time or from students accepted for study at Wayne State. Recipients are selected on the bases of scholastic achievement, qualities of leadership, and financial need. This award is renewable, provided recipients have a 3.0 g.p.a. at the end of each consecutive academic year.

**Mildred James Hulme Memorial Endowed Scholarship Fund:** Awards of varying amounts, dependent on funds available, that are limited to students enrolled full-time at Wayne State, or who are accepted for full-time enrollment at Wayne State. Recipients are selected on the bases of scholastic achievement, desirable qualities of character and leadership, and financial need.

**Margaret Humbarger Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Dauris G. Jackson Endowed Scholarship Fund:** Awards of various amounts, depending on funds available, that are limited to undergraduate students enrolled full- or part-time at Wayne State, have completed at least one full semester at WSU, and reside in the city of Detroit. Students must submit two references attesting to their qualities of character and leadership. Recipients are selected on the bases of academic potential, desirable qualities of character and leadership, and financial need.

**Mildred Jeffrey Endowed Scholarship Fund:** Awards of varying amounts, dependent on funds available, that are limited to undergraduate students. Students accepted for study at Wayne State may apply. Recipient selection is based on scholastic achievement or

promise, desirable qualities of character and leadership, and financial need.

**Howard and Mary Kehrl Endowed Scholarship Fund:** An award of full tuition (recipients are responsible for fees, laboratory expenses, room, board, and other education-related expenses) that is limited to undergraduate students enrolled full-time who have the intention of majoring in science or engineering. Recipients must be residents of Michigan and have a minimum 3.0 g.p.a. Recipients are selected on the bases of scholastic achievement and financial need. This scholarship is awarded for four consecutive years. A fifth-year award is an option decided by the Office of Scholarships and Financial Aid. Recipients must continue to meet the stated criteria each year.

**Michael P. LaGatella Memorial Scholarship:** An award of \$1,000 is given to promote a positive gay/lesbian identity, to encourage continued academic progress, and to assist in financing higher education for gay/lesbian or other supportive individuals attending Wayne State University. An Interview with the Michael P. LaGatella Scholarship Committee may be required. Financial need and grade point average are considered in making the award. Application for Federal Student Aid (FAFSA). Please contact the Michael P. LaGatella Memorial Scholarship Committee, 701 W. Bethune, Detroit, MI 48202, for further information.

**Ernie and Mary Lofton Endowed Scholarship Fund:** Awards of tuition, fees, and books; limited to undergraduate students enrolled in a degree program full-time. At least one scholarship per academic year is available. The award recipient must meet the following criteria: (a) He or she must have been represented by the UAW for at least five years, and those years must not have ended more than one year prior to his or her commencement of full-time studies; and (b) he or she must be retired pursuant to the terms of any UAW-negotiated retirement plan or program, or (c) he or she must be a spouse or a surviving spouse of an employee or a retiree described under (a) or (b) above; or (d) he or she must be a dependent or child of an employee or a retiree described under (a) or (b) above.

If more than one student is eligible for this award in an academic year, more than one scholarship recipient may be selected on the *additional* basis of financial need or demonstrated scholastic ability or another criterion that is consistent with the purpose of providing UAW-represented employees the best possible opportunity for higher education.

**Alvin Macauley Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**David Mackenzie Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Hans A. Matthias Scholarship:** Award of \$500, open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**McGregor-Perring Scholarship:** Award of \$1000, open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Metro Detroit Rehabilitation Association—Fred Howes Scholarship:** Amount depends on funds available; open to students with a disability, or enrolled in a field of study related to disabilities; student must maintain a minimum 3.0 g.p.a.

**MichCon—Leon Atchison Scholarship:** Amount depends on funds available; open to any minority undergraduate student majoring in accounting, chemical engineering, mechanical engineering, or computer science, from the MichCon service area. Student must maintain a minimum 2.5 g.p.a., be a United States citizen, and demonstrate financial need.

**Louise Tuller Miller Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Theodora Morales Scholarship:** Amount depends on funds available; open to full-time undergraduate student of Hispanic descent maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Pontiac Central High School Scholarship:** Amount depends on funds available; open to any full-time student who is a graduate of Pontiac Central High School; contact Pontiac Central High School for details.

**William Rettenmeier Scholarship—Sheetmetal Workers Local 80:** Outside agency scholarship affiliated with Wayne State University; contact: Sheetmetal Workers Local 80, 17255 W. Ten Mile Road., Southfield, MI 48075. Amount depends on funds available; open to any full-time student who is a Local 80 member; preference given to those pursuing engineering studies.

**Edmund Ruffin Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Schlumberger Foundation Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Anna Schumaker Memorial Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Henry M. Seldon Memorial Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Mabel Muriel Smith Scholarship:** Amount depends on funds available; open to freshman student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**The 'Boys' of Lieutenant Al Staub Chapter No. 751 AZA Annual Scholarship Fund:** Award of financial assistance for four years when 3.0 minimum g.p.a. is maintained. Awarded to Detroit Central High School senior graduate enrolled full time at Wayne State who demonstrates leadership potential and scholastic achievement.

**Elliott Dov Strom Endowed Memorial Scholarship:** Awards of varying amounts (typically at least one award of \$700 per academic year), depending on funds available. Open only to students enrolled full-time who are majoring in the sciences at Wayne State University. Recipients are selected on the basis of financial need. Once selected, students will receive the award every year until they graduate.

**Homer D. Strong Scholarship:** Award of varying amounts, depending on funds available; open only to full-time students of Wayne State. Students accepted for study at Wayne State may apply. Recipients are selected on the bases of scholastic achievement, qualities of leadership, and financial need.

**Joseph Tamosiunas Scholarship:** Amount depends on funds available; open to any full- or part-time student of Lithuanian descent; final selection made by the Lithuanian Committee.

**Margaret Teal Award:** Amount depends on funds available; open to any full-time student majoring in science and maintaining a minimum 3.0 g.p.a.

**Edna Smiley Tudor Scholarship:** Amount depends on funds available; open to female students age 35 or over returning to complete their education, and who have a 3.0 g.p.a. Selection based on achievement and financial need.

**Mae M. Watterson General Scholarship:** Award of varying amounts, depending on funds available, limited to students enrolled full- or part-time. Recipients are selected on the bases of qualities of leadership and financial need. This scholarship must be used for tuition. Provided they meet the stated criteria, recipients may re-apply for this award each year.

**Wayne State Fund Scholarship:** Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

**Millicent Agatha Wills Scholarship:** Award of \$500 open to any full-time freshman minority student who is a graduate of a Detroit Public High School, maintaining a 3.0 g.p.a. and demonstrating financial need.

**Women of Wayne Alumni Loan Fund:** Makes loans available to qualified female students at Wayne State. Contact the Women's Resource Center for further information.

**Women of Wayne Incentive Scholarship Program for Part-Time Students:** Amount depends on funds available; open to any part-time female student maintaining a minimum 3.0 g.p.a. and demonstrating financial need. Contact: Women's Resource Center, 575 Student Center; 577-4103.

**Samuel H. Zelby Memorial Scholarship:** Award of one semester full tuition; open to full-time undergraduate student maintaining a minimum 3.0 g.p.a. and demonstrating financial need

## Scholarships and Awards Available through the Division of Student Development and Campus Life

ATHLETICS, INTRAMURALS, and RECREATION

Athletic Office, Matthaei Physical Education Center, 5101 John Lodge Service Drive; 577-4250

**Bob Brennan Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Dr. Nick Cherup Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Crosky Family Endowed All Sport Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in any varsity sport offered; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Mel DeGrazia Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Joe Gembis Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Pat Kent Endowed Softball Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of softball; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Rodney Kropf Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Joel Mason Endowed Men's Basketball Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of men's basketball; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**David Mendelson Endowed Golf Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of golf; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Chuck Peters Endowed Men's Basketball Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of men's basketball; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Dr. Steve Plomaritis Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**President's Endowed All Sport Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in any varsity sport offered; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**George B. Sherman Endowed All Sport Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in any varsity sport offered; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Jean Ann Stanicek Endowed Women's Tennis Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of women's tennis; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**David & Lois Stulberg Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

**Tartar Gridiron Club Endowed Football Scholarship:** Amount depends on funds available; open to any full-time student who meets all National Collegiate Athletic Association (NCAA) and Wayne State athletic financial aid and academic requirements; recipient must also

demonstrate exceptional abilities in the sport of football; candidates recommended by Department of Athletics, Intramurals, and Recreation.

#### EDUCATIONAL ACCESSIBILITY SERVICES

583 Student Center; 577-1851

**Vera Brown Endowment Fund:** Amount depends on funds available; open to any blind student demonstrating financial need in pursuit of his/her educational goals.

**Robert O. Cork Scholarship:** Amount depends on funds available; open to any full-time handicapped student with minimum 3.0 g.p.a. demonstrating financial need. Application deadline is April 30.

**Roger Alan Rogan Memorial Fund:** Amount depends on funds available; open to full-time disabled students experiencing emergency or other unusual circumstances.

# DEGREE REQUIREMENTS

**DEGREE REQUIREMENTS:** To earn a bachelor's degree at Wayne State University, a student must satisfy the following *minimum* requirements, as well as any other requirements for specific degrees stipulated by the Schools/Colleges, Departments, and Programs of the University:

1. Complete a minimum of 120 credits with a cumulative grade point average of 2.00 or higher for all Wayne State University course work.
2. Complete the University General Education Requirements as specified below.
3. Complete all School/College, Departmental and Program requirements.
4. Complete a minimum of thirty credits at Wayne State University.
5. *Credit Limitations:*

a) Credit by special examination may not be counted as resident credit, but such credit, if earned during a semester in which the student is registered for a regular course(s), will not be considered an interruption of residence.

b) Not more than thirty-two credits earned through one or more of the following programs will apply towards graduation: credit earned by the College-Level Examination Program, Advanced Placement, International Baccalaureate, Credit by Special Examination, or other credit earned for a course in which the student has not been regularly enrolled in a University course.

c) Not more than sixteen credits by Special Examination may be earned in any one subject.

d) Not more than sixty-four credits transferred from a two-year institution may be applied toward graduation.

**SECOND BACHELOR'S DEGREE:** A student who holds a bachelor's degree from any accredited institution may receive a second bachelor's degree from Wayne State University by satisfying the following minimum requirements:

1. Complete at least thirty credits at Wayne State University beyond the first bachelor's degree.
2. Meet all School/College, Department, and Program requirements for the degree.

**CONCURRENT DEGREES:** A student who wishes to simultaneously receive two different bachelor's degrees from Wayne State University must satisfy the following minimum requirements:

1. Complete a minimum of 150 credits.
2. Complete all University, School/College, Department, and Program requirements for each degree.

**GRADUATION APPLICATION:** Degrees are NOT awarded automatically upon completion of scholastic requirements. To be considered as a candidate for a degree, students must file an *Application for Degree* form with Student Records by the first day of classes for the term in which the students expect to graduate.

**SCHOOL/COLLEGE REQUIREMENTS:** Schools/Colleges, Departments, and Programs may establish degree requirements above and beyond those stated here. For statements of any such specific degree requirements, students should consult the School/College and Departmental sections of this bulletin.

## UNIVERSITY REQUIREMENTS IN GENERAL EDUCATION

*Major, minor, cognate and elective credit requirements for University degrees are specified by the individual Schools and Colleges of Wayne State University. Students should consult the respective School and College sections of this bulletin for these requirements. ALL undergraduate degree programs include satisfaction of the University General Education Requirements, which are outlined below.*

University-wide General Education Requirements apply to all undergraduate students seeking baccalaureate degrees from Wayne State University — irrespective of the College or School in which they may be enrolled. Since the various Colleges and Schools may impose additional College or School requirements and/or specify particular courses which their students must elect in fulfilling the University-wide Requirements, it is essential that all students seek advice from the Wayne State University Undergraduate Bulletin, the University Advising Center and their respective College/School Advising Office before electing courses to satisfy these General Education Requirements. It is the responsibility of the student to satisfy all University, College and program requirements.

The University-wide Program in General Education seeks to enhance facility in those basic skills which are fundamental to success in college while simultaneously providing the intellectual breadth necessary to place specialized and professional curricula in proper perspective. The primacy of basic skills is established by requiring all undergraduate students to demonstrate competence in written communication, mathematics, oral communication, computer literacy, and critical thinking. The significance of intellectual breadth is underscored by requiring all students to elect and successfully complete two courses (minimum of six credits) in the natural sciences, one course (minimum of three credits) in historical studies, two courses (minimum of six credits) in the social sciences, one course (minimum of three credits) in foreign culture, two courses (minimum of six credits) in the humanities, and one course (one credit) which provides an introduction to the University and its libraries (UGE 1000: Information Power). (Courses elected to satisfy these requirements must be made from approved lists: see below.) By means of this Program, undergraduate students will improve their basic skills and be introduced to methods of inquiry, modes of thought, bodies of knowledge, and representative ideas drawn from a wide range of academic disciplines.

Provided below is a full description of the University-wide Program in General Education. All undergraduate students must meet the specified requirements in accordance with the following Implementation Schedule, and should consult an academic adviser to assist in planning an appropriate program.

**General Education Implementation Schedule:** Effective Fall Term 1987, Wayne State University required undergraduate students to fulfill the University-wide General Education Requirements. The Requirements have been implemented in accordance with the following schedule:

*Fall Term 1987:* The General Education Requirements apply to all entering freshmen and to students who transfer twelve or fewer credits.

*Fall Term 1990:* The General Education Requirements apply to the group of students cited above and to transfer students who began college work in Fall 1988 or thereafter.

*Fall Term 1991:* The General Education Requirements apply to all undergraduate students.

Transfer students who are not covered by the above schedule and who entered Wayne State University between Fall Term 1987 and Spring/Summer Term 1991 must fulfill the University Proficiency Requirements in English and Mathematics and the University Requirement in American Government, outlines of which may be found below.

Students who have matriculated at Wayne State University prior to Fall Term 1987 must fulfill all University and School/College requirements in force at the time of entry. These include the University Requirement in American Government and the University Proficiency Requirements in English and Mathematics, outlines of which may be found below.

Students who hold a bachelor's degree from an accredited institution and who seek a second bachelor's degree are exempt from the University-wide General Education Requirements, but must satisfy all school/college, department and program requirements.

**General Education Course Prefixes:** Parenthetical two-letter prefixes denote content areas of subjects and identify courses approved for satisfying competency requirements and group requirements in the University's General Education Program. The following prefixes, listed and defined in alphabetical order, precede *course titles* in the Courses of Instruction sections and curricular information in this bulletin, and in each semester's *Schedule of Classes*.

**AI**—American Society and Institutions  
**BC**—Basic Composition Competency  
**CL**—Computer Literacy Competency  
**CT**—Critical Thinking Competency  
**EP**—English Proficiency Requirement  
**FC**—Foreign Culture  
**GE**—General Education  
**HS**—Historical Studies

**IC**—Intermediate Composition Competency  
**LS**—Life Sciences  
**MC**—Mathematics Competency  
**OC**—Oral Communication Competency  
**PL**—Philosophy and Letters  
**PS**—Physical Sciences  
**SS**—Social Sciences  
**VP**—Visual and Performing Arts  
**WI**—Writing Intensive Competency

### Competency Requirements

Competence in fundamental skills which underlie and make possible the acquisition of knowledge is required of all who would succeed in college and function as educated citizens. Without command of these skills (writing, mathematics, speaking, computing, and analysis), basic courses prove difficult and advanced work becomes an insurmountable obstacle. Since it is the skills which are preconditions for success in higher education, competence, not simply a record of successfully completed course work, is expected. Therefore, multiple methods are provided for demonstrating competence and satisfying these requirements: (1) satisfactory performance on placement, proficiency, screening, or competency examinations; OR (2) in some cases, satisfactory completion of specified high school courses; OR (3) satisfactory completion of designated University courses or their equivalents. Information regarding placement, proficiency, screening or competency examinations may be obtained from the Testing Office of the University Counseling Services (698 Student Center).

Competency requirements should be met early in a baccalaureate degree program. WITH THE EXCEPTION OF THE 'WRITING-INTENSIVE MAJOR COURSE REQUIREMENT,' ALL COMPETENCY REQUIREMENTS SHOULD BE SATISFIED BY THE TIME SIXTY CREDITS OF COLLEGE WORK HAVE BEEN COMPLETED. Students who fail to meet this deadline will be allowed two additional semesters (or equivalent) in which to satisfy their remaining competency requirements. During these two semesters, they must be actively involved in taking appropriate courses or otherwise preparing themselves to demonstrate competence in these fundamental skills. After completing ninety credits, students who have not satisfied these requirements will be barred from enrolling in courses other than those which satisfy competency requirements until all such requirements have been completed.

The following general principles apply to all competency requirements:

1. Students who satisfy any competency requirement by passing a Wayne State University placement, qualifying, screening, competency or proficiency examination shall be excused from equivalent course work but shall receive NO course credit.

2. Course credit granted for satisfactory completion of an Advanced Placement, CLEP, or Departmental Examination will satisfy the appropriate competency or group requirement; credit so earned will be applicable to a baccalaureate degree.

3. Remedial courses (i.e., those numbered below 1000) required because of failure to demonstrate competence will yield NO credit toward a degree.

**WRITTEN COMMUNICATION (BC, IC, EP, WI):** Writing ability is fundamental to success in almost all human activity. It is a cornerstone of academic studies and is often considered the touchstone of a university education. Skill and effectiveness in writing serve the individual throughout life—in career, in community, and in social and avocational activities.

But the ability to write well must be developed so that specialized audiences within professional fields as well as general audiences can be addressed effectively. While writing proficiency may be honed and refined in composition courses, writing is a skill that serves many purposes, one that requires constant renewal. Consequently, the concept of 'writing across the curriculum' as a way of making the skill a habit is strongly recommended, and the requirement in Written Communication is structured not only to provide training in how to write well, but also to insure that writing skills continue to be exercised and enhanced throughout the undergraduate years. This requirement contains the following four components:

**Basic Composition (BC):** All students must demonstrate competence in basic composition by:

- a) Earning an appropriate score on the University's English Qualifying Examination; OR
- b) Earning credit for basic composition through Advanced Placement or CLEP tests; OR
- c) Completing successfully an approved course in basic composition: ENG 1020, 1050; GIS 1510; OR
- d) Transferring credit received for successful completion of a comparable course taken at another college or university.

**Intermediate Composition (IC):** All students must successfully complete an approved intermediate or advanced course in which the teaching of English composition and rhetoric is a major component, or transfer credit received for successful completion of a comparable course taken at another college or university.

The purpose of this requirement is threefold: a) to emphasize the relationship between analytical reading and the acquisition of writing skills—especially the ability to organize and sustain extensive writing assignments; b) to acquaint students with works of imaginative, expository, argumentative, and/or analytical writing in the English language; and c) to develop an understanding of the nature and function of language. Courses currently approved for intermediate composition are: AFS 2390; AGS 4991; ENG 2050, 2100, 2110, 2120, 2210, 2310, 2390, 2570, 3010, 3030, 3050; GIS 3510; GUH 2010; HUM 2000.

**English Proficiency Requirement (EP):** PRIOR TO COMPLETING SIXTY CREDITS, ALL STUDENTS MUST DEMONSTRATE COMPETENCE IN WRITTEN COMPOSITION BY PASSING THE ENGLISH PROFICIENCY EXAMINATION. (Students who fail this examination should prepare to repeat it by taking advantage of directed self study opportunities and/or tutorial assistance provided by the English Composition Clinic. Students who fail the English Proficiency Examination a second time must elect and satisfactorily complete ENG 1080, (EP) Writing Workshop.

**Writing-Intensive Course in Major (WI):** All students must demonstrate an ability to communicate effectively with specialized or professional audiences by completing successfully the writing requirements (courses which incorporate major writing assignments) specified by the departments or professional schools in which they are seeking degrees. Students should consult their departmental adviser for the approved course(s) in their major.

**MATHEMATICS (MC):** All educated individuals should possess a basic mastery of mathematical skills in order to cope with academic subjects in which mathematical formulations form an integral part of the subject matter, deal with mathematical manipulations which might be required in their careers, manage their personal finances, and understand mathematical elements relevant to public issues.

Students enrolled prior to Fall Term 1990 may satisfy the mathematics proficiency requirement as outlined on page 33. Students who enroll Fall Term 1990 and thereafter may satisfy the mathematics proficiency requirement by one of the following means. PRIOR TO THE COMPLETION OF THIRTY CREDITS, ALL STUDENTS MUST DEMONSTRATE COMPETENCE IN MATHEMATICS BY:

- a) Passing the Mathematics Proficiency Examination. (Students who fail this examination should prepare to repeat it by taking advantage of directed self study opportunities and/or tutorial assistance. Students who fail the Mathematics Proficiency Examination a second time must elect and satisfactorily complete MAT 0991); OR
- b) Achieving an acceptable test score on the quantitative or mathematics section of one of the following tests: AP-CEEB, or CLEP; OR
- c) Transferring credit received for successful completion of a course which is equivalent to MAT 1800 OR MAT 2010 or higher, taken at another college or university.

**ORAL COMMUNICATION (OC):** Educated persons should be comfortable in situations which require them to make oral presentations, convince others of a point of view, or make appropriate remarks in an informal setting. Along with an inability to write cogently, difficulty in communicating orally is mentioned most frequently by employers and others who evaluate the preparedness of college students to compete in contemporary adult society. Consequently, oral communication is a crucial skill needed for success in virtually every field of endeavor. PRIOR TO COMPLETING SIXTY CREDITS, ALL STUDENTS MUST DEMONSTRATE COMPETENCE IN ORAL COMMUNICATION BY:

- a) Completing successfully suitable high school courses, or their equivalent, in oral communication; OR
- b) Passing the Oral Communication Competency Examination; OR
- c) Completing successfully an approved course in oral communication: ENG 3060; GIS 1560; SPB 1010; OR
- d) Transferring credit received for successful completion of a comparable course taken at another college or university.

**COMPUTER LITERACY (CL):** Since the application of computer technology to virtually all academic disciplines and their corresponding array of occupations is clearly a central fact of contemporary life, the need for students to become computer-literate is essential. In the modern world, it is vital that students possess some elementary knowledge of computer functions: they should be able to initiate a file and operate word-processing software, understand how to gain access to the University's main computer system, and command the basic skills needed to perform simple on-line data retrieval and manipulative operations. PRIOR TO COMPLETING SIXTY CREDITS, ALL STUDENTS MUST DEMONSTRATE COMPUTER LITERACY BY:

- a) Completing successfully a suitable high school course in computing; OR
- b) Passing the Advanced Placement (AP) Examination in Computer Science; OR
- c) Passing the Computer Literacy Competency Examination; OR
- d) Completing successfully an approved computer application course such as: B E 1010; CSC 1000, 1050, 1100, 1140, 1500, 2110, or any higher-level CSC course; GST 2710; ISM 2630; MED 5590; MUA 5610; NUR 1110; SPJ 2020, 3210; OR
- e) Transferring credit received for successful completion of a comparable course taken at another college or university.

**CRITICAL THINKING (CT):** The ability to reason critically is essential to the acquisition of knowledge in any discipline and may there-

fore appropriately be regarded as a fundamental skill, one to be acquired by students as early as possible in their education. Critical thinking includes: formulating and identifying deductively- and inductively-warranted conclusions from available evidence; recognizing the structure of arguments (premises, conclusions, and implicit assumptions); assessing the consistency, inconsistency, logical implications, and equivalence among statements; and recognizing explanatory relations among statements. ALL STUDENTS MUST DEMONSTRATE COMPETENCE IN CRITICAL THINKING PRIOR TO THE COMPLETION OF SIXTY CREDITS BY:

- a) Passing the Critical Thinking Competency Examination; OR
  - b) Completing successfully an approved course in critical thinking: B A 1010; GIS 3260; PHI 1050; SPC 2110;
- OR
- c) Transferring credit received for successful completion of a comparable course taken at another college or university.

## Group Requirements

As knowledge proliferates and the interrelatedness of separate disciplines becomes increasingly evident, the traditional goal of mastering discrete or representative bodies of common, canonic material has become obsolete; even the aim of becoming familiar with all areas of knowledge has become an impossible objective. A commitment to intellectual diversity, though, must remain a central goal of any coherent undergraduate experience, and all college students must be exposed to a broad range of basic disciplines. Thus, courses specifically designed to insure that students are adequately exposed to representative branches of knowledge are fundamental to any set of general education requirements, and course work in areas outside specialized fields is required of all undergraduates at Wayne State University. These courses provide the conceptual framework within which major and professional curricula are placed in proper perspective and supply an appropriate foundation upon which continuing self-education can take place.

In addition to providing breadth of knowledge, however, the general education Group Requirements aim to foster awareness and appreciation of how scholars and scientists in various disciplines acquire knowledge — particularly, how recently-developed epistemological and methodological approaches are applied. Thus, the purpose of the Group Requirements is two-fold: to acquire a broad range of knowledge, and to develop methodological skills which encourage continued exploration on an independent level.

To satisfy the Group Requirements, students will be introduced to materials drawn from the natural sciences, the social sciences, historical studies, foreign culture, and the humanities. Courses which fulfill the Group Requirements carry a minimum of three credits and constitute broad introductions to individual academic disciplines. Such courses are designed for non-majors; however, some courses designed specifically for majors, or for those with substantial prior preparation, may also be acceptable. The following principles apply to the general education Group Requirements:

1. Courses which satisfy the Group Requirements must be elected from lists of approved courses.
2. Students who place out of a course or courses which satisfy one or more of the Group Requirements will be considered to have fulfilled those portions of the Group Requirements represented by such courses.
3. **For the purpose of satisfying these Group Requirements, students may elect no more than one course from a single subject area as defined by the University system of subject area codes. (Subject area codes are the letter designations which precede course numbers.) For example, a student who takes a HIS (History) course to fulfill a group requirement cannot take a HIS course to fulfill any other group requirement.**
4. Where specified, a Group Requirement may be satisfied by approved course sequences.

**NATURAL SCIENCE (PS, LS):** The evolution of science in the last four centuries has profoundly influenced the development of thought throughout the world. The natural sciences, both directly and through their applications in technology, present society with problems as well as opportunities. By transforming cultural values and beliefs, the sciences have altered behavior and created new pathways to the future. Thus, university graduates should understand the nature and applications of scientific knowledge, the processes by means of which it is generated and tested, and its limitations and capabilities. They should be familiar with phenomena of the natural world and comprehend how theoretical explanations are provisionally accepted by the scientific community.

To meet the natural science requirement objectives, all undergraduate students at Wayne State are required to complete successfully at least one course in the physical sciences and one course in the life sciences as defined below (a minimum of three credits each). A laboratory or interactive demonstration/simulation experience (a minimum of one credit) must be associated with one of these courses. (Courses listed below with an asterisk (\*) may also satisfy the Natural Science Laboratory Requirement.)

**Physical Sciences (PS):** Students must elect one course from the fields of astronomy, chemistry, geology, or physics, or combinations of no more than two of these areas. The following approved options are designed to explain physical laws and their effects on the natural world; emphasis is placed on mathematical predictability and the nature of scientific inquiry.

### PHYSICAL SCIENCE OPTIONS:

AST 2010\*; CHM 1000\*, 1020\*, 1220\*, 1225\*, 1410\*; GEL 1010\*; GST 2420\*; HON 4230; PHY 1020\*, 1040, 1070, 2130\*, 2170\*, 2175, 3100\*.

**Life Sciences (LS):** Students must elect one course from the fields of biology, behavioral psychology, physical anthropology, or combinations of no more than two of these areas. The following approved options are designed to explain the mechanisms which govern the behavior and functioning of living organisms; emphasis is placed on factors which control these mechanisms and the nature of scientific inquiry.

### LIFE SCIENCE OPTIONS:

ANT 2110; BIO 1030, 1050\*, 1510\*, 2200; GST 2310; HON 4220; NFS 2030; PSY 1010\*, 1020.

**HISTORICAL STUDIES (HS):** Historical studies provide insight into the development of human institutions, their similarities and differences, and the means by which knowledge about the past is acquired. Such studies reveal how contemporary perspectives evolve from past events and enhance our understanding of the present.

To meet the historical studies requirement objectives, all undergraduate students at Wayne State are required to complete successfully at least one course (a minimum of three credits) in historical studies. The following approved options do not offer a comprehensive overview of history; rather, they are designed to introduce significant historical periods or themes in which comparative perspectives are emphasized and the purposes and methods of historical studies explained.

### HISTORICAL STUDIES OPTIONS:

ANT 3200; GIS 3160; GUH 3810; HIS 1100, 1200, 1300, 1400, 1600, 1610, 1800, 1810, 1995; HON 4250; N E 2030, 2040.

**SOCIAL SCIENCE (AI, SS):** Studying the social sciences assures that students are introduced to several bodies of knowledge which shed light on contemporary social problems and are exposed to theories and methods appropriate to social science investigation (research). The findings of social scientists address such relevant issues as race relations, family structure, the organization of social institutions, politics, economic policy, and international relations. All

courses which satisfy the requirements in social science must introduce the methodology of modern, empirical social science.

To meet the social science requirement objectives, all undergraduate students at Wayne State are required to complete successfully at least one course in American society and institutions, and one course in basic social science as defined below (a minimum of three credits each).

**American Society and Institutions (AI):** Students must elect one course in this area. The following approved options are designed to promote civic literacy by studying American society from the perspective of pluralism; emphasis is placed on the organization of political bodies and the manner in which they function.

*AMERICAN SOCIETY AND INSTITUTIONS OPTIONS:*

AGS 3420; GSS 1510; HIS 1050; HON 4270; P S 1010, 1030.

**Social Science (SS):** Students must elect one course in basic social science. The following approved options provide an overview of social structures and illustrate the role of human beings in different institutional arrangements; emphasis is placed on the approaches and methods of modern social science: the significance of theories, models, data collection, analysis, and inference.

*SOCIAL SCIENCE OPTIONS:*

AFS 2210; AGS 3480; ANT 2100; ECO 1000, 2010, 2020; GPH 1100, 2000, 3130, 3200; GSS 2710; HIS 2000; HON 4210; P S 1000, 2000, 2240; SOC 2000, 2020, 2500, 3300, 3510, 4100; U S 2000; W S 3010.

**FOREIGN CULTURE (FC):** A significant measure of a college education is the degree to which individual cultural assumptions can be placed in the context of a wider and more diversified world view. Such understanding leads to greater appreciation for the life style and artifacts of different peoples and a tolerance for opinions originating from disparate traditions by helping minimize narrow certainties and dispel provincial attitudes.

To meet these objectives, all undergraduate students at Wayne State are required to complete successfully at least one course (a minimum of three credits) in foreign culture elected from the following list of approved options:

*FOREIGN CULTURE OPTIONS:*

AFS 3250, 3610; ANT 3150, 3520, 3540, 3550; ARM 3410, 4750; CBS 2410, 2420; DNC 2400; FRE 2710, 2720; GER 2710, 2720, 3410; GIS 3600, 3610, 3620; GRK 3710; HIS 2440; HON 4260; ITA 2710, 2720; JPN 4550, 4560; N E 2000, 3550; NUR 4800; POL 2710, 3410; RUS 3410, 3510; SLA 3410; UKR 3410; or completion of any foreign language sequence through 2010 or 2110.

**HUMANITIES (VP, PL):** Meaningful exposure to the humanistic disciplines produces more well-rounded and humane citizens, individuals capable of broadening their view of human experience. It also provides an indispensable creative perspective on the teachings of other disciplines. The general education Group Requirements in the humanities afford students an opportunity to examine a range of humanistic statements and to consider some of the ways in which they are meaningful. Analyzing works drawn from across the humanities (arts, philosophy, and letters), considering the varied contexts to which they belong and within which they are properly understood, and evaluating a range of interpretations, leads to an appreciation of how imagination and intellect, working in tandem, provide insight into the nature of human experience.

To meet the humanities requirement objectives, all undergraduate students at Wayne State are required to complete successfully at least one course in the visual and performing arts, and one course in philosophy and letters as defined below (a minimum of three credits each).

\* May also satisfy Natural Science Laboratory Requirement when elected for appropriate credits and/or with appropriate laboratory.

**Visual and Performing Arts (VP):** Students must complete one course in the appreciation or history of art, music, film, dance, theatre, or appropriate combinations of these media. The following approved options are designed to enhance understanding and pleasure; emphasis is placed on developing the fundamental skills of analysis, interpretation, and evaluation and applying them to primary materials in the visual and performing arts. (Studio and applied courses will not satisfy this requirement.)

*VISUAL AND PERFORMING ARTS OPTIONS:*

A H 1000, 1020, 1110, 1120; ARM 3710; DNC 2000, 2310; ENG 2450, 2460; FLM 2010, 2020; GUH 2730, 3730; HON 4240; HUM 1010, 1020, 1030; MUH 1340, 1350, 1370; POL 3710; RUS 3710; SLA 3710; SPF 2010, 2020; THR 1010, 1030; UKR 3710.

**Philosophy and Letters (PL):** Students must complete one course in philosophy, literature, linguistics, the history of rhetoric, or appropriate combinations of these subjects. The following approved options are designed to enhance understanding and pleasure; emphasis is placed on developing the fundamental skills of analysis, interpretation, and evaluation, and applying them to primary philosophical and literary materials.

*PHILOSOPHY AND LETTERS OPTIONS:*

CLA 1010, 2100, 2200; ENG 2200, 2500, 2720, 3110, 3120, 3140; FRE 2700; GER 2310, 2700, 2991; GUH 2710, 3710; HON 2100, 4200; HUM 2100, 2200, 2220; ITA 2700; LIN 2720; PHI 1010, 1020, 1030, 1040, 1100, 2100, 2110, 2320, 3500, 3550, 3700; P S 3510, 3520; RUS 2700, 3600, 3650; SLA 2310; SPA 2700; SPC 2160.

**INFORMATION POWER: THE UNIVERSITY AND ITS LIBRARIES:**

Newly-matriculated undergraduate students can profit from an introduction to the history and development of the modern university, the function of the university as a social institution, the roles of the faculty, the relationship between research and teaching, and the impact of different methods of inquiry on the growth and evolution of ideas. All students should be familiar with those service units of the University which may enhance educational development and career selection.

To meet these objectives, all freshmen and students who transfer twelve or fewer hours to Wayne State University are required to complete satisfactorily UGE 1000, Information Power, a one-credit course consisting of lectures and applied skills modules designed to introduce modern universities and their research libraries, especially those of Wayne State University. Students will become oriented to the information available in the Wayne State Library System and both the traditional and automated methods of accessing this material. The goal of this experience is to enrich the lives of students while at the University and afterwards, and to improve the ways in which the resources of the University are used. Students may place out of this requirement; otherwise, UGE 1000 should be completed during the student's first semester at Wayne State. THE REQUIREMENT MUST BE SATISFIED PRIOR TO COMPLETING THIRTY CREDITS IN RESIDENCE, BUT NO LATER THAN THE SECOND TERM AT WAYNE STATE UNIVERSITY.

## COURSE OF INSTRUCTION (UGE)

### 1000 (GE) Information Power. Cr. 1

Prereq: admission to Wayne State University. Offered for S and U grades only. Designed to empower students to achieve academic success and to develop lifelong learning skills for the information society. Develops student awareness of traditions, goals, and structure of universities and their research libraries, particularly those at Wayne State University. (F,W)



## University Requirements Prior to Fall Term 1987

*The following requirements apply to all undergraduate students who matriculated at Wayne State University prior to Fall Term 1987 and to all entering undergraduate students not covered in the General Education Implementation Schedule above:*

### University Requirements in American Government:

All undergraduate students must satisfactorily complete a course in the principles of American government as a prerequisite to graduating from Wayne State. The courses and course sequences listed below and similar courses completed in other colleges and universities are applicable to this requirement. Credit for these courses may be applied toward fulfillment of a minor in the social sciences.

1. History 1030 (former 103)
2. History 2040 and 2050 (former 204 and 205)
3. History 5160 and 5170 (former 516 and 517)
4. Political Science 1010 (former 101)
5. Political Science 1030 (former 103)
6. former Political Science 201 and 202
7. General Social Science (College of Lifelong Learning). Any six of the following courses: GSS 2010, 2710, 2720, 2730; former GSS 202, 203, 231, 232, 233.

### University Proficiency Requirements in English and Mathematics:

ALL UNDERGRADUATE STUDENTS WHO HAVE REGISTERED FOR THE FIRST TIME AT WAYNE STATE UNIVERSITY SINCE FALL SEMESTER 1983 ARE REQUIRED TO DEMONSTRATE PROFICIENCY IN ENGLISH AND MATHEMATICS BY THE TIME THEY HAVE EARNED SIXTY SEMESTER CREDITS TOWARD A BACHELOR'S DEGREE. The following proficiencies establish minimal standards throughout the University, and students who meet these standards have satisfied the University-wide requirements. Individual colleges or schools, as part of their own requirements, may set higher standards as a prerequisite for admission to a major or as a prerequisite for enrollment in certain classes.

Undergraduate students who have completed sixty credits of college-level work are expected to demonstrate the following proficiencies:

**English Proficiency** — Students will be expected to: (1) use English as an effective means of written communication; (2) write with facility at the level of writing demanded by courses throughout the University; (3) support statements with specific details or relevant evidence; (4) present a recognizable point of view or aim; (5) adapt tone and style to the needs of the audience and to the demands of the occasion; (6) vary sentence structure, length, and style; (7) employ vocabulary appropriate to the subject matter; (8) exercise command over standard written English, especially in spelling, punctuation, inflections, mechanics, and diction.

*English proficiency* can be established in the following ways:

1. Pass the English Proficiency Examination.
2. Pass English 1080 (restricted to those who have failed the English Proficiency Examination).

**Mathematics Proficiency** — Students will be expected to: (1) perform, with reasonable accuracy, addition, subtraction, multiplication, and division, using fractions, decimals, and integers; (2) use ratios, percentages, proportions, roots, and powers; (3) apply the concepts of introductory algebra and informal geometry; (4) make estimates and approximations and judge the reasonableness of the results; (5) formulate and solve a problem in mathematical terms; (6) read and interpret graphs, charts, and tables; (7) apply elementary concepts of probability and statistics; (8) deal with different units of measurement.

*Mathematics proficiency* can be established in the following ways for students who enrolled at Wayne State from Fall Term 1983 through Spring/Summer Term 1990:

1. Completing successfully (with an overall grade of 'C') a four-year program of high school mathematics which includes at least one year of algebra and one year of plane geometry; OR
2. Achieving an acceptable test score on the quantitative or mathematics section of one of the following tests: ACT, SAT, AP-CEEB, or CLEP; OR
3. Achieving an acceptable score on the Placement (Screening) Examination for MAT 1500 or MAT 1800; OR
4. Passing the Mathematics Proficiency Examination. (Students who fail this examination should prepare to repeat it by taking advantage of directed self study opportunities and/or tutorial assistance. Students who fail the Mathematics Proficiency Examination for a second time must elect and satisfactorily complete MAT 0991); OR
5. Transferring credit received for successful completion of an algebra or trigonometry course, taken at another college or university, equivalent to the level of achievement attained in MAT 1500, MAT 1800, or MAT 2010.

Students who do not establish proficiency by the time they earn sixty credits toward a bachelor's degree will have up to two semesters (or equivalent), without penalty, in which to meet the requirements. During that period they must pass the English Proficiency Examination and/or the Mathematics Proficiency Examination; or, if they fail these, pass English 1080 and/or Mathematics 0991.

The University expects all undergraduate students to meet the English and mathematics proficiency requirements. There shall be strict enforcement of the requirements, and only in extraordinary circumstances will the requirements be waived.

**Examinations:** The English Proficiency Examination, the Mathematics Proficiency Examination, and the Mathematics Qualifying Examinations are administered by the Testing and Evaluation Office, University Counseling Services, at regularly scheduled intervals. Students should contact the Testing and Evaluation Office, University Counseling Services, for information on examination dates, times, and fees.

**Enrollment prior to Fall 1983:** For students who first registered at Wayne State University prior to Fall Semester 1983, the following College requirements apply in regard to English proficiency:

Students in the Colleges of Liberal Arts, Nursing, and Pharmacy and Allied Health Professions who have accumulated forty credits, and students in the School of Business Administration, must take the English Proficiency Examination. Students in the College of Engineering must take the examination at least two semesters before they plan to register for ENG 3050. Students should contact the Testing and Evaluation Office, University Counseling Services, for information on examination dates, times, and fees.

**Table Showing the Various Ways Competencies Requirements May Be Fulfilled  
(other than through WSU or equivalent transfer courses)**

In general, any of the competencies requirements may be fulfilled by obtaining appropriate course credit through Wayne State University Credit by Special Examination procedures (described in the Undergraduate Bulletin). Advanced Placement (AP) and College-Level Examination Program (CLEP) scores shown in these columns will fulfill the General Education Competencies Requirements, but will not necessarily qualify the student to receive college credit. For information about college credit earned through the AP or CLEP exams, refer to the full descriptions of these programs in the Undergraduate Bulletin. Information regarding registration for any of the exams cited below may be obtained from the Testing Office of the University Counseling Services (698 Student Center Building). (N.A. = Not Applicable)

<i>Competency</i>	<i>High School Courses</i>	<i>SAT or ACT score</i>	<i>AP score</i>	<i>CLEP Exam name: score</i>	<i>WSU Qualifying Exam</i>	<i>WSU Proficiency Exam</i>
<i>A. Written Communication</i>						
1. Basic Composition (BC)	N.A.	N.A.	3, 4, or 5	Eng. Comp: 500	Placement out of ENG 1020	N.A.
2. Intermediate Composition (IC)	N.A.	N.A.	4 or 5	N.A.	N.A.	N.A.
3. English Proficiency Exam (EP)	N.A.	N.A.	N.A.	N.A.	N.A.	Exam to be passed before completion of 60 credit hrs.
4. College/School/Dept. Required Writing Intensive Course (WI)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<i>B. Mathematics Proficiency (MC)</i>						
	N.A.	N.A.	2, 3, 4, or 5	Genl. Math: 490 Algebra/Trig: 50 Coll. Algebra: 50 Trigonometry: 50 Calculus with Elementary Functions: 50	N.A.	Exam to be passed before completion of 30 hours unless requirement previously fulfilled by other means
<i>C. Oral Communication (OC)</i>						
	2 semesters	N.A.	N.A.	N.A.	N.A.	Exam to be passed before 60 hours unless requirement previously fulfilled by other means
<i>D. Computer Literacy (CL)</i>						
	1 semester	N.A.	3, 4, or 5	Computers and Data Processing: 50	N.A.	Same as for Oral Communication, above
<i>E. Critical or Analytic Thinking (CT)</i>						
	N.A.	N.A.	N.A.	N.A.	N.A.	Exam to be passed before completion of 60 hours unless requirement previously fulfilled by other means

**Table Showing How General Education Group Requirements May Be Met  
through Advanced Placement or College-Level Examination Program Examinations**

In general, students will fulfill Group Requirements by successfully completing specially-designated Wayne State University courses or by transferring credit for equivalent courses taken at other collegiate institutions. However, Group Requirements may also be fulfilled by obtaining course credit for these courses through regular WSU Credit by Special Examination procedures or by obtaining course credit through Advanced Placement (AP) or College-Level Examination Program (CLEP) examinations as specified below. See the Undergraduate Bulletin for descriptions of these three examination programs. (Note also that course credit may be granted for AP and CLEP exams other than those indicated below, but such credit will not fulfill General Education Group Requirements.) The CLEP General Examinations, when passed with the indicated scores, grant the student credit for two courses, as follows:

Credit granted for Natural Science General Examination is 4 semester credits of physical science and 4 semester credits of biological science. Credit granted for Social Science and History General Examination is 4 semester credits of social science and 4 semester credits of history. Credit granted for Humanities General Examination is 3 semester credits of fine arts and 3 semester credits of literature.

<i>Group Requirement</i>	<i>Advanced Placement Program</i>			<i>College-Level Examination Program</i>		
	<i>AP Test</i>	<i>AP Score</i>	<i>Credits Awarded</i>	<i>CLEP Test</i> <i>S = Subject Exam</i> <i>G = General Exam</i>	<i>CLEP Score</i>	<i>Credits Awarded</i>
<i>Natural Science:</i>						
<i>Physical Science (PS)</i>	Chemistry	3, 4, or 5	5 - 8	General Chemistry (S)	50	4
	Physics (Basic)	3, 4, or 5	4 - 8	Natural Science (G)	490	8
	Physics (E & M)	4 or 5	4 - 8			
	Physics (Mechanics)	4 or 5	4 - 8			
<i>Life Science (LS)</i>	Biological Science	3, 4, or 5	4 - 8	General Biology (S)	50	3
	Psychology	3, 4, or 5	3	General Psychology (S)	50	3
				Natural Science (G)	490	4
<i>Historical Studies (HS)</i>						
<i>European History*</i>		4, or 5	4	Western Civ. I (S)	50	3
				Western Civ. II (S)	50	3
				Social Sci. & History (G)	490	4
<i>American Institutions (AI)</i>						
<i>American History*</i>		4, or 5	4	American Hist. I (S)	50	3
				American Hist. II (S)	50	3
	<i>American Government*</i>	3, 4, or 5	3 - 4	American Govt. (S)	50	3
<i>Basic Social Science (SS)</i>						
	Macroeconomics	3, 4, or 5	3 - 4	Intro. Sociology (S)	50	3
	Microeconomics	3, 4, or 5	3 - 4	Intro. Macroeconomics (S)	50	3
				Intro. Microeconomics (S)	50	3
				Social Sci. & History (G)	490	8
<i>Foreign Culture (FC)</i>						
	French Language	3, 4, or 5	4 - 8	Not applicable.		
	German Language	3, 4, or 5	4 - 7			
	Spanish Language	3, 4, or 5	4 - 8			
	Comparative Politics*	3, 4, or 5	4			
<i>Humanities:</i>						
<i>Visual and Performing Arts (VP)</i>	Art History	3, 4, or 5	4	Humanities (G)	490	3
	Music History	3, 4, or 5	2 - 3			
<i>Philosophy and Letters (PL)</i>	French Literature	3, 4, or 5	4 - 8	American Literature (S)	50	3
	German Literature	3, 4, or 5	4 - 7	Analysis and Interpretation of Literature (S)	50	3
	Spanish Literature	3, 4, or 5	4 - 8	English Literature (S)	50	3
				Humanities (G)	490	6

\* Students may NOT receive General Education credit for both European and American History, or for both American Government and Comparative Politics.

**Table of University General Education Courses  
Listed By Subject Area Codes under General Education Course Title Prefixes**

**\* American Society and Institutions (AI)**

AGS 3420 — (AI) The American Constitution and the Judicial System. Cr. 4  
 GSS 1510 — (AI) American Political Development. Cr. 4  
 HIS 1050 — (AI) American Civilization Since World War II. Cr. 3-4  
 HON 4270 — (AI) Seminar in American Society and Institutions. Cr. 3 (Max. 9)  
 P S 1010 — (AI) American Government. Cr. 4  
 P S 1030 — (AI) The American Governmental System. Cr. 3

**Basic Composition Competency (BC)**

ENG 1020 — (BC) Introductory College Writing. Cr. 4  
 ENG 1050 — (BC) Freshman Honors: English I. Cr. 4  
 GIS 1510 — (BC) Written Communication Skills. Cr. 4 (Max. 8)

**Computer Literacy Competency (CL)**

B E 1010 — (CL) Introduction to Computers in Engineering. Cr. 3  
 CSC 1000 — (CL) Introduction to Computer Science. Cr. 3  
 CSC 1050 — (CL) Introduction to C and Unix. Cr. 2  
 CSC 1100 — (CL) Problem Solving and Programming. Cr. 4  
 CSC 1140 — (CL) Introduction to COBOL. Cr. 3  
 CSC 1500 — (CL) Fundamental Structures in Computer Science. Cr. 3  
 CSC 2110 — (CL) Introduction to Data Structures and Abstraction. Cr. 4  
 GST 2710 — (CL) Computers and Society. Cr. 4  
 ISM 2630 — (CL) Fundamental Computer Skills. Cr. 3  
 MED 5590 — (CL) Computer Applications in Music Teaching. Cr. 2  
 MUA 5610 — (CL) Introduction to Music Technology. Cr. 3  
 NUR 1110 — (CL) Introduction to Computers and Technology for Health Care Professionals. Cr. 2  
 SPJ 2020 — (CL) Using Computers in Journalism. Cr. 1  
 SPJ 3210 — (CL) News Editing. Cr. 4

**Critical Thinking Competency (CT)**

B A 1010 — (CT) Critical Thinking for Consumer Decisions. Cr. 3.  
 GIS 3260 — (CT) Methods of Search and Critical Thinking. Cr. 4  
 PHI 1050 — (CT) Critical Thinking. Cr. 3  
 SPC 2110 — (CT) Argumentation and Debate. Cr. 3

**English Proficiency (EP)**

ENG 1080 — (EP) Writing Workshop. Cr. 2

**\*Foreign Culture (FC)**

**EITHER a course from those listed below:**

AFS 3250 — (FC) Politics and Culture in Anglophone Caribbean. Cr. 3  
 AFS 3610 — (GIS 3610) (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans. Cr. 4  
 ANT 3150 — (FC) Anthropology of Business. Cr. 3-4  
 ANT 3520 — (FC) Understanding Africa: Past, Present and Future. Cr. 3  
 ANT 3540 — (FC) Cultures and Societies of Latin America. Cr. 3  
 ANT 3550 — (FC) Arab Society in Transition. (N E 3550) Cr. 3  
 ARM 3410 — (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience (GER 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3  
 ARM 4750 — (FC) Survey of Armenian Culture and Literature: The Modern Period. Cr. 3  
 CBS 2410 — (FC) History of Mexico. (HIS 2440). Cr. 3  
 CBS 2420 — (FC) History of Puerto Rico and Cuba. Cr. 3  
 DNC 2400 — (FC) Introduction to African Dance. Cr. 3  
 FRE 2710 — (FC) Introduction to French Civilization I. Cr. 3  
 FRE 2720 — (FC) Introduction to French Civilization II. Cr. 3

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GER 2710 — (FC) Survey of Germanic Culture I. Cr. 3  
 GER 2720 — (FC) Survey of Germanic Culture II. Cr. 3  
 GER 3410 — (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience (ARM 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3  
 GIS 3600 — (FC) Interdisciplinary Perspectives on Foreign Culture: The Arabs. Cr. 3  
 GIS 3610 — (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans. (AFS 3610) Cr. 4  
 GIS 3620 — (FC) Interdisciplinary Perspectives on Foreign Culture: The Chinese. Cr. 3  
 GRK 3710 — (FC) Modern Greek Literature and Culture (in English). Cr. 3  
 HIS 2440 — (CBS 2410) (FC) History of Mexico. Cr. 3  
 HON 4260 — (FC) Seminar in Foreign Culture. Cr. 3 (Max. 9)  
 ITA 2710 — (FC) Italian Culture and Civilization I. Cr. 3  
 ITA 2720 — (FC) Italian Culture and Civilization II. Cr. 3  
 JPN 4550 — (FC) Japanese Culture and Society I. Cr. 4  
 JPN 4560 — (FC) Japanese Culture and Society II. Cr. 4  
 N E 2000 — (FC) Introduction to Islamic Civilization of the Near East. Cr. 3  
 N E 3550 — (ANT 3550) (FC) Arab Society in Transition. Cr. 3  
 NUR 4800 — (FC) Transcultural Health Through the Life Cycle. Cr. 3  
 POL 2710 — (FC) Survey of Polish Culture. Cr. 3  
 POL 3410 — (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (RUS 3410) (UKR 3410) Cr. 3  
 RUS 3410 — (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (POL 3410) (UKR 3410) Cr. 3  
 RUS 3510 — (FC) Study of Russian Culture. Cr. 3  
 SLA 3410 — (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3  
 UKR 3410 — (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (POL 3410) (RUS 3410) Cr. 3

**OR completion of one of the following foreign language sequences (through 2010 or 2110, as applicable):**

ARB 2010 — (FC) Intermediate Arabic I. Cr. 4  
 ARM 2010 — (FC) Intermediate Armenian. Cr. 4  
 CHI 2010 — (FC) Intermediate Chinese. Cr. 4  
 FRE 2010 — (FC) Intermediate French. Cr. 4  
 GER 2010 — (FC) Intermediate German. Cr. 4  
 GRK 2010 — (FC) Classical Greek Prose. Cr. 4  
 GRK 2110 — (FC) Intermediate Modern Greek I. Cr. 4  
 HEB 2010 — (FC) Intermediate Hebrew I. Cr. 4  
 ITA 2010 — (FC) Intermediate Italian. Cr. 4  
 JPN 2010 — (FC) Intermediate Japanese I. Cr. 4  
 LAT 2010 — (FC) Latin Literature. Cr. 4  
 POL 2010 — (FC) Intermediate Polish. Cr. 4  
 RUS 2010 — (FC) Intermediate Russian. Cr. 4  
 SPA 2010 — (FC) Intermediate Spanish. Cr. 4  
 SWA 2010 — (FC) Intermediate Swahili. Cr. 4  
 UKR 2010 — (FC) Intermediate Ukrainian. Cr. 4

**\* Historical Studies (HS)**

ANT 3200 — (HS) Lost Cities and Ancient Civilizations. Cr. 3  
 GIS 3160 — (HS) World War I as a Turning Point: Historical Perspectives. Cr. 4  
 GUH 3810 — (HS) Discovering the Past. Cr. 3-4  
 HIS 1100 — (HS) The Ancient World. Cr. 3-4  
 HIS 1200 — (HS) The Medieval World. Cr. 3-4  
 HIS 1300 — (HS) Europe and the World: 1500-1945. Cr. 3-4  
 HIS 1400 — (HS) The World Since 1945. Cr. 3-4  
 HIS 1600 — (HS) African Civilizations to 1800. Cr. 3-4  
 HIS 1610 — (HS) African Civilizations Since 1800. Cr. 3-4  
 HIS 1800 — (N E 2030) (HS) The Age of Islamic Empires:

600 - 1600. Cr. 3.

- HIS 1810 — (N E 2040) (HS) The Modern Middle East. Cr. 3  
HIS 1995 — (HS) Society and the Economic Transition. Cr. 3  
HON 4250 — (HS) Seminar in Historical Studies. Cr. 3 (Max. 9)  
N E 2030 — (HS) The Age of Islamic Empires: 600 - 1600  
(HIS 1800). Cr. 3.  
N E 2040 — (HS) The Modern Middle East (HIS 1810). Cr. 3.

### **Intermediate Composition Competency (IC)**

- AFS 2390 — (ENG 2390) (IC) Introduction to African-American  
Literature: Literature and Writing. Cr. 4  
AGS 4991 — (IC) Senior Essay Seminar I. Cr. 4  
ENG 2050 — (IC) Freshman Honors: English II. Cr. 4  
ENG 2100 — (IC) Introduction to Poetry: Literature and Writing. Cr. 3  
ENG 2110 — (IC) Introduction to Drama: Literature and Writing.  
Cr. 3  
ENG 2120 — (IC) Introduction to Fiction: Literature and Writing.  
Cr. 4  
ENG 2210 — (IC) Great English Novels: Literature and Writing. Cr. 3  
ENG 2310 — (IC) Major American Books: Literature and Writing.  
Cr. 3  
ENG 2390 — (IC) Introduction to African-American Literature:  
Literature and Writing. (AFS 2390) Cr. 4  
ENG 2570 — (IC) Literature By and About Women:  
Literature & Writing. Cr. 3  
ENG 3010 — (IC) Intermediate Writing. Cr. 3  
ENG 3030 — (IC) Writing the Research Paper. Cr. 3  
ENG 3050 — (IC) Technical Communication I: Report Writing. Cr. 3  
GIS 3510 — (IC) Intermediate Reading and Writing. Cr. 4  
GUH 2010 — (IC) Cultural Identity and the American Experience:  
Writers' Responses. Cr. 4  
HUM 2000 — (IC) Reading and Writing About the Arts. Cr. 3

### **\* Life Sciences (LS)**

- ANT 2110 — (LS) Introduction to Physical Anthropology. Cr. 3  
BIO 1030 — (LS) Biology Today. Cr. 3-4  
BIO 1050 — (LS) An Introduction to Life. Cr. 3-4\*\*  
BIO 1510 — (LS) Basic Life Mechanisms. Cr. 3-4\*\*  
BIO 2200 — (LS) Introductory Microbiology. Cr. 4  
GST 2310 — (LS) Living in the Environment. Cr. 4  
HON 4220 — (LS) Seminar in Life Science. Cr. 3  
NFS 2030 — (LS) Introductory Nutrition. Cr. 3\*\*  
PSY 1010 — (LS) Introductory Psychology. Cr. 4\*\*  
PSY 1020 — (LS) Elements of Psychology. Cr. 3

### **Mathematics Competency (MC)**

- MAT 0991 — (MC) Basic Concepts in Mathematics. Cr. 3

### **Oral Communication Competency (OC)**

- ENG 3060 — (OC) Technical Communication II: Writing and  
Speaking. Cr. 3  
GIS 1560 — (OC) Dimensions of Oral Communication.  
Cr. 4 (Max. 8)  
SPB 1010 — (OC) Oral Communication: Basic Speech. Cr. 2-3

### **\* Philosophy and Letters (PL)**

- CLA 1010 — (PL) Classical Civilization. Cr. 3-4  
CLA 2100 — (PL) Classical Origins of Western Thought.  
(HON 2100) Cr. 3

\* For the Group Requirements: AI, FC, HS, LS, PL, PS, SS and VP, students may elect no more than one course from a single subject area code as defined by the letters which precede course numbers. For example, a student who takes a HIS (History) course to fulfill a Group Requirement cannot take another HIS course to fulfill any other requirement.

\*\* Courses which also satisfy the Natural Science Laboratory Requirement when elected for appropriate credits and/or with appropriate laboratory.

- CLA 2200 — (PL) Introduction to Greek Tragedy. Cr. 3-4  
ENG 2200 — (PL) Shakespeare. Cr. 3  
ENG 2500 — (PL) The English Bible as Literature. Cr. 4  
ENG 2720 — (PL) Basic Concepts in Linguistics. (LIN 2720) Cr. 3  
ENG 3110 — (PL) English Literature to 1700. Cr. 3  
ENG 3120 — (PL) English Literature after 1700. Cr. 3  
ENG 3140 — (PL) Survey of American Literature. Cr. 3  
FRE 2700 — (GER 2700) (PL) Anguish and Commitment: European  
Existentialist Literature. (SPA 2700) (ITA 2700) (RUS 2700) Cr. 3-4  
GER 2310 — (PL) Short Fiction from Central Europe & Russia  
(SLA 2310). Cr. 3  
GER 2700 — (PL) Anguish and Commitment: European Existential-  
ist Literature (SPA 2700) (FRE 2700) (ITA 2700) (RUS 2700) Cr. 3-4  
GER 2991 — (PL) Understanding the Fairy Tale. Cr. 3  
GUH 2710 — (PL) Art and Aesthetics: Literature and Philosophy.  
Cr. 4  
GUH 3710 — (PL) Significant Issues in Cultural Studies. Cr. 3-4  
HON 2100 — (CLA 2100) (PL) Classical Origins of Western  
Thought. Cr. 3  
HON 4200 — (PL) Seminar in Philosophy and Letters. Cr. 3 (Max. 9)  
HUM 2100 — (PL) Ancient and Medieval: Literature and the Arts.  
Cr. 4  
HUM 2200 — (PL) Sophomore Honors Colloquium in Humanities.  
Cr. 4 (Max. 8)  
HUM 2220 — (PL) Constructs of Human Experience: Histories,  
Novels, Philosophies. Cr. 3-4  
ITA 2700 — (GER 2700) (PL) Anguish and Commitment: European  
Existentialist Literature. (SPA 2700) (FRE 2700) (RUS 2700) Cr. 3-4  
LIN 2720 — (ENG 2720) (PL) Basic Concepts in Linguistics. Cr. 3  
PHI 1010 — (PL) Introduction to Philosophical Systems. Cr. 3-4  
PHI 1020 — (PL) Honors Introduction to Philosophical Systems.  
Cr. 3-4  
PHI 1030 — (PL) Introduction to Philosophical Problems. Cr. 3-4  
PHI 1040 — (PL) Honors Introduction to Philosophical Problems.  
Cr. 3-4  
PHI 1100 — (PL) Contemporary Moral Issues. Cr. 3 (Max. 9)  
PHI 2100 — (PL) Ancient and Medieval Philosophy. Cr. 3  
PHI 2110 — (PL) Seventeenth and Eighteenth Century Philosophy.  
Cr. 3  
PHI 2320 — (PL) Introduction to Ethics. Cr. 3-4  
PHI 3500 — (PL) Theory of Knowledge. Cr. 3  
PHI 3550 — (PL) Metaphysics. Cr. 3  
PHI 3700 — (PL) Philosophy of Art. Cr. 3  
P S 3510 — (PL) Law, Authority and Rebellion. Cr. 4  
P S 3520 — (PL) Justice. Cr. 4  
RUS 2700 — (GER 2700) (PL) Anguish and Commitment: European  
Existentialist Literature. (SPA 2700) (FRE 2700) (ITA 2700) Cr. 3-4  
RUS 3650 — (PL) Literature Before Communism Cr. 3  
RUS 3650 — (PL) Literary Masterpieces: Love, War, and Revolution.  
Cr. 3  
SLA 2310 — (GER 2310) (PL) Short Fiction from Central Europe and  
Russia Cr. 3  
SPA 2700 — (GER 2700) (PL) Anguish and Commitment: European  
Existentialist Literature. (FRE 2700) (ITA 2700) (RUS 2700) Cr. 3-4  
SPC 2160 — (PL) Contemporary Persuasive Campaigns and  
Movements. Cr. 4

### **\* Physical Sciences (PS)**

- AST 2010 — (PS) Descriptive Astronomy. Cr. 4  
CHM 1000 — (PS) Chemistry and Your World. Cr. 3-4\*\*  
CHM 1020 — (PS) General Chemistry I. Cr. 4\*\*  
CHM 1220 — (PS) Chemical Structure, Bonding, and Reactivity.  
Cr. 4\*\*  
CHM 1225 — (PS) Chemical Structure, Bonding, and Reactivity.  
Cr. 3\*\*  
CHM 1410 — (PS) Chemical Principles I: General/Organic  
Chemistry. Cr. 6\*\*

GEL 1010 — (PS) Geology: The Science of the Earth. Cr. 4\*\*  
 GST 2420 — (PS) Atoms and Stars: A Historical Intro. to  
 Astronomy, Physics and the Process of Scientific Discovery.  
 Cr. 3-4\*\*  
 HON 4230 — (PS) Seminar in Physical Science. Cr. 3  
 PHY 1020 — (PS) Conceptual Physics: The Basic Science. Cr. 3-4\*\*  
 PHY 1040 — (PS) Einstein, Relativity & Quanta: A Conceptual  
 Introduction. Cr. 3-4  
 PHY 1070 — (PS) Energy and the Environment. Cr. 4  
 PHY 2130 — (PS) General Physics. Cr. 3\*\*  
 PHY 2170 — (PS) General Physics. Cr. 4\*\*  
 PHY 2175 — (PS) General Physics. Cr. 4  
 PHY 3100 — (PS) The Sounds of Music. Cr. 4\*\*

**\* Social Sciences (SS)**

AFS 2210 — (SS) Black Social and Political Thought. Cr. 4  
 AGS 3480 — (SS) Theoretical and Practical Analysis of Work  
 Organizations. Cr. 4  
 ANT 2100 — (SS) Introduction to Anthropology. Cr. 3-4  
 ECO 1000 — (SS) Survey of Economics. Cr. 4  
 ECO 2010 — (SS) Principles of Microeconomics. Cr. 3-4  
 ECO 2020 — (SS) Principles of Macroeconomics. Cr. 3-4  
 GPH 1100 — (SS) World Regional Patterns. Cr. 4  
 GPH 2000 — (U S 2000) (SS) Introduction to Urban Studies  
 (HIS 2000) (SOC 2500) (P S 2000). Cr. 4  
 GPH 3130 — (SS) Introductory Urban Geography. Cr. 4  
 GPH 3200 — (SS) Europe. Cr. 3  
 GSS 2710 — (SS) Selected Perspectives on Ethnicity. Cr. 4  
 HIS 2000 — (U S 2000) (SS) Introduction to Urban Studies  
 (SOC 2500) (P S 2000) (GPH 2000). Cr. 4  
 HON 4210 — (SS) Seminar in Social Sciences. Cr. 3  
 P S 1000 — (SS) Introduction to Political Science. Cr. 3  
 P S 2000 — (U S 2000) (SS) Introduction to Urban Studies.  
 (HIS 2000) (SOC 2500) (GPH 2000) Cr. 4  
 P S 2240 — (SS) Introduction to Urban Politics and Policy. Cr. 4  
 SOC 2000 — (SS) Understanding Human Society. Cr. 3  
 SOC 2020 — (SS) Social Problems. Cr. 3  
 SOC 2500 — (U S 2000) (SS) Introduction to Urban Studies  
 (HIS 2000) (P S 2000) (GPH 2000). Cr. 4  
 SOC 3300 — (SS) Social Institutions and Social Structure. Cr. 4  
 SOC 3510 — (SS) The Nature and Impact of Population on Society.  
 Cr. 3  
 SOC 4100 — (SS) Social Psychology. Cr. 4  
 U S 2000 — (SS) Introduction to Urban Studies. (HIS 2000) (SOC  
 2500) (P S 2000) (GPH 2000) Cr. 4  
 W S 3010 — (SS) Interdisciplinary Introduction to Women's Studies.  
 Cr. 3-4

**\* Visual and Performing Arts (VP)**

A H 1000 — (VP) Introduction to Art. Cr. 4  
 A H 1020 — (VP) Image, Race, Gender, Power. Cr. 3  
 A H 1110 — (VP) Survey of Art History: Ancient through Medieval.  
 Cr. 3-4  
 A H 1120 — (VP) Renaissance through Modern Art Survey. Cr. 3-4  
 ARM 3710 — (SLA 3710) (VP) Russian and East European Film.  
 (POL 3710) (RUS 3710) (UKR 3710) Cr. 3

DNC 2000 — (VP) Introduction to Dance. Cr. 4  
 DNC 2310 — (VP) Historical Perspectives of Dance. Cr. 3  
 ENG 2450 — (FLM 2010) (VP) Introduction to Film. (SPF 2010)  
 Cr. 4  
 ENG 2460 — (FLM 2020) (VP) History of Film. (SPF 2020) Cr. 3  
 FLM 2010 — (VP) Introduction to Film. (ENG 2450) (SPF 2010)  
 Cr. 4  
 FLM 2020 — (VP) History of Film. (ENG 2460) (SPF 2020) Cr. 3  
 GUH 2730 — (VP) Meaning in the Visual and Performing Arts. Cr. 3  
 GUH 3730 — (VP) Music and American Culture. Cr. 3  
 HON 4240 — (VP) Seminar in Visual and Performing Arts.  
 Cr. 3 (Max. 9)  
 HUM 1010 — (VP) Introduction to Art and Music in Western  
 Civilization. Cr. 4  
 HUM 1020 — (VP) Experiencing the Arts. Cr. 3-4  
 HUM 1030 — (VP) Exploring the Arts in Detroit. Cr. 4  
 MUH 1340 — (VP) Music Appreciation: World Music. Cr. 3  
 MUH 1350 — (VP) Music Appreciation: Popular Music to the  
 Present. Cr. 3  
 MUH 1370 — (VP) Music Appreciation: Beginnings to the Present.  
 Cr. 3  
 POL 3710 — (SLA 3710) (VP) Russian and East European Film.  
 (ARM 3710) (RUS 3710) (UKR 3710) Cr. 3  
 RUS 3710 — (SLA 3710) (VP) Russian and East European Film.  
 (ARM 3710) (POL 3710) (UKR 3710) Cr. 3  
 SLA 3710 — (VP) Russian and East European Film. (ARM 3710)  
 (POL 3710) (RUS 3710) (UKR 3710) Cr. 3  
 SPF 2010 — (FLM 2010) (VP) Introduction to Film. (ENG 2450)  
 Cr. 4  
 SPF 2020 — (FLM 2020) (VP) History of Film. (ENG 2460) Cr. 3  
 THR 1010 — (VP) Introduction to the Theatre. Cr. 3  
 THR 1030 — (VP) Black Theatre: An Introduction. Cr. 3  
 UKR 3710 — (SLA 3710) (VP) Russian and East European Film.  
 (ARM 3710) (POL 3710) (RUS 3710) Cr. 3

\* For the Group Requirements: AI, FC, HS, LS, PL, PS, SS and VP,  
 students may elect no more than one course from a single subject  
 area code as defined by the letters which precede course numbers.  
 For example, a student who takes a HIS (History) course to fulfill a  
 Group Requirement cannot take another HIS course to fulfill any  
 other requirement.

\*\* Courses which also satisfy the Natural Science Laboratory Requirement  
 when elected for appropriate credits and/or with appropriate laboratory.

## Graduation with Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: *Cum Laude*, *Magna Cum Laude*, and *Summa Cum Laude*. Graduation with distinction will be indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each graduation the top twenty per cent of students in each college who have earned the highest grade point average in their colleges, with the following approximate distribution:

<i>Summa Cum Laude</i> .....	Top five per cent
<i>Magna Cum Laude</i> .....	Next five per cent
<i>Cum Laude</i> .....	Next ten per cent

The specific minimum grade point average will be determined each year in the following manner, except that it shall not be less than 3.0:

Based on the grade point average distributions of the previous year's senior class, the grade point average cut-offs for each college will be established to provide for recognition of the top eighteen to twenty per cent of the graduating students.

The criteria for Graduation with Distinction include:

1. A minimum of sixty credits in residence at Wayne State University.
2. A qualifying minimum grade point average (calculated as explained above) on all work at Wayne State University must be completed by the end of the semester of graduation. (For notation in the commencement program, the grade point average on all work completed prior to the semester of graduation will be used.)

## UNDERGRADUATE HONORS CURRICULA

The University's honors curricula serve to challenge highly motivated students through courses of advanced study; to provide academic programs of unusual breadth and depth; to provide recognition of outstanding scholastic achievement; to foster interest in research and scholarly activity; and to provide students an opportunity to work with outstanding faculty.

Two types of curricula are available in the University Honors Program: a University-wide Honors Curriculum; and a College or Department Honors Curriculum.

**Dual Recognition:** Students who complete the requirements of both the University-wide Honors Program and, in addition, the requirements of a college/department Honors Program, shall have both designations on the transcript and the diploma. Only a single senior essay, thesis, or project shall be required.

For information in addition to the summaries provided below, students should contact the Director of Honors Programs, who is responsible for overall administration of the University's honors curricula, or their program adviser, about college or departmental programs.

### University-wide Honors Curriculum

The University-wide Honors Program allows undergraduate students in any college or school to pursue individually-designed Honors Programs which complement their majors. Students may pursue the University-wide Honors Curriculum only, or a college/departmental Honors curricula in conjunction with the University-wide Honors Curriculum.

**Admission:** Students with excellent academic records are eligible and may enter the University's Honors Program. In considering participants in the program, emphasis shall be placed on the character of the student's prior accomplishments, and on measures of potential appropriate to the individual and his/her field. Normally, the following are required:

**Entering Freshmen:** Any entering freshmen with a high school grade point average of 3.5, or a composite ACT score of 26 or SAT combined score of 1100, is eligible for admission to the Honors Program.

**Matriculated Students:** Students who have a cumulative grade point average of 3.3 or above at Wayne State University for twenty-four successive credits, and who have satisfied the English and Mathematics Proficiency Requirements, may apply for admission to the program.

**Transfer Students:** Students who have completed a minimum of fifteen hours of college credit with a cumulative grade point average of 3.3 at another postsecondary institution are eligible to apply for admission to the program. Transfer students must have a composite ACT score of 26 or SAT combined score of 1100. Normally, no student shall be admitted to the University Honors Curriculum who has fewer than sixty credits remaining for undergraduate study at Wayne State University. No more than a maximum of half of the total required credit hours of honors work may be transferred from another institution.

**Presidential Scholars:** Students awarded Presidential scholarships may automatically join the University Honors Program upon entrance to Wayne State University.

Students whose cumulative grade point average is at least 3.3, but who are not formally in the Honors Program, are eligible to elect honors courses to enrich their educational experiences.

**Program Requirements:** The program requires honors-designated course work which constitutes at least twenty per cent of the required credits for the baccalaureate program the student is pursuing. In no case may the Honors credits be less than twenty-four credits. Students in this program *must* satisfy the General Education Requirements, but the approved General Education courses may, with prior approval, differ for the Honors Program. The Honors Adviser shall develop with the student an individual program of study appropriate to the student. The program of study must be approved by the student's home college. Students must complete a minimum of sixty credits in residence at Wayne State University.

**Retention:** The academic record of each student shall be reviewed at regular intervals. To remain in the University Honors Program, a student normally shall be expected:

- a) to pursue a program consistent with the objectives of the Honors Program, as recommended by the University Honors Council and approved by the President or his/her designee; and
- b) to maintain a cumulative grade point average greater than or equal to 3.3; however, colleges/departments may establish a higher g.p.a. for retention in a college/department program.
- c) A student whose cumulative grade point average is below 3.3 and is, for that reason, dropped from the Honors Program, may reapply when his/her cumulative g.p.a. is 3.3 or higher.

**Graduation:** For graduation, students must have a minimum cumulative grade point average of 3.3 and must complete a minimum of twenty per cent of their degree credits (but no less than twenty-four credits) in honors-designated course work (including credits in an independent research project, essay or thesis) with a minimum cumulative grade point average of 3.3 for University Honors. Students must complete a minimum of sixty credits in residence at Wayne State University. Graduates of the University-wide honors program will be so recognized on the transcript and diploma.

### College or Department Honors Curricula

Undergraduate programs in colleges and schools shall be encouraged to develop programs leading to honors. College or department Honors Programs are included in college and department sections of this Bulletin.

**Admission:** Students must be admitted to the major or program for which honors is sought. A minimum grade point average of 3.3 is required for enrollment in college/department programs; however,

colleges/departments may establish a higher grade point average for admission.

**Program Requirements:** College or department Honors Curriculum shall require no more than twelve credits in honors-designated course work of which at least three credits may be in an independent research project, essay, or thesis in the student's college/department. Students also must meet the requirements of their major fields. The honors requirements for the major may include approved modifications of normal major requirements.

**Retention:** To remain in a college or department Honors Program, a student normally shall be expected to maintain a cumulative grade point average greater than or equal to 3.3; however, colleges/departments may establish a higher g.p.a. for retention in college/department programs.

**Graduation:** For graduation with honors, students must have a minimum grade point average of 3.3; but college or department Honors Programs may establish a higher g.p.a. Normally, the grade point average of honors graduates should be among the top twenty-five per cent of the seniors in a particular college.

## Henry and Donnelly Awards

The David D. Henry Award and the Howard A. Donnelly Award are given annually to the man and woman at graduation who have been judged as having made the most outstanding contributions to the University in the areas of student activities, leadership and service. These contributions must be consistent with high scholarship during the recipients' entire undergraduate careers.

The David D. Henry Award was established in 1948 to honor the third University President and is granted at the Fall commencement ceremony. The Howard A. Donnelly Award was established in 1927 at the request of Mr. Howard Donnelly, a friend of the University, through a grant provided in his name. The Donnelly Award is granted at the Winter commencement ceremony.

The winners of these awards are determined by the David D. Henry/Howard A. Donnelly Award Selection Committee. The Committee is comprised of academic representatives from each undergraduate degree granting college and school of the University and from the Division of Student Development and Campus Life.

## Office for Global Education

Office of the Provost  
4092 Faculty/Administration Building; 577-2254

The Office for Global Education, housed in the Office of the Provost, Division of Academic Affairs, coordinates international educational activities at Wayne State. Key activities include the administration of a global grant competition to support students in study/internship programs outside the U.S.; the administration of the Fulbright program; greeting international visitors to the Wayne State campus; coordinating international travel for Wayne State delegations; and coordinating agreements between Wayne State and universities outside the United States.

The Office also coordinates applications from Wayne State students for the Japan Center for Michigan Universities, which offers opportunities for semester- and year-long study in Hikone, Japan.

**Other International Opportunities:** A number of short-term international study trips for credit are available to Wayne State students; see individual school and college sections of this bulletin for information. For information on trips and programs for study outside the United States, contact the University Advising Center; 577-2680.

**International Students** requiring information on study at Wayne State University should contact the Office for International Students and Scholars; see page 54.

# ACADEMIC ADVISING

## University Advising Center

The University Advising Center provides undergraduate academic advising to all students with undeclared majors and to pre-professional students in the Colleges of Science, Liberal Arts, Fine, Performing and Communication Arts, and Urban, Labor, and Metropolitan Affairs. The Center is staffed by fifteen professional advisers. The major responsibilities and services include:

**Program Advising** helps students choose a program of courses designed to fulfill the requirements of their academic curriculum. Courses are suggested and discussed in connection with students' intended academic goals. Advisers are fully informed on degree requirements including group requirements, restrictions on credits, transfer credit, and residency. Advisers monitor the progress of students towards the completion of school/college and University requirements for graduation.

**Academic Deficiency Advising:** Students whose grade point average falls below 2.0 and who are placed on academic probation are required to discuss their situation with an academic adviser. Advisers help probationary students consider ways to improve their academic situation. Referrals may be made to other University services where students can find assistance for specific problems or difficulties.

**Pre-Professional Advising:** Advisers assist students in planning programs which will fulfill requirements for admission to the various professional programs offered by Wayne State University, including those at the School of Business Administration, the College of Education, the College of Nursing, the Faculty of Pharmacy, and the Allied Health Professions Departments.

**Health Careers Advising:** Students in pre-medical, pre-dental, pre-osteopathic and pre-veterinary medicine curricula are advised on procedures for applying to post-baccalaureate institutions. Letters of recommendation are sent to schools as requested by the student.

**Early Academic Assessment:** Academic progress for students enrolled in 0990-2999-level courses is assessed by faculty at the end of fourth week of classes. If a student's performance is assessed below the 'C' level, the student receives an alert notification referring him/her to appropriate campus resources.

**Study Abroad Resource Center:** Books, brochures, catalogs and advising on academic and travel/study programs in foreign countries are available at the Resource Center, including information on Wayne State's thirteen foreign-study programs and other programs sponsored by American and foreign institutions. Course credit is available on approval for many foreign study programs; credit approval should be obtained before entering a foreign study program.

**University Orientation Program:** A University-wide orientation program, 'Wayne State and You' (WS&U), is mandatory for entering freshmen and for transfer students with fewer than thirty credits. Students learn about University programs and services, receive academic advising, and register for classes during the one-day program. A Transfer Transition Orientation is offered at which students learn about University programs and resources, meet individually with an adviser in their school or college, and register for classes.

**Student Handbook:** Perspectives, the student handbook is published annually for new and continuing students. This book includes information about University programs, policies, procedures, and services as well as activities in the campus area.

**Wayne EXCEL Program Advising:** Wayne EXCEL offers academic support and intensive developmental advising to a select group of first- and second-year students. The advising includes diagnostic assessment of study skills and ACT interpretation, pre-scheduled advising appointments, developmental workshops, and exploration of educational and career goals.



# ACADEMIC REGULATIONS

Each student, except those in the annual medical program, is required to register at the beginning of each term of attendance 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 and the alphabetic appointment schedule, the student should consult the Schedule of Classes, available at the Registration and Scheduling Office, 2 West, Helen Newberry Joy Student Services Center; or on the Web: <http://es.wayne.edu/registrar/regappt>

*Students wishing graduate credit must NOT register under 'post-bachelor' status. This is an undergraduate classification in which graduate credit may NOT be earned.*

## Normal Program Load

A full-time undergraduate student is one who is enrolled for twelve or more credits during a semester. The definition of what constitutes a normal course load will vary depending upon the requirement of each program. In general, for completion of undergraduate degree requirements in four years, full-time students should average fifteen to sixteen credits each semester during the academic year.

## Auditing Courses

To audit a course, a student must register in person for the course and indicate that he/she wishes to audit the course rather than receive academic credit. 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 requested change.

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

## Dual Enrollment

**Undergraduate Election of a Graduate Course:** Highly qualified undergraduate students may, under special circumstances, take a 7000-level course for undergraduate credit only. A written petition initiated by the student's adviser must be approved by the graduate officer of the school or college, the professor teaching the course, and the Dean of the Graduate School. The petition, with all required signatures, must be turned in at the time of registration.

**Graduate School Admission Under the Senior Rule:** An undergraduate student in his/her senior year who has a 3.0 or higher upper division g.p.a. and who desires to earn a limited number of graduate credits may receive in his/her final semester a temporary Senior Rule graduate admission for one semester only to a graduate program. Students who desire this status must file an *Application for Graduate Admission* and be admitted to the Graduate School. A completed Senior Rule/Dual Enrollment form must be submitted at the time of registration. For further information, see Senior Rule Admission, page 48.

**Dual Enrollment:** Graduate students may register for undergraduate courses by requesting Dual Enrollment registration status. Courses

electd under this status for graduate credit will be recorded on the graduate transcript, and those elected for undergraduate credit will be recorded on an undergraduate transcript. *All courses elected under this status will be assessed at the graduate rate.* At the time of registration, the student must ensure that the completed *Senior Rule/Dual Enrollment Form* is on file in the Graduate School office.

**Dual Registration at 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 in 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 the Wayne State University—University of Michigan dual registration should obtain the necessary forms from Registration and Scheduling and pay the appropriate tuition at their home institution.

## Retaking Courses

**The mark of 'R' — Retake (prior to Winter Term 1998):** If an undergraduate student repeats a course and completes it with a grade of 'A,' 'B,' 'C,' 'D,' or 'E,' the following rules will apply in posting the student's cumulative record:

1. The grade, grade points and credits for an earlier attempt will be eliminated from the student's grade point average computation.
2. The grade, grade points and credits of only the latest repetition will be included in the student's grade point average computation.
3. An 'R' on the student's academic record will replace the original grade in the course repeated under this rule. Thus, the indicator 'R' will appear for all attempts in a course except the last.

**The mark of 'R' — Retake (Winter Term 1998 to present):** If an undergraduate student repeats a course and completes it with a grade of 'A,' 'A-minus,' 'B-plus,' 'B,' 'B-minus,' 'C-plus,' 'C,' 'C-minus,' 'D-plus,' 'D,' 'D-minus,' or 'E,' the following rules will apply in posting the student's cumulative record:

1. The grade, grade points and credits for an earlier attempt will be eliminated from the student's grade point average computation.
2. The grade, grade points and credits of only the latest retake will be included in the student's grade point average computation.
3. The original grade in the course retaken under this rule will remain on the student's academic record. Each attempt at retaking the course will be indicated by an 'R' next to the grade earned for that term.

After registering to retake a course, a Retake Form must be filed in Student Records, 1 West, Helen Newberry Joy Student Services Center.

After a degree has been granted, no grade computed in that degree may be changed.

**If a post-bachelor status student** retakes a course originally taken under regular undergraduate status, the retake will in no way modify the earlier attempt. The second election, however, will be averaged in the grade point base.

*School of Business Administration:* No course in which a student has received a passing grade or mark may be repeated without the prior written approval of the Graduate Officer of the School of Business Administration.

*College of Pharmacy and Allied Health Professions—Faculty of Allied Health:* No course may be retaken without the prior written consent of the adviser(s) delegated for each professional curriculum.

## Registration

REGISTRATION and SCHEDULING OFFICE:

2 West, Helen Newberry Joy Student Services Center; 577-3541

Registration is the process of officially enrolling in classes for a particular term. The Schedule of Classes, published by the Office of the Registrar in advance of each term, lists the days, times and locations for registration and explains registration procedures. Students should review the information in the Schedule of Classes prior to registering.

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

**POST-BACHELOR STATUS:** Students wishing graduate credit are cautioned 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. Credit for courses elected as a post-bachelor student does *not* count toward graduate credit.

## Registering for Classes

**TELEPHONE REGISTRATION:** Registration for classes at Wayne State is conducted by telephone, which allows students to use any touch-tone telephone to register for, add, or drop courses. To register by telephone, a student needs: (1) his/her student ID number or Social Security Number; (2) his/her personal ID number (PIN); (3) the five-digit call number of each of the classes the student wishes to enroll in, add, or drop.

Telephone registration allows a student to: register for, add, or drop classes; access information on holds; change his/her PIN; check which classes are available and which classes are completely enrolled; select the desired credit hours in variable-credit classes; access tuition and fees account balance; and make payment using a credit card.

Complete instructions for registration appear in each Schedule of Classes, which also contains helpful registration worksheets and answers to frequently-asked questions. Additional information and assistance is available by calling Registration and Scheduling, (313) 577-3541.

## Drop/Add — Adjusting Your Schedule

Registered students may drop and/or add classes on the date(s) indicated in the Schedule of Classes. 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.
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 may drop (not add) courses by mail by sending a certified letter to Registration and Scheduling, 2 West, Helen Newberry Joy Student Services Center. The effective date of such drops, for tuition cancellation and grading purposes, is determined by the postal cancellation date.
4. Students who officially drop 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.
5. 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 included on students' academic records with a mark of 'W,' Withdrawal.

6. Students are not permitted to add courses after the second week of the term.

7. Students are required to have instructors' signatures for drops processed after the fourth week of the term.

8. Students are not permitted to drop courses after the final examination period begins.

*College of Engineering:* Students are not permitted to drop courses after the fifth week of classes without written approval of their adviser. Some departments have more stringent restrictions on dropping of courses.

## Credit by Special Examination

Upon the recommendation of the department chairperson and with the written approval of the appropriate college or school office, a student may earn credit in a course in which he/she has not been regularly enrolled in this University, but which is offered by a department, by passing a special examination. Credit by a special examination is restricted as follows:

1. Not more than sixteen credits may be earned in any one subject.
2. Not more than thirty-two credits may be included in the minimum credits required for graduation.
3. Credit will be recorded with grade to indicate the level of performance in the examination but will not be considered in computing grade point average.
4. Credit will not be considered residence credit.
5. To be eligible to earn Credit by Special Examination, a student must have been regularly admitted or have attended with guest status, have enrolled for one semester and have completed at least one course.

Students who intend to transfer to other schools are cautioned that Credit by Special Examination at one institution is infrequently accepted for transfer credit by another institution.

For Special Examination fee, see page 18.

## Undergraduate Academic Probation

Effective Fall Term 1988, an undergraduate student whose cumulative grade point average (g.p.a.) falls below 2.00 will be placed on 'Academic Probation.' An 'Academic Probation' status is placed on the student's record and the student shall be permitted to register only after consultation with, and approval has been granted by, a designated University adviser. (For information on other types of Holds on records, see page 19.)

The statement 'Academic Probation' shall be printed on the grade report and the student record the first term in which the cumulative g.p.a. falls below 2.00. A student shall be given two subsequent terms for enrollment on probationary status. At the conclusion of the two terms, a student who has not achieved a cumulative g.p.a. of at least 2.00 shall be excluded from his/her program. A student excluded from the University may not apply for readmission or reinstatement for one calendar year.

Each School and College may establish more stringent Probation, Exclusion, and Appeal policies, and students should consult the appropriate Dean's Office. The Probation Committee of the University Advising Center is responsible for monitoring the University Probation and Exclusion Guidelines for Students in the Colleges of Liberal Arts, Science, Fine, Performing and Communication Arts, and Urban, Labor, and Metropolitan Affairs. Students must consult with an academic adviser regarding appropriate deadlines for academic hold releases and/or reinstatement procedures.

## Obligations of Faculty and Students 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.

## Classroom Attendance Policy

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.

## Early Progress Assessment

The University policy on early progress assessment requires that courses taught at the 1000- and 2000-level include a means of assessing student progress, normally before the end of the fourth week of classes but no later than the sixth week. Students are encouraged to participate in supplemental instruction groups, study groups, and other academic support services designed to help students in lower division courses achieve academic success.

## 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, other unacceptable academic conduct, or misuse of University documents.

## Student Ethics

**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.

## Student Rights and Responsibilities

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 Office of the Vice President for Student Development and Campus Life.

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

## Student Due Process

A high standard of student conduct plays a major role in creating an environment of excellence, and the Student Due Process Policy is

used to maintain these high standards. The policy (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 the student and other parties; (5) specifies prohibited conduct and sanctions to be imposed if such conduct occurs. Examples of prohibited conduct subject to the Student Due Process Policy include, but are not limited to, academic dishonesty, knowingly furnishing false information to the University, disorderly behavior, theft, damage of property, illegal drugs, weapons on campus, false report of emergency, unauthorized entry, violation of criminal law, etc.

The University Judicial Officer, housed in the Office of the Vice President for Student Development and Campus Life, 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 Due Process Policy are available from the Office of the Vice President for Student Development and Campus Life, 470 Student Center, or from the Offices of the Deans of each school and college.

## College/School Grade Appeal Procedures

Each college and school has established grade appeal procedures. These procedures are available from the Dean's Office of the College or School. In most instances, grade appeals must be filed within thirty days of the time the student has or should have received his/her final grade.

## Academic Appeal Procedure

In matters where a College's 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. 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 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.

## Academic Nepotism

Faculty members are not to place themselves, or allow themselves to be placed, in a situation 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.

# STUDENT RECORDS

## University Grading System

A report of final grades and marks is sent to students at the close of each term. The following system is in effect for degree credit in all colleges and schools of the University, with the exception of the School of Medicine four-year M.D. program and the Law School:

### Undergraduate Grades

A . . . . .	Excellent . . . . .	4.00 grade points per credit hour
A minus . . . . .	Excellent . . . . .	3.67 grade points per credit hour
B plus . . . . .	Good . . . . .	3.33 grade points per credit hour
B . . . . .	Good . . . . .	3.00 grade points per credit hour
B minus . . . . .	Good . . . . .	2.67 grade points per credit hour
C plus . . . . .	Fair . . . . .	2.33 grade points per credit hour
C . . . . .	Fair . . . . .	2.00 grade points per credit hour
C minus . . . . .	Fair . . . . .	1.67 grade points per credit hour
D plus . . . . .	Poor . . . . .	1.33 grade points per credit hour
D . . . . .	Poor . . . . .	1.00 grade points per credit hour
D minus . . . . .	Poor . . . . .	0.67 grade points per credit hour
E . . . . .	Failure . . . . .	0.00 grade points per credit hour

P . . . . .	Passed
N . . . . .	Not Passed
S . . . . .	Satisfactory
U . . . . .	Unsatisfactory
M . . . . .	Marginal Pass

P, N, S, U, and M grades are not reflected in the grade point average.

IP — *Course in Progress*. The mark of IP will be reported for current term classes on a student's transcript when a transcript is generated during that term.

NR — *No grade reported* by the instructor. This mark does not appear on the transcript; it may appear on the grade mailer for a particular term. However, the mark of IP will remain on the student's record until such time as the instructor submits a grade.

P or N — *Passed* or *Not Passed* (undergraduate students only). These grades do not affect grade point averages, but undergraduate courses completed with grade of 'P' may count toward a degree.

S, M, or U — Satisfactory, Marginal, or Unsatisfactory performance in non-degree courses and in certain designated courses such as field work, practicums and internships. These grades do not affect grade point averages.

### Marks

I . . . . .	Incomplete.
R . . . . .	Repeated. See page 41 for explanation of this mark (this mark applies to undergraduate students only)
W . . . . .	Official Withdrawal.
X . . . . .	No grade reported.
Y . . . . .	Deferred.
Z . . . . .	Auditor.

**The mark of I—Incomplete**, is given to either an undergraduate or 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 can complete the course successfully without again attending regular class sessions. The responsibility for completing all course work rests entirely with the student. The mark of 'I' will be changed to a grade only 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. The mark of 'I' shall not be changed to a grade of 'E' unless, after receiving the 'I,' the student's subsequent work is of such quality that the overall average for the course is below passing.) Work must be completed within one calendar year.

The mark of 'I' is inappropriate if, in the instructor's judgment, it will be necessary for the student to attend subsequent sessions of the class regularly. Should regular attendance become necessary, the student must register for the class for the semester in which attendance is planned. In the event of a second registration for the course, the mark of 'I' for the original election will be considered a Withdrawal ('W'), and the student will be assessed tuition and applicable fees for the second registration.

The mark of 'I' which is not converted to a letter grade within one calendar year from the time it was received will be considered a withdrawal ('W'), unless, prior to the end of that year, the student requests, and the instructor agrees to certify in writing to Student Records that an additional year is needed for the removal of the Incomplete. The mark of 'I' cannot be extended beyond two calendar years.

**The mark of 'R'—Repeated:** See page 41 for explanation of this mark (this mark applies to undergraduate students only)

**The mark of 'W'—Official Withdrawal,** is given when a student reports the withdrawal to Registration and Scheduling in accordance with University policy. See Drop/Add, above, page 42.

**The mark of 'X'—No grade reported,** is a non-punitive mark used when there has been insufficient work submitted and there is no basis on which to assign a grade.

**The mark of 'Y'—Deferred,** is given when the student is up-to-date in the work of certain designated courses pre-planned to continue beyond the term (i.e., essay, thesis, dissertation, and certain courses in sequence).

**The mark of 'Z'—Audit,** is given when the student has formally registered for audit. To register, the student's registration must be processed in person through the department offering the class, or through Registration and Scheduling. Students must complete the Registration Schedule Authorization Form and secure department approval.

## Passed — Not Passed Program

The University has a program whereby undergraduate students may elect to take courses in which they will be marked as *Passed* ('P') or *Not Passed* ('N') in place of a letter grade. The following regulations apply:

1. The student may elect one 'P'-N' course per semester with the consent of an adviser, but he/she may not elect more than six courses in all.
2. After classes have begun, a student may not change from Passed/Not Passed to a letter grade election or vice versa.
3. Courses taken for 'P'-N' may be used to satisfy competency requirements; however, no course taken on this basis may be used to fulfill specific group or major requirements.
4. Credits for a 'P'-N' course may be used to fulfill graduation requirements but will not count in the grade point average. In the event the student enrolls in more than six 'P'-N' courses, those beyond the permissible maximum will be designated on the permanent record as not applicable toward graduation.

*School of Business Administration:* Undergraduate students in the School of Business Administration may *not* take courses offered by the School of Business Administration on a passed - not passed basis.

## Change of Grade and Mark

Once recorded in the Office of the Registrar, grades/marks will be changed only if an official Change of Grade form, properly completed and signed by the instructor, is submitted to the school or college Grades Coordinator, and is received by Student Records within three semesters (one calendar year) after the end of the term for which the relevant course was originally graded/marked.

## Credits

A credit (credit hour) is defined as one class hour per week or its approved equivalent requiring a minimum of two hours of preparation per week carried through a semester. A credit in other modes of instruction should be made as consistent as possible with the above definition.

*Laboratory:* A three-hour laboratory period is normally regarded as the equivalent of one class hour.

## Class Ranking

Ranks are determined according to the number of degree credits which the student has satisfactorily completed. The classifications are:

Freshman . . . . .	0 to 28.99 credits, inclusive
Sophomore . . . . .	29 to 55.99 credits, inclusive
Junior . . . . .	56 to 87.99 credits, inclusive
Senior . . . . .	88 credits or above

## Grade Point Average

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 credit hours for each course; add the results and divide by the total number of credit hours.

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' or 'X' or a grade of 'S,' 'U,' 'M,' 'P,' or 'N' has been earned are excluded from grade point average computation.

*At the undergraduate level,* courses repeated are computed in the grade point average according to the procedure given on page 41 on 'Repeating Courses'.

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

## Responsible Attendance and Performance

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) and 'W' (Withdrawal) may be refused the privilege of further registration by the dean or the dean's designee of their school or college. Students experiencing attendance difficulties should seek counseling from appropriate college or University offices.

## Transcript Request Policy

Official transcripts bear the seal of the University and the signature of the Registrar and cost \$2.00 when sent via the U.S. Postal Service. An additional \$1.00 (\$3.00 total) is charged for an official transcript issued directly to the student. Unofficial transcripts may be obtained for \$1.00; however they do not contain the University seal or the signature of the Registrar. Unofficial transcripts are normally used for advising purposes. Unofficial transcripts may require twenty-four hour processing.

*Transcript tickets,* which indicate credited amount applicable to transcript fees, may be purchased at the Cashier's Office, 1100 Academic/Administrative Building, or in Room 211 Student Center. The

ticket must be submitted to Student Records, 1 West, Helen Newberry Joy Student Services Center, with a transcript request form.

A transcript may be requested in person or by mail. The University will not honor telephone or faxed requests for transcripts. To request a transcript in person, the student must file a transcript request form and a transcript ticket (or check or money order) for the appropriate fee at Student Records. Requests by mail should be addressed to: Student Records, Attn: Transcripts, 1 West, Helen Newberry Joy Student Services Center, Wayne State University, Detroit MI 48202; and should include a check or money order for the appropriate amount payable to Wayne State University. 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.

## Release of Student Records

The University recognizes admission and academic 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 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.

## Student Directory Information

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 that the University not release it, by completing the Release of Directory Information form, available from the Office of the Registrar and on the Office website.

## Michigan's Freedom of Information Act

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.

The Media Relations Office, 3222 Faculty/Administration Building, is designated as the Office responsible for accepting requests for public records, and the Director of that office is the University officer in charge of providing this service. Under the 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.

## Application for Degree or Certificate

Each candidate for a degree or certificate must file an *Application for Degree* in Student Records, 1 West, Helen Newberry Joy Student Services Center, not later than the first day of classes for the semester in which the student expects to complete the requirements for the degree or certificate; consult the Academic Calendar on page 4 of this bulletin. If an application for a degree was filed for a previous commencement period in which the student did not graduate, a new application is required. Applications for graduation must be accompanied by a \$15.00 (one time only) graduation fee.

## 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.

## Wayne State University — University of Windsor Exchange 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. 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. Participants in this program pay tuition and fees at the home institution and receive credit for course(s) only at the home institution. Interested students should consult the Director of International Programs for further 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 homestays in a Japanese community, field trips, and participation in cultural events.

For additional information, contact the Office for Global Education, 4092 Faculty/Administration Building; 577-2254.

# GRADUATE SCHOOL ADMISSION

Office of University Admissions  
3 East, Helen Newberry Joy Student Services Center  
Wayne State University  
Detroit MI 48202

Telephone: 313-577-3577  
Web: <http://www.admissions.wayne.edu>

*Following are the rules and regulations governing admission to the Wayne State University Graduate School. For information on all degrees and programs, consult the Wayne State University Graduate Bulletin.*

## Regular Admission

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

To be considered for graduate admission, an applicant must hold or be completing an earned baccalaureate degree (or the 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.*

A completed *Application for Graduate Admission* form, the graduate application fee and an official transcript from each college or university attended are required before any student can be considered for admission to graduate study. A transcript is considered official only if it is sent directly from the institution where the work was completed and bears an official seal. The applicant is also responsible for arranging to take any examinations that may be specified by the Office of University Admissions, the college or school, or the individual department.

Several academic areas of the University require an additional departmental application. Students are advised to contact the department to which they are applying and request full particulars on admission procedures.

In most departments (see departmental sections for variants), a regular admission may be authorized for the master's degree applicant upon an adviser's recommendation, if the applicant's grade point average is 2.6 (C=2) or above for the upper division (approximately the last 60 semester credits) of his/her undergraduate course work and if he/she holds a degree from a regionally accredited institution.

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 course work and must have completed an undergraduate major or have done 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. Students presenting less than a 3.0 undergraduate grade point average must pursue a master's program prior to consideration for admission to a doctoral program.

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.

## Qualified Admission

In most departments (see below for variants), qualified admission to a master's or certificate program may be authorized if an applicant's grade point average is between 2.25 and 2.6 or if his/her degree is from a non-accredited institution, provided the major departmental adviser 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, *in writing*, his/her admission to the Graduate School.

Applications from students who have completed substantial coursework 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 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 a determination of credit. The director for graduate admissions is authorized to deny admissions to any applicant whose previous education does not conform to Graduate School standards.

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. If admitted, all such students will be assigned a qualified status unless exempted by the Office of University Admissions. Coursework 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.

Upon recommendation of an adviser and the Graduate Officer of the appropriate college or school, qualified status may be granted to an applicant whose grade point average is below 2.25, 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.

## Application Dates

The Office of University Admissions, 3E Helen Newberry Joy Student Services Building (313-577-3577), 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 a decision before the semester starts. Unless an application and all supporting materials are received by the date indicated, there may not be adequate time to complete consideration for the desired term.

<i>Term</i>	<i>Classes Begin</i>	<i>Date</i>
Fall	Early September	July 1
Winter	Early January	November 1
Spring	Early May	March 15

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

**Several colleges and departments have earlier deadlines.** Students should consult the school/college and department sections of this bulletin, or the Office of University Admissions for complete information.

## GRADUATE NON-DEGREE ADMISSION\*

A student who is entering the Graduate School with objectives not related to the pursuit of a graduate degree — to earn credits for a Continuing Teaching Certificate, or to elect a limited number of courses for personal reasons — may request admission on a non-degree basis. One must file an *Application for Graduate Admission* but does not record a major. In most instances, a non-degree student may 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*, are 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 resident 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.

No student should select or continue in any of the graduate non-degree admission classifications if he/she has any interest in earning a degree. 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. If the student decides to seek admission to a graduate degree program, he/she should apply to the appropriate College Graduate Officer for a 'Change of Status' *before* completing nine credits. Depending on the applicant's highest previous degree, he/she may apply for admission to one of the following Graduate Non-Degree Admission classifications:

1. **PRE-MASTER'S:** A student with an acceptable grade point average and an earned bachelor's degree from an accredited institution may apply for this rank. Applicants must submit an *Application for Graduate Admission* and request that official transcripts from all previously attended colleges and schools be forwarded directly to the Office of University Admissions.
2. **POST-MASTER'S:** This rank is reserved for those students who evidence an earned master's degree at the time of application. Students holding Wayne State master's degrees should contact the Graduate Officer of the college they wish to enter. Those with master's degrees from other institutions must submit an *Application for Graduate Admission* and transcripts.
3. **POST-DOCTORAL:** This rank is reserved for those students who evidence an earned doctoral degree at the time of application.

**Graduate Guest Admission:** Graduate students from other accredited institutions may be admitted to elect a limited number of credits at Wayne State University. Interested students are directed to contact the Office of University Admissions to obtain a *Graduate Guest Application*, which must be signed by the graduate dean of 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. Admission as a Graduate Guest student does not constitute permission to register as a degree applicant.

**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 to be used toward a master's degree. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements.

\* Applicants are advised that there exists an undergraduate admission classification called 'Post-Bachelor'. Students wishing graduate credit are cautioned not to enroll 'Post-Bachelor', since credits earned while holding that classification do not carry, and may not be converted to, graduate credit.

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 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.

Students who qualify and are recommended by the department will be given a 'temporary' admission to the Graduate School for one semester. A final transcript showing the bachelor's degree must be submitted to the Office of University Admissions before regular status as a graduate student can be authorized.

As a courtesy, the University permits a student admitted to Senior Rule status to pay undergraduate fees for those graduate courses elected toward his/her master's degree. Students admitted to this status are advised to elect 5000-6999 courses in their Senior Rule semester that carry both undergraduate and graduate credit. Authorization is made by the individual college or school. Completion of the *Application for Graduate Admission* form is required. Senior Rule status may be granted for one semester only. Students are directed to consult their advisers and the Office of University Admissions. Application deadlines for Senior Rule admission are the same as for regular graduate admission.

**College of Pharmacy and Allied Health Professions** — Undergraduate pharmacy students may register for one of their last two semesters of their fifth year under Senior Rule status.

**College of Nursing** — Applicants must submit a graduate College of Nursing Application to the Office of Student Services, 225 Cohn, Wayne State University, Detroit, Michigan 48202.

**Permit to Register:** Admission may be granted on a one-term-only basis to applicants with incomplete applications for graduate admission.

Eligibility for a graduate Permit to Register requires an earned baccalaureate from an accredited institution. Evidence of completion of the degree (e.g., diploma, transcript) must be submitted along with the Permit application and the processing fee. Approval to enroll on a Permit is valid for only one semester. Registration beyond the initial semester requires the submission of a regular graduate admission application and official transcripts. 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 University Admissions.

## Michigan Intercollegiate Graduate Studies (MIGS) Program

The Michigan Intercollegiate Graduate Studies (MIGS) Program enables graduate students of Michigan public institutions offering graduate degree programs 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 University Admissions for further information and instructions.



## Post-Bachelor Admission

Holders of bachelor's degrees from accredited institutions who wish to elect only courses open to undergraduate students (numbered below 7000) are advised to apply for post-bachelor status. Courses elected while in post-bachelor status will not count toward graduate credit but may be used to fulfill prerequisite requirements for graduate admission. Please check with the Office of University Admissions or Registrar's Office for other regulations regarding this status.

## International Students

Students from other countries must contact the Office of University Admissions, or their prospective department, for appropriate application materials and deadline dates.

To be considered for graduate admission, 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 made financial arrangements which allow for approximately \$16,000 per calendar year (two semesters or nine months) for minimum tuition, supplies and living expenses; and (3) have a sufficient proficiency in English. See the following section on Graduate Admission English Proficiency Requirement.

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

## Graduate Admission English Proficiency Requirement

Graduate applicants must demonstrate proficiency in English to obtain full admission to the University. To fulfill this requirement an applicant must satisfy one of the following criteria:

- 1) Complete baccalaureate degree requirements at a regionally accredited U.S. institution or at an institution 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).

Some units may elect to grant qualified graduate admission to academically-talented International Students whose TOEFL scores fall slightly below the minimum score. Interested students should contact the chairperson or director of their prospective program, to determine whether their program offers such qualified admission. For further information on the English proficiency policy, please consult the Office of University Admissions, 3E Helen Newberry Joy Student Services Building (313-577-3577).

# University Centers and Institutes

*The following University Centers and Institutes have programs pertaining to undergraduate study. A list of additional Centers and Institutes follows, below.*

## Center for Chicano-Boricua Studies

3324 Faculty/Administration Building; 313 577-4378;  
Fax: 313 993-4073

**Director:** José Cuello

**Web:** <http://www.cbs.wayne.edu>

**e-mail:** [j.cuello@wayne.edu](mailto:j.cuello@wayne.edu)

**Purpose:** The mission of the Center for Chicano-Boricua Studies (CBS) is to transform the university by providing equitable access to a quality university education to Latina/o students in the Detroit metropolitan area, and by enhancing the environment of diversity on the campus. The Center accomplishes its mission through a four-part program in (1) student services; (2) research on Latina/o and Latin American issues; (3) internal university advocacy on Latina/o perspectives; and (4) outreach to the Latina/o and larger metropolitan communities.

**Teaching:** The Center is the home or cross-listed department for a number of courses on Latina/o and Latin American history and culture. These include the histories of Mexico, Puerto Rico, Cuba, and of Latina/os in the United States along with Chicana/o and Puerto Rican literatures and cultures. The Center has a co-major that is the equivalent of a Latina/o/Latin American Studies co-major. The Center offers a two-semester sequence in Student Academic Self-Empowerment.

**Research:** The research specializations of the faculty associated with the Center are Mexican history, Caribbean history, South American literature, United States Latina/o history and student learning strategies in higher education.

**Service:** Chicano-Boricua Studies is a comprehensive student services center. CBS recruits Latina/o students from the metropolitan area into a two-year Academic Self-Empowerment Program; they are advised from entry through graduation. CBS administers an annual scholarship fund of \$150,000. The Center also serves as a source for cultural programming, networking, and information for the university and the metropolitan community.

## Developmental Disabilities Institute

Leonard Simons Building, Suite 268,  
4809 Woodward, Detroit, MI 48202 ; 313-577-2654

**Director:** Barbara LeRoy, Ph.D.

**e-mail:** [B\\_Le\\_Roy@wayne.edu](mailto:B_Le_Roy@wayne.edu)

**Web:** <http://www.ddi.wayne.edu/Ddi/>

The mission of the Developmental Disabilities Institute is to contribute to the development of inclusive communities and quality of life for people with disabilities and their families through a culturally-sensitive statewide program of interdisciplinary education, community support and services, research and dissemination.

In the Institute's education program, research findings and state-of-the-art practices are used to educate and to produce sensitive, competent professionals and direct support professionals needed to advance the field. Educational activities include interdisciplinary seminars, courses for degree or certificate credit, guest lectures, and one-to-one educational support or advisement.

The Institute's research, evaluation and dissemination program coordinate efforts of all Institute projects to evaluate results, engage in original research and disseminate information and products devel-

oped through project work. The research and evaluation area also provides evaluation services to outside organizations and agencies.

The Institute's community support program provides technical assistance and training to disability agencies and organizations. The program works closely with partner agencies in pre-implementation evaluation, planning, provision of training and technical assistance, follow-up evaluation and revision of approaches.

Students have the opportunity to complete field placements, internships and work as student assistants on projects in the Institute's education, research and service programs.

## Labor Studies Center

3178 Faculty/Administration Building; 313-577-2191

*Director:* Hal Stack

*Web:* <http://www.laborstudies.wayne.edu>

*e-mail:* [h.stack@wayne.edu](mailto:h.stack@wayne.edu)

The Labor Studies Center is a comprehensive labor education and research 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. Undergraduates can receive a bachelor's degree in labor studies. An internship program is also available.

## Merrill-Palmer Institute for Child and Family Development

Freer House, 71 E. Ferry Avenue; 313-872-1790

*Director:* Rita J. Casey

*Web:* <http://www.mpi.wayne.edu>

The Merrill-Palmer Institute (MPI) is a multidisciplinary research institute committed to enhancing the development of children. It conducts basic and applied research on childhood development, facilitates research on children through the University and beyond, prepares students and researchers to contribute to the understanding of the development of children; and develops and evaluates programs and policies that contribute to children's well-being.

The Institute does not offer undergraduate courses. However, undergraduates can take a directed study with MPI faculty, and conduct Honors theses with MPI faculty. In addition, undergraduates can work as student assistants in the MPI Child Development Laboratory. From time to time there are opportunities for undergraduates to participate in research projects conducted by the Institute. The Institute typically employs two or three student assistants every year to assist with routine work of the Merrill-Palmer staff.

## Center for Peace and Conflict Studies

2320 Faculty/Administration Bldg.; 313-577-3453

Fax: 313-577-8269

*Director:* Fred Pearson

*e-mail:* [ab3440@wayne.edu](mailto:ab3440@wayne.edu)

The Center for Peace and Conflict Studies presents programs and courses on the management and resolution of conflict in all contexts, from the local community to the international system. With the advice of an interdisciplinary executive committee, projects are developed that contribute to the exploration of the social and political controversies of our time. The Center serves as the base for an undergraduate co-major in peace and conflict studies and also involves students in active research. Following such experiences, students may go on to a number of related careers, or to the Master of Arts in Dispute Resolution in the College of Urban, Labor, and Metropolitan Affairs.

**Detroit Council for World Affairs:** The Council is a community outreach of the Center for Peace and Conflict Studies and presents activities for youth and adults on crucial world issues. The Council serves as a link between the University and the greater Detroit community, and brings prominent speakers to the campus. Members of the public and students may join the Council to participate in its activities.

50 *General Information*

ities. Students also can be active in the Peace and Conflict Student Forum, which has become the WSU chapter of Amnesty International.

## State Policy Center

3198 Faculty/Administration Building; 313-577-3075

*Director:* Peter Eisinger

*Web:* <http://www.culma.wayne.edu/spc/>

*e-mail:* [spc@wayne.edu](mailto:spc@wayne.edu)

The State Policy Center – a nonpartisan entity for addressing statewide and urban issues – is part of Wayne State University's College of Urban, Labor and Metropolitan Affairs. It represents Wayne State's ongoing commitment to public service, and is a specific response to the legislative initiative advanced in the Fiscal Year 1997-98 Budget for Higher Education, which called upon Michigan's major research universities to make a major commitment to assist state government in the broad development of public policy.

The Center's mission is to serve Michigan's citizens and state officials in the process of public policy analysis and development and to make academic resources more widely available to the Michigan Legislature, its staff, and all of state government. The State Policy Center offers summer internship opportunities to junior and senior level undergraduates. Internships are available in various public policy fields with state government and related agencies located in the State capital, Lansing, Michigan.

## Center for Urban Studies

3040 Faculty/Administration Building; 313-577-2208

Fax: 313-577-1274

*Director:* David Fasenfest, Ph.D.

*Web:* <http://www.cus.wayne.edu>

*e-mail:* [CUSInfo@wayne.edu](mailto:CUSInfo@wayne.edu)

The mission of Wayne State University's Center for Urban Studies is to improve understanding of and provide innovative responses to urban challenges and opportunities. Committed to serving Detroit and its metropolitan area, the Center is part of the College of Urban, Labor and Metropolitan Affairs and exemplifies Wayne State University's urban research and service mission. The Center pursues its mission by conducting and disseminating research, developing policies and programs, and providing training, capacity-building, and technical assistance.

The Center participates in defining and influencing local, regional, state and national urban policy. It engages community, government, institutions, and policymakers in collaboration with university faculty and resources to transform knowledge into action.

Through its Urban Linkage Program, the Center offers paid internship opportunities to Wayne State juniors, seniors and graduate students. These internships are available with metropolitan area municipalities, community agencies and city of Detroit departments as a way to provide professional experience in public and community service agencies to Wayne State students.

Through the Michigan Metropolitan Information Center, the resources of the State Data Center network are available to Wayne State students. This makes all U.S. Census Bureau data available at low or no cost. The Center for Urban Studies' web site also contains a variety of state and local data at: <http://www.cus.wayne.edu>. From time to time, the center also has student assistant opportunities available to undergraduates.

The Center has continued to add to its website, most recently adding a new research tools section that will allow students to retrieve demographic and other statistical data and work with interactive maps. Detroit and Southeast Michigan are the focus of this information.

## Other WSU Centers and Institutes

Other Wayne State University Centers and Institutes that may provide opportunities for undergraduates:

### **Addiction Research Institute**

4201 St. Antoine; 9-A University Health Center; 313-577-1388  
e-mail: [cschust@med.wayne.edu](mailto:cschust@med.wayne.edu)  
Web: [http://www.med.wayne.edu/communitymedicine/a\\_ri.htm](http://www.med.wayne.edu/communitymedicine/a_ri.htm)  
Director: Robert Schuster

### **Bioengineering Center**

818 W. Hancock; 313-577-1344  
e-mail: [king@rrb.eng.wayne.edu](mailto:king@rrb.eng.wayne.edu)  
Web: <http://ttb.eng.wayne.edu/>  
Director: Albert King

### **Center for Automotive Research**

2121 Engineering; 313-577-3887  
e-mail: [henein@me1.eng.wayne.edu](mailto:henein@me1.eng.wayne.edu)  
Web: <http://www.eng.wayne.edu/~ME/HENEIN/>  
Director: Naiem Henein

### **Center for Health Research**

315 Cohn Bldg.; 313-577-0204  
e-mail: [ajacox@atlas.nursing.wayne.edu](mailto:ajacox@atlas.nursing.wayne.edu)  
Web: <http://www.nursing.wayne.edu/center2.htm>  
Director: Ada Jacox

### **Center for Healthcare Effectiveness Research**

121 Shiffman Library; 313-577-5189  
e-mail: [mmassana@med.wayne.edu](mailto:mmassana@med.wayne.edu)  
Web: <http://www.med.wayne.edu/cher/>  
Director: Michael Massanari

### **Center for International Business Studies**

100 Rands House; 313-577-4842  
e-mail: [aa4506@wayne.edu](mailto:aa4506@wayne.edu)  
Web: <http://www.busadm.wayne.edu/services/resources/cibs/index.htm>  
Director: Attila Yaprak

### **Center for Molecular Medicine and Genetics**

540 E. Canfield; 313-577-5323  
e-mail: [g.grunberger@wayne.edu](mailto:g.grunberger@wayne.edu)  
Web: <http://cmmg.biosci.wayne.edu/>  
Director: George Grunberger

### **Center for the Study of Arts and Public Policy**

5104 Gullen Mall; 313-577-2952  
e-mail: [ad4271@wayne.edu](mailto:ad4271@wayne.edu)  
Web: <http://www.research.wayne.edu/artpolic.html>  
Co-Director: David Magidson

### **Cohn-Haddow Center for Judaic Studies**

442 Manoogian Hall; 313-577-2679  
e-mail: [aa1380@wayne.edu](mailto:aa1380@wayne.edu)  
Web: <http://www.research.wayne.edu/judaic.html>  
Director: David Weinberg

### **Morris Hood, Jr. Comprehensive Diabetes Center**

4043 Faculty/Administration Bldg.; 313-577-5600  
e-mail: [asima@med.wayne.edu](mailto:asima@med.wayne.edu)  
Contact: Anders Sima

### **Developmental Disabilities Institute**

Leonard Simons Bldg., Suite 268; 313-577-2654  
e-mail: [Barbara\\_Le\\_Roy@wayne.edu](mailto:Barbara_Le_Roy@wayne.edu)  
Web: <http://www.ddi.wayne.edu/>  
Director: Barbara LeRoy

### **Douglas Frasier Center for Workplace Issues**

1261 Faculty/Administration Bldg.; 313-577-4380  
e-mail: [aa4604@wayne.edu](mailto:aa4604@wayne.edu)  
Web: <http://www.culma.wayne.edu/fraser.html>  
Director: William Cooke

### **Humanities Center**

2147 Old Main; 313-577-5488  
e-mail: [Walter\\_Edwards@wayne.edu](mailto:Walter_Edwards@wayne.edu)  
Web: <http://www.research.wayne.edu/hum.html>  
Director: Walter Edwards

### **Institute of Environmental Health Sciences**

4000 MCHT; 313-577-0100  
e-mail: [r.novak@wayne.edu](mailto:r.novak@wayne.edu)  
Web: <http://www.wayne.edu:80/ict/>  
Director: Raymond Novak

### **Institute of Gerontology**

87 E. Ferry St.; Knapp Bldg., Rm. 226; 313-577-2297  
e-mail: [p.lichtenberg@wayne.edu](mailto:p.lichtenberg@wayne.edu)  
Web: <http://www.iog.wayne.edu>  
Director: Peter Lichtenberg

### **Institute for Manufacturing Research**

281 Physics Bldg.; 313-577-2970  
e-mail: [skip@thermal.physics.wayne.edu](mailto:skip@thermal.physics.wayne.edu)  
Web: <http://www.research.wayne.edu/imr.html>  
Interim Director: Lawrence Favro

### **Institute for Scientific Computing**

335 Chemistry; 313-577-2694  
e-mail: [wlh@chem.wayne.edu](mailto:wlh@chem.wayne.edu)  
Director: William Hase

### **Institute of Maternal and Child Health**

4201 St. Antoine; 9-D University Health Center; 313-577-1033  
Web: [http://www.med.wayne.edu/communitymedicine/i\\_mch.htm](http://www.med.wayne.edu/communitymedicine/i_mch.htm)  
Director: John Waller

### **Karmanos Cancer Institute**

110 E. Warren; 313-833-0710  
e-mail: [petersw@kci.wayne.edu](mailto:petersw@kci.wayne.edu)  
Web: <http://www.karmanos.org/>  
Director: John Crissman

### **Ligon Research Center of Vision**

Kresge Eye Institute; 313-577-1355  
e-mail: [ad4942@wayne.edu](mailto:ad4942@wayne.edu)  
Director: Gary Abrams

### **Manufacturing Information Systems Center**

100 Rands House; 313-577-7837  
e-mail: [aa7507@wayne.edu](mailto:aa7507@wayne.edu)  
Director: Arik Ragowsky

### **Michigan Small Business Development Center**

2727 Second Ave., Rm. 121; 313-964-1778  
e-mail: [ron@misbdc.wayne.edu](mailto:ron@misbdc.wayne.edu)  
Web: <http://michigansbdc.org/>  
Director: Ronald Hall

### **C.S. Mott Center for Human Growth & Development**

275 E. Hancock; 313-577-1485  
e-mail: [rsokol@med.wayne.edu](mailto:rsokol@med.wayne.edu)  
Web: <http://www.research.wayne.edu/mott.html>  
Director: Robert Sokol

### **Skillman Center for Children**

3198 Faculty/Administration Bldg.; 313-577-5225  
e-mail: [alma.young@wayne.edu](mailto:alma.young@wayne.edu)  
Web: <http://www.culma.wayne.edu/skillman.html>  
Acting Director: Alma Young

# STUDENT DEVELOPMENT and CAMPUS LIFE

## Office of the Vice President for Student Development and Campus Life

470 Student Center; 577-1992

The Division of Student Development and Campus Life supports and supplements the academic and urban missions of the University. The Division's programs for students facilitate intellectual development and critical thinking, nurture positive self-identity, and develop an understanding of the University and society. The programs also encourage interpersonal relationships in a context of diverse, ethnic, cultural, and racial backgrounds. Both through formal and informal means, the Division continually assesses student needs and supports a process of continuous improvement in services.

Among the major duties of the Office of the Vice President for Student Development and Campus Life are communication of student attitudes and activities to the faculty, administration and general public; interpretation of University objectives and policies to students; assistance to students in developing their potential through effective use of the University's resources; and the encouragement of intellectual stimulation beyond the traditional classroom environment.

Moreover, this office oversees intercollegiate athletics and intramural recreation, University Housing, the Recreation and Fitness Center, University Advising Center, Academic Success Center, Personal Counseling, Placement Services, Records and Registration, the Office of International Students and Scholars, Academic College Enrichment Services (Trio Programs), student personnel services, the Student Center, student organizations and activities, and a variety of special student programs. It is the responsibility of the office to communicate with the President and his executive staff and to cooperate in the work of their divisions; to participate in development of the University with regard to its program and staff needs; to help students develop a sense of their responsibilities; to coordinate the University student code of conduct; to maintain communication between students and all other groups within the University; and to assure that student viewpoints are represented in all policy-setting deliberations of the University.

Through a variety of specialized programs and student academic support services, the Division assists students in the successful pursuit of their educational objectives. Programs of the Division also provide opportunities for students, individually or in groups, to voice their questions and concerns and to receive assistance in defining problems and working toward effective solutions. Furthermore, the Division seeks to minimize student frustrations so that the student may gain confidence in his/her ability to accomplish goals through established channels. The Division of Student Development and Campus Life is committed to the quality process and promotes the continual improvement of services provided to students and others.

## Office of the Registrar

2 West, Helen Newberry Joy Student Services Center;  
313-577-3550

The Office of the Registrar supports the instructional mission and, to a lesser extent, the research and professional service missions of the University. The Office coordinates, supplements and facilitates many activities necessary to the instructional process. Administrative services are also provided to the Vice President for Student Development and Campus Life and many academic and program units across the University.

The Office consists of three major units: Student Records, Registration and Scheduling, and Student Systems Technical Support. Student Records maintains academic and personal student data, grades, transcripts, graduation applications, and diplomas and certifies enrollment, including enrollment in athletics and veterans' programs. Registration and Scheduling prepares the Schedules of Classes and Final Examinations, makes room assignments for classes and special events, processes registrations, drops and adds, assesses tuition and fees, determines residency, and reviews all appeals for exceptions to University enrollment policies. Student Systems Technical Support provides hardware, software, and network services to offices in the Helen Newberry Joy Student Services Center. The unit also develops systems and procedures for business processes, produces official enrollment data, and responds to the student information needs of the University community.

## University Advising Center

2 East, Helen Newberry Joy Student Services Center; 577-2680; for appointments: 577-8889

The University Advising Center's staff members advise all students with undeclared majors and most pre-professional students. Using professional advisers, the Center helps students identify their curricula, select courses, understand and negotiate the institution's rules, regulations and requirements, and resolve probationary issues. In addition, the Center maintains a Study Abroad Resource Center, operates the orientation program, houses pre-medical credential files, facilitates the early progress assessment (academic alert), and publishes the student handbook. For further information, see page 40.

## Academic Success Center

2100 Adamany Undergraduate Library; 577-3165; Fax: 577-9372  
Hours: Mon. - Thurs., 8:30 a.m. - 8:00 p.m.; Fri., 8:30 a.m. - 5:00 p.m.

This Center is a 'one-stop learning shop with a total learning fitness plan' for students, which has a variety of programs and services oriented toward academic success:

*Individual Learning Fitness Plan:* Professional learning specialists are available to aid students in academic success. Any Wayne State student may set up a learning fitness plan. A learning specialist and a student may cooperatively develop a learning fitness plan for a particular term, based on the specialist's assessment of the student's academic strengths and weaknesses.

*Tutoring:* Three types of tutoring are available at the Academic Success Center: (1) Students may apply to meet one hour weekly with a student expert, to assist them with work in a particular course; (2) Drop-in tutoring is available at the Center in specific courses; (3) Supplemental Instruction (SI) is available in many first-year introductory courses, in which SI leaders collaborate with the course instructor. These student experts attend each lecture, organize and facilitate group study sessions following the lecture (one to three hours per week), and direct students toward academic success. In addition, students may apply for a personal tutor or contact a tutor on the Web: <http://www.success.wayne.edu>

*Reading and Study Skills:* Students may enroll in free, structured courses such as R E 0990, Learning Theory and Study Skills, or R E 0995, Analytical Reading for Textbook Study. Students can also work on self-managed, individualized laboratory programs that are developed according to the needs of each student. These programs are designed to improve students' study skills including vocabulary, reading speed, and comprehension. See page 484 for Reading Efficiency (R E) courses.

*Career Development:* The Career Planning Staff will review and discuss a student's major and career plans to help prepare him or her for employment opportunities or career changes. A structured course in career planning, UCS 0991, Designing Your Future, is offered along with many professional workshop events. Additionally, interac-

tive career exploration computer software programs are available for career planning. (See page 484 for UCS 0991.)

**Technology Center/Lab:** The Center has multi-media computers and computer software available which are designed to improve students' reading, writing, and math skills. Course-specific reviews and studyware are available for student use, along with material designed to prepare students for taking the GRE, GMAT, LSAT, and MCAT standardized tests. The Lab is equipped with twenty computers, a SMART board and instructor's station. Scheduled use of Technology Center resources is available to the University community.

**Learning Video Library:** Individual rooms may be reserved for viewing self-help instructional videos, which cover such topics as time management, test-taking strategies, preparation in mathematics proficiency, and other study skills strategies.

**Customized Workshops:** Workshops may be scheduled for groups, student organizations, and academic departments, customized to specific needs by Academic Success Center learning specialists. Workshop topics may cover techniques required by individual students, such as managing time, preparing for final examinations, coping with test-taking anxiety, methods of textbook use, reversing negative trends in scholarship, or developing the capacity to concentrate while studying; or may have a specific focus such as: how successful nursing students study, effective study strategies in organic chemistry, or how to navigate the psychology textbook.

## University Counseling and Placement Services

1001 Faculty/Administration Building; (313) 577-1141; Fax: 577-9943

University Counseling and Placement Services helps students promote individual development in ways which will maximize benefits from their University experience and help them develop career direction and find ways of coping with problems which interfere with their career and education attainment. It also provides help to students and alumni in defining career and employment goals and assists them in their search for employment opportunities. Further, support is provided to students who have special needs associated with their handicaps.

To meet the diverse needs of students, there are three service areas within University Counseling and Placement Services: Counseling and Placement Services; Testing, Evaluation and Research; and Educational Accessibility Services. The following services are provided:

**Personal Counseling Services, 1001 Faculty/Administration Building, 577-3398.** This service provides students with special opportunities for consultation about needs or concerns for which individualized help is desired. Any facet of experience which affects a student's educational progress may be explored with the professional counseling staff. Counseling may help students to clarify for themselves their own identity and relationship with the social, educational and occupational world, to explore opportunities for personal and self-esteem development, to set and realize goals and to resolve motivational and other personal conflicts. In addition to confidential private consultation, a number of psychological education group workshops on common issues are offered, and services are available for emergency situations.

**Lesbian, Gay, and Bisexual Services, 1001 Faculty/Administration Building, 577-3398:** This service provides various types of assistance to lesbian, gay, and bisexual students, staff, and faculty. Services include: individual, couple, and group counseling for personal and career development; discussion and support groups in which to explore personal concerns and discuss issues with others; educational presentations to classes, student groups, and conferences that address sexual orientation, discrimination, and other issues; information and referrals to local, state, and national organizations; and special events and programs throughout the year.

**Women's Resource Program, 580.3 Student Center, 577-4103:** The Women's Resource Program offers services for students, staff, faculty, and community persons and is open to men as well as women. Information and referral services include: legal issues, health care, child care, emergency assistance, family services, education and training programs, personal counseling, career information, women's groups, events, legislation regarding women's issues, financial aid and academic research related to women's needs.

**Minorities Resource Program, 580.2 Student Center, 577-4291:** The Minorities Resource Program offers services oriented to the needs and concerns of various minority populations, including ethnic minorities and alternative lifestyle minorities. Participation is open to everyone. Services include information, resources and referrals regarding University procedures and policies, academic support services, personal and career counseling, professional and graduate school information, scholarship information, and family and personal needs. The Program also publishes the biannual *Minorities Resource Directory*.

**Re-Entry to Education Program: 580.1 Student Center, 577-0340:** This program provides service to people of all ages who have interrupted their formal education and who want additional education, specialized training, or academic degrees. Information is provided on admission, financial aid, child care, social services, legal services, and health care services. Referrals are provided on academic services (mathematics review, writing skills, test preparation, and the like), career information (such as prospective salary, job-market potential, and how to choose a career), and for personal counseling.

### COUNSELING and PLACEMENT SERVICES

1001 (First floor) Faculty/Administration Building;  
(313) 577-3390; Fax: 577-9943

**Cooperative Education:** Cooperative Education is primarily an undergraduate program which provides comprehensive professional preparation by means of alternating semesters of full-time, paid work experience and full-time class attendance. The program is available to students in Business Administration, Engineering, and selected majors from the Colleges of Liberal Arts; Science; and Fine, Performing and Communication Arts.

**Summer Internships:** The Summer Internship program provides opportunities for career-related paid summer intern positions. Summer employment workshops are provided from November through March to help students prepare for the job search. Preprofessional positions are available throughout the United States with a wide range of employers.

**College Work-Study:** Students who receive College Work-Study awards through the Office of Scholarships and Financial Aid can visit the Counseling and Placement Services to find College Work-Study job openings. Placement assistance is provided in matching a student's interests with employers' needs.

**Student Employment:** The Student Employment Program provides part-time employment opportunities to students enrolled at the University. The policies and procedures of the Program are described in the *Student Guide to On-Campus Employment*. Part-time jobs, either on a seasonal or continuous basis, are available on-campus through the Student Assistant Program, and off-campus through an open posting process or with the assistance of a placement coordinator.

**On-Campus Interviews:** Assistance in obtaining full-time employment after graduation is provided. Graduating seniors may increase employment opportunities through interviews with any of several hundred employers who visit the campus annually.

**Michigan Collegiate Job Fair:** State-wide, one-day job fairs are available in November and March of each year for Wayne State students and graduates. The events, jointly sponsored with Eastern Michigan University, each attract 150 varied employers and approximately 1,000 students from over fifty colleges and universities in Michigan.

**Job Bulletin, Resume Referral, and Credentials:** A Job Bulletin, listing all full-time positions received by Counseling and Placement Services, is available to students and alumni. It is published every two weeks and is mailed directly to subscribers. A resume referral service offers recent graduates and alumni a continuous means for referring their resumes directly to the employers who regularly list opportunities with the service. Master's and doctoral graduates who intend to teach, as well as graduates in nursing, social work, criminal justice and allied health professions may establish a professional credential file, which prospective employers of these majors generally require of applicants.

**Placement Resources Center:** The Center contains career information including books on job-hunting, interviewing, resume writing, and government employment, and directories of associations. A collection of videotapes containing information about various organizations, interviewing techniques and career-related information is available for viewing. Computerized job listings are available.

**Additional Services:** Annual surveys of Wayne State University graduates are conducted to determine the kind of jobs and salaries obtained by former students and the satisfaction they feel about their jobs. A speakers' bureau is available to community, faculty and student groups, giving information on employment, resumes and interviewing techniques.

#### **EDUCATIONAL ACCESSIBILITY SERVICES**

583 Student Center, 577-1851; 577-3365 (TTD)

This Office is responsible for providing reasonable accommodations for those persons with disabilities on campus. The Office staff is committed to a philosophy that allows for the full integration and participation of a student with a disability in campus life. Students are offered: consultation prior to University enrollment, priority registration, note-taker services, study rooms with adaptive equipment, alternative testing arrangements, scribes, interpreters, and information on community resources. For scholarships available as a function of this office, see page 28.

#### **TESTING, EVALUATION, and RESEARCH**

698 Student Center; (313) 577-3400; Fax: 577-0617

**Testing Services:** 698 Student Center, 577-3400: Testing is provided to students for entrance examinations, credit by examination through the College-Level Examination Program, qualifying examinations for course election, proficiency examinations, examinations for fulfillment of University General Education Requirements, and tests required by professional associations and licensing agencies.

Testing service for graduate and professional school admission is also available, as are services to faculty and academic personnel. These include preparation of class reports based on teacher-made tests or qualifying examination data, consultation on commercially-available test programs or on the construction of course examinations, and scoring of departmental exams. An undergraduate retention database is maintained for the University by Testing Services; and research studies are undertaken for planning student services and resources.

**Course Evaluation Office,** 684 Student Center, 577-0469: This Office coordinates the Student Evaluation of Teaching project. The Office staff distributes, collects and processes the forms used to evaluate courses and instructors each term and produces individual and department-level reports based on data collected. The staff also advises on design and use of survey forms tailored to individual needs.

## **Office of International Students and Scholars (OISS)**

598 Student Center; 577-3422; Fax: 577-2962

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

Wayne State University is home to approximately 3,300 international students and visiting scholars from nearly 100 countries. The OISS

54 *General Information*

was established to aid these individuals in their educational and scholarly pursuits at Wayne State. This is accomplished by providing quality service, facilitating important linkages to the campus and community, offering cross-cultural educational programs and activities, and assisting in important matters related to immigration regulation compliance. (Also see 'International Students,' above, page 17.)

The mission of OISS is to support and enhance the educational, cultural, and social experiences of international students and scholars at Wayne State University. The Office aims to serve as the primary link for international students and scholars to the University, community, federal government, and public and private agencies and organizations. In addition, OISS strives to promote a positive cross-cultural environment through international education and exchange, and by serving as the 'gateway to the world' through international and cross-cultural educational programs provided to the University and surrounding community.

OISS staff advise and counsel students and scholars on matters pertaining to immigration regulations, and issues of cross-cultural adjustment; provide students and scholars with educational, cultural, and social programs and activities including a comprehensive orientation program and written material designed to help them achieve their educational and personal goals at Wayne State; assists University departments in the hiring of foreign national employees by processing necessary immigration petitions with the Immigration and Naturalization Service (INS), Department of Labor (DOL), and Department of State; consult and interact with administrative units at Wayne State, governmental organizations and other agencies; serve as a focal point for campus and community services to meet the needs of students and scholars; provide cross-cultural workshops and training seminars on campus and in the community; and work with campus academic and academic support units to help define and achieve the institutional goals related to international education and exchange.

*New International Students and Scholars* receive the OISS welcome booklet with their visa document (Form I-20 or IAP-66). The booklet provides information on a wide variety of important topics to these individuals before they leave their home country. Among the subjects covered are housing, health insurance, expenses, immigration status, local climate, and airport transportation. New students and scholars report to the OISS soon after their arrival and participate in a comprehensive orientation program. This program is designed to meet their immediate needs in terms of housing information and University registration procedures; introduce them to the U.S. culture and the educational system at Wayne State; 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.

*Non-Immigrant Students:* Before registering for classes, all non-immigrant international students must report to the OISS to complete check-in procedures and have immigration documents reviewed, purchase mandatory health insurance, and obtain an orientation schedule. Transferring F-1 students must obtain a transfer clearance form from their previous school in the United States 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 through the OISS of any change in program, including changes in level and field of study. J-1 exchange visitors, including students, may not make a change in level, field, or category without the advance approval of the United States Immigration Agency (USIA), and may be precluded from change of immigration status until a two-year home country residency requirement is met.

Immigration and Naturalization Service regulations require F-1 and J-1 students to maintain a full course of study and make normal progress toward program completion at the institution they have been authorized to attend. Undergraduate students (including those in Post-Bachelor's status) must successfully complete at least twelve credits each semester (excluding Spring/Summer term or an

approved annual vacation). See an OISS adviser for details on complying with this and other INS requirements.

*Communting Canadian students* enrolled less than full time must obtain a 'border-crossing letter' from the OISS and should consult with an adviser to determine the impact of this status on future immigration benefits including the availability of practical training.

*Professors and Research Scholars:* Wayne State provides foreign professors and research scholars with the opportunity to engage in research, teaching, consulting, and lecturing with colleagues at the University; to participate in cross-cultural activities; and to share their experience and increase 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 governmental regulations. Offers of employment to foreign nationals must be authorized by the OISS, and only this office may sign immigration forms and petitions related to their employment on behalf of the University. All foreign national employees must complete INS Form I-9, 'Employment Eligibility Verification,' and present evidence of their identity and employment eligibility at the OISS before commencing employment at Wayne State University.

*Health Insurance:* International students and J-1 exchange visitors and their dependents holding J-2 status are required to comply with the health insurance requirements of the University. Insurance that meets these requirements may be purchased through the OISS. The mandatory international health 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.

Communting Canadian students may waive the University health insurance requirement by providing proof of OHIP coverage prior to each semester of enrollment.

*Cross-Cultural Activities:* The OISS provides cross-cultural activities in order to provide the broadest exposure to American society, culture, and institutions. Activities include: field trips, holiday programs, the International Fair, and a free International Coffee Hour held on the seventh floor of the Student Center Building every Wednesday from 11:30 a.m. to 1:00 p.m., which provides opportunity for dialogue with and among international students and scholars, American students, and community sponsors.

## Office of Military and Veterans Affairs (OMVA)

2 West, Helen Newberry Joy Student Services Center;  
313-577-3374; Fax: 313-577-3769

This office assists veterans, eligible dependents/survivors, reservists and national guard members in obtaining educational benefits. Specifically, students are aided in applying for Federal benefits outlined under Title 38, U.S.C., including: the Montgomery G.I. Bill (chapter 30), the Reserve G.I. Bill (chapter 1606), V.E.A.P. (chapter 32), 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.*

*Standards of Academic Progress:* The minimum academic level for continued benefit eligibility is a cumulative grade point average (g.p.a.) of 2.0 for undergraduate students, and 3.0 for graduate students. Students with a cumulative g.p.a. below these minimums will be placed on probation. Failure to raise the average to the established standard after two semesters on probation will result in termination of V.A. benefits. Information on restoration policies and requests should be directed to an OMVA Certifying Official.

*Non-Punitive Grades:* Payments received for educational benefits may be recouped upon the student's earning a non-punitive grade. In the case of an 'X' grade for an unofficial withdrawal, the student will

be required to verify the last date of attendance to the Department of Veterans Affairs (DVA).

*Changes in Program:* Students are permitted to change programs without detriment to their benefits. However, the student must have completed course work attempted under the prior program successfully, and the OMVA must verify to the DVA the student's ranking and credit hour completion in the new program. Forms for verifying this change are: Form 22-1995 for veterans/reservists, and Form 22-5495 for survivors and dependents.

*Excess Credits:* Undergraduate students who have earned 130 credits or above and have yet to earn a bachelor's degree are required to complete the *Excess Hours for Graduation* memorandum, and have it signed by their academic adviser, in order to remain eligible for benefits.

*Post 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 OMVA via an academic adviser the reason for enrollment (i.e., completing foundation courses for a master's-level program).

*Changes in Enrollment (Drop/Add):* If a student changes his/her enrollment during a semester, the student must immediately notify the University's VA Certifying Official. The OMVA is required to certify to the DVA all changes in credit load, including complete withdrawal. Failure to notify immediately would result in a status of overpayment of benefits for the student.

*Advance payment* for the initial and second month may be obtained by eligible students who register for half-time study or more. The advance payment will be sent to the OMVA. In order to be eligible for an advance payment, students must file their request thirty days prior to the first day of the semester. If a student receives advance payment, and subsequently registers for an amount of credits which makes him/her ineligible for the advance, the check must be promptly returned to the DVA by the Wayne State OMVA.

*DVA Vocational Rehabilitation:* Vocational rehabilitation programs help service-disabled veterans to select, prepare for, and secure work that is in line with their personal goals, interests, abilities and physical capabilities. To apply, contact VARO, Detroit, at: 800-827-1000.

*DVA Tutorial Assistance:* Tutorial assistance is available to help defray tutoring costs for eligible persons. Veterans must be enrolled on a half-time basis or above. Currently, tutorial benefits are paid up to a maximum monthly benefit of \$100, for a maximum total benefit of \$1,200 with no charge against a basic entitlement for the first six months.

*DVA Work-Study Jobs:* Part-time student assistant positions are usually available on campus at the OMVA, at the DVA Regional Office, or at a DVA hospital. Students who qualify may work up to twenty-five hours per week, are limited to 250 hours per semester, and receive the federal minimum wage; these wages, as of the time of printing of this Bulletin, are not subject to federal taxation.

## Academic College Enrichment Services (ACCESS)

1 East, Helen Newberry Joy Student Services Center; 577-5050

ACCESS provides academic assistance and support services to promising youths and adults in the metropolitan Detroit area who have been historically under-represented in college due to their economic condition, racial/ethnic status, educational preparation, or family background. This office helps students and potential students who range in age from sixth-graders in Detroit Public Schools to veterans of the U.S. armed services seeking admission to college.

This department's mission also includes efforts to increase the post-secondary admission of the diverse population groups which it serves, and to advance the retention rate of such students in the University. Through continuous improvement of services, the depart-

ment aims to both maximize the educational achievement of its participants as well as to further the urban commitment of Wayne State University.

The department has five federally-funded programs and one initiative (the King-Chavez-Parks College Day Program) which is funded by the state:

**The Educational Opportunity Center (EOC)**, 1 East, Helen Newberry Joy Student Services Center, 577-5050, provides a comprehensive career counseling program that offers free academic, vocational career and financial aid information to eligible applicants nineteen years of age and older, who wish to pursue a postsecondary education.

**The Higher Education Opportunities Committee (HEOC) Talent Search Program**, 1 East, Helen Newberry Joy Student Services Center, 577-5050, provides guidance and information on college admissions and financial aid to students who reside in its target area or attend designated Detroit high schools and wish to pursue a post-secondary education. HEOC also sponsors trips to colleges and works with students on career choices, tutoring, study skills and test-taking techniques.

**The Martin Luther King, Jr.—Cesar Chavez—Rosa Parks (KCP) College Day Program**, 345 Manoogian Hall, 577-3085, offers motivational and informational activities and college visitations designed to encourage seventh- through twelfth-grade students in targeted schools to complete high school and continue on to college.

**Student Support Services (Project 350)**, 1 East, Helen Newberry Joy Student Services Center, 577-5050, provides academic support and facilitates admission to Wayne State University for students who demonstrate academic potential or have financial need, and who meet the federal eligibility requirements for participation in Student Support Services Programs. Project 350 students are required to participate in an initial summer program.

**Upward Bound**, 5425 Woodward, 577-1943, provides students who are potential first-generation college students, currently in grades 9-12 of designated Detroit high schools, with a head start on improving the skills required to succeed in college, through instruction, tutoring, academic and career guidance, personal counseling, and cultural enrichment activities.

**Veterans' Educational Opportunity Program (VEOP)**, 5425 Woodward, 577-9710, provides a program of instruction, academic and career guidance, personal counseling, tutoring, and post-secondary placement to veterans who have served in the U.S. Armed Forces from December 31, 1955 to present.

## STUDENT CENTER AND PROGRAM ACTIVITIES

*Director:* 341 Student Center; 577-3482

The Student Center is a unifying force in the life of the University. This Department's mission is to provide a Student Center which will meet the educational, social, recreational, dining, program and meeting-room needs of students, faculty and administration, alumni, and guests. The Department consists of program, service, and facility components, operating 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.

### *Student Center*

The Student Center serves as the home away from home for thousands of students commuting daily to and from the campus. 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. To insure the effectiveness of its programs and services, the Center administration meets regularly with an advisory board

comprised mostly of students. The major facilities, programs and services of the Student Center include:

*Student Resource and Assistance Center; 577 3568:* The Center, located in 135 Student Center, provides information and programs that will enhance students' experience on campus. Staffed by students, the Center is open from 9:00 a.m. to 6:30 p.m., Monday through Thursday, and from 9:00 a.m. to 3:30 p.m. on Friday during the fall and winter semesters. Summer hours are Monday through Thursday, 9:00 a.m. to 5:00 p.m.; Friday, 9:00 a.m. to 3:30 p.m. Information available in the Center includes: University academic programs and services; off-campus housing information; campus activities; travel information; campus weekly and monthly calendars; job postings; SMART and DOT bus schedules; Ride-Share Carpool program; community activities; community service opportunities; tutor and typist lists. The Center also co-sponsors informational and entertainment programs such as Hallo-Wayne, The Dating Game, Wayne Winter Week, Health Day, Spring Travel Fair, and Study Abroad Open House.

*Postal Contract Station; 577-4328:* Located in 101 Student Center, this station provides the following U.S. Postal Services Monday through Friday, 9:00 a.m. to 4:00 p.m.: postage stamps, express mail, certified/registered mail envelopes, postcards, and package handling.

*Game Room; 577-3477* Recreation facilities are located on the lower level. Billiards and table tennis equipment may be rented by the hour. A juke box, table games, foosball, and a variety of video games are also available in the facility.

*Service Center; 577-3484:* Located in 211 Student Center, the Service Center provides the following services for a fee: typewriter rental, duplicating service, SMART and DOT bus tickets, laminating service, overnight photo-finishing service, international identification cards, Fax service, drop box for *South End* classified ads, and State Hall locker rental. In addition, the University Lost and Found and student organization mail boxes are located here. Campus bulletin board postings are also done by the Service Center staff. Notary Public service and personal mailboxes are available.

*Grosberg Religious Center:* Various religious denominations have offices on the sixth and seventh floors of the building. Programs, personal counseling as well as spiritual counseling are available from the various University chaplains.

*Reservations; 577-4585:* Rooms and audio-visual equipment are available for meetings, seminars, conferences and special programs. Bake sale lottery, dance lottery, literature table and showcase information is also provided by the Reservations Office, located in 333 Student Center.

*Business Office; 577-8062:* Located in 217 Student Center, the Business Office houses the Student Center's Accounting Administrator and Business Manager. Responsible for maintenance of Student Center accounts, Student Center personnel processing, and allocation of student organizations' general fund and agency accounts. It also provides Notary Public service at no charge to students, faculty and staff.

### *Program Activities*

351 Student Center; 577-3444

*Student Organizations:* There are approximately 200 active student organizations including such diverse categories as academic/professional, social action, political, sororities/fraternities, honoraries, ethnic and religious groups, as well as student governments. The *South End*, the official student newspaper, is published daily during the academic year. Student activities advisers are available to assist students who want to organize new student groups. The staff coordinates various programs such as the International Fair, Student Organizations Day, Commencement Corps, College Bowl, yearbook, leadership training, WSU Diplomats Club, Project Volunteer, and Alternative Spring Break.



*Weekly Programs:* Each week during the academic year, Student Center and Program Activities offers a variety of different programs for the general student population. These programs include: the Wayne Underground Music Series, on alternate Wednesdays; and Multiformity: An Entertainment Series, on Thursdays.

## Student Council

395 Student Center; 577-3416

The Student Council is the recognized student government of Wayne State University. It consists of twelve members, elected in a university-wide election, plus one student representative elected by each college and school. The Student Council has an official advisory responsibility in policy formation for the governing of student activities at Wayne State. The Student Council, through the Student Activities Budget Committee (SABC), allocates the student life portion of the Omnibus Fee. The Student Council appoints Council members and student volunteers to sit on several University committees; students interested in serving on a committee should contact the Council office.

## Recreation and Fitness Center

5210 Gullen Mall; 313-577-BFIT (2348)

This state-of-the-art facility is located in the heart of the campus, next to the Student Center and the libraries on Gullen Mall. It offers programs and services to meet the recreational, fitness, wellness and personal development needs of the campus community. Among its features are:

*Group Fitness Classes (non-credit):* A rich assortment of classes, conducted by trained, certified and experienced instructors, is available to meet individual needs, including traditional high/low aerobics, hip-hop, step, yoga, spinning, stretch and tone, and aqua aerobics classes.

*Open Recreation:* The fitness area, courts, walking track, climbing wall, pool, aerobics gym, and multi-activity center offer opportunities for unstructured play and participation. Basketball, volleyball, and a variety of equipment and areas for working out, stretching, or socializing are offered.

*Fitness and Wellness Programs:* Health assessment and personal training programs for every level of fitness are available to all members.

*Leisure Pool:* The pool includes a giant water slide, lazy river, bubble bench, and spa. Water basketball, volleyball, water polo and aqua fitness programs are offered at various times.

*Climbing Wall:* This is a challenging exercise option for building strength and endurance. All necessary equipment may be rented at the climbing wall registration desk; structured classes and open-use periods are available.

The 75,000 square-foot Recreation and Fitness Center also features a juice bar and merchandise area, a service center on the lower level with equipment check-out and locker services, a family/disabled locker room, two lifts in the pool area for use by disabled persons, weight equipment specifically for use by the disabled, men's and women's locker rooms with individual private showers, day lockers and dressing areas.

## Athletics, Intramurals and Recreation

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

*Intramural Sports:* 127 Matthaei Building; 577-4278

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

Wayne State University has a rich athletic tradition dating back to 1917. Its student athletes have captured numerous championships, including national championships directed by the NCAA and Conference honors. Individual participants have been honored with recognition as national champions, academic All-Americans and All-

Conference distinction. The over 400 student athletes currently involved in competitive athletics have a combined grade point average of 2.92. 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, golf, men's and women's ice hockey, softball, men's and women's swimming, men's and women's tennis, and volleyball.

The University competes in both NCAA Division I and Division II. Currently, both men's and women's hockey are Division I, with men competing in the College Hockey America Conference. The other University athletic programs compete in the Great Lakes Intercollegiate Athletic Conference (GLIAC). Members of the GLIAC are: Ashland University, Ferris State University, University of Findlay, Grand Valley State University, Hillsdale College, University of Indianapolis, Mercyhurst College, Michigan Technological University, Northern Michigan University, Northwood University, Saginaw Valley State University, and Wayne State University.

The University offers a wide and varied program of recreational and intramural activities. The Matthaei Complex, located on the west end of the 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/diving facilities. Use of these facilities is free; a current University ID is required for admission to the indoor facilities.

The Matthaei Building is open from 7:30 a.m. to 9:30 p.m., Monday through Friday; and 12 noon to 4:30 p.m. on Saturdays, during the fall and winter semesters. During the spring/summer semester the Building is open from 7:30 a.m. to 7:30 p.m., Monday through Friday. A facility schedule is available 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. Lock and towel services are available for students. For additional facility information, visit the Matthaei Shop in the Matthaei Building; or call: 577-4295.

Intramural activities are also available for students. Activities offered include basketball, racquetball, tennis, and volleyball. For sign-up information or schedules, visit the Intramural Office, 127 Matthaei Building; or call: 577-4278.

Ticket and schedule information is available at the Athletic Office, 101 Matthaei Building, 313-577-4280; or call the ticket office toll-free: 1-866-WSU-TIKS. For current information on WSU athletic teams (including ticket information), visit the Website: <http://www.WSUathletics.com>

# ADDITIONAL UNIVERSITY SERVICES

## Computing & Information Technology Division (C&IT)

5925 Woodward Avenue; (313) 577-4778  
<http://www.wayne.edu/cit/>

Computing & Information Technology (C&IT) strives to enhance Wayne State University's teaching, learning, research, and service activities. The division aligns its activities and services closely with the University's strategic directions to ensure that Wayne State is successful in a highly competitive and technology-intensive world for universities. C&IT seeks to deliver its core services efficiently to anticipate and respond to the changing needs of the university community in using technology creatively and effectively.

**Computer Access:** C&IT maintains a list of Wayne State University libraries, extension centers, and academic departments that provide computers for Wayne State students to use (at [http://support.wayne.edu/services/computer\\_access.shtml](http://support.wayne.edu/services/computer_access.shtml)).

**Access to the Internet:** WSU students can access the Internet and the University's network on campus or from home:

- 1) using a computer in any Wayne State Library, at the Oakland Center or Wayne County Center, or in many academic departments on campus; and
- 2) using a home computer, with a phone line, modem, Internet communications software (PPP), and a WSU AccessID (see below) to dial one of Wayne State's 24 remote network access numbers in SE Michigan (for free use by WSU students and employees exclusively) or a MichNet access number available throughout the State of Michigan (for those who live outside WSU's dial-in service area).

For assistance accessing the Internet or WSU's network, contact the C&IT Help Desk, (313) 577-4778 (also see below).

**Electronic Communication:** C&IT provides free Internet-standard electronic mail and directory services to all Wayne State students, faculty, and staff by means of a WSU AccessID. Instructions on how to use WSU e-mail and other electronic communication services are on the World Wide Web (at <http://support.wayne.edu/>). Further assistance is available from the C&IT Help Desk, (313) 577-4778 (also see below).

**Help Desks** (for using computers and accessing networks): The C&IT Help Desk provides telephone services at (313) 577-4778, electronic mail services (via [helpdesk@wayne.edu](mailto:helpdesk@wayne.edu)), and World Wide Web services (at <http://support.wayne.edu/>) to help Wayne State University students:

- 1) dial in to the Internet or WSU's network from a home computer, using a phone line, modem, Internet communications software (PPP), and a WSU AccessID; 2) use electronic mail, LISTSERV discussion lists, and other centrally provided computing and communication resources and services at Wayne State;
- 3) use general-productivity software (such as Microsoft Office) on a Windows PC or a Macintosh computer;
- 4) obtain site-licensed or public domain software;
- 5) get information about purchasing a Windows PC or Macintosh computer and software at educational discounts;
- 6) troubleshoot problems with PCs and Macintosh computers; or
- 7) use or obtain information about any of the central computing and networking resources and services that C&IT provides.

**The Computing & Information Technology Help Pages** on the World Wide Web (at <http://support.wayne.edu/>) also contain information about how to access and use central computing resources and services at Wayne State, purchase computers and software at educational discounts, and obtain public-domain or site-licensed software.

**The University's Data Network Help Desk** is available 24 hours a day, seven days a week, by telephone at (313) 577-4746 or on the Web (<http://noc.wayne.edu/~noc>):

- 1) to report a suspected network problem; or
- 2) if one has trouble connecting to Wayne State's network or the Internet on campus or when using a WSU or MichNet dial-in line from home.

**Computer and Software Purchases:** Wayne State students can obtain Internet software and set-up instructions and virus protection software (public-domain or site-licensed) from the C&IT Help Pages on the Web (at <http://support.wayne.edu/>) or on CD-ROM. WSU students also can get information about purchasing computer hardware and software at educational discounts from the C&IT Help Desk, (313) 577-4778, or the C&IT Help Pages on the Web.

**Research Computing:** Computing & Information Technology, in partnership with a number of Wayne State schools and colleges, provides the University with a high-performance IBM RS/6000 SP super-computer for research use by faculty, graduate students, post-doctoral students, and academic staff. This high-performance computer is connected to a network infrastructure that supports the expansion of WSU research and collaboration with academic institutions and laboratories around the country and abroad, as well as providing access to national supercomputing centers. C&IT also provides specialized applications on the UNIX-based Wayne Academic Computing Server, which faculty, researchers, and graduate students can use for statistical processing and computer programming. Contact the C&IT Help Desk (see below) for assistance accessing these computers. The Research Support Laboratory (also below) provides consulting support on the use of the academic UNIX server and can make referrals for assistance using WSU's super-computer.

**Research Support:** C&IT operates the Research Support Laboratory (RSL), a fully equipped computer lab where WSU students can obtain comprehensive support services (from one-on-one consulting to group seminars by request) on the use of computer technology at any phase of the research process (design, implementation, analysis, or presentation) or hold a hands-on computer tutorial, free-of-charge. Located in Purdy Library (northeast corner, 1st floor), (313) 577-5804, the RSL contains: networked Macintosh and Windows computers and laser printers; statistical, qualitative analysis, spreadsheet, database, word-processing, presentation, graphics, and desktop publishing software that is fully supported by the RSL staff; user manuals for available software; and research-oriented textbooks. Additional equipment in this lab includes: color scanners, a 6-color plotter, a film recorder for making 35mm slides, a CD burner, and CD-ROM and videodisc technology. For more information about the software, hardware, and current staff at the RSL, visit their Web site (at <http://www.rsl.wayne.edu/>).

**Computing Workshops by Request:** Classes and other student groups can arrange special-request workshops on Internet-related subjects (e-mail, LISTSERV discussion lists, Web publishing, HTML, etc.) by calling C&IT staff at (313) 577-4620. For seminars, workshops, or tutorials that pertain to research computing, call the Research Support Laboratory at (313) 577-4740.

**Educational Technology Services:** Computing & Information Technology staff provide leadership to faculty and students in the use of education technologies, develop instructional media, and serve as education technology consultants to academic departments, support groups, and faculty. In addition, C&IT develops and supports central teaching and learning systems, and works to integrate them with Wayne State's central administrative systems.

**Television Transmission Services:** C&IT transmits the College Cable Channel, which provides distance education services for Wayne State and several other colleges and universities in the Detroit area; programs, schedules, and transmits The Working Channel, a joint community channel between Wayne State University and Detroit's public television station, WTVS/Channel 56; transmits special courses and programs directly to businesses in the area; coordinates reception of satellite teleconferences on WSU's campus; and produces and broadcasts satellite teleconferences from WSU's campus.

**Computing News & Information:** C&IT announces changes to the availability and status of Wayne State's networks and the central computing resources and services that the division provides, including hours of operation, by posting Computing Notices on the Web (at <http://support.wayne.edu/>) and by sending e-mail messages to WSU schools, colleges, and divisions. Many of the division's publications also are available electronically on Computing & Information Technology's Web site (at <http://www.wayne.edu/cit/>).

**C&IT Phone Numbers of Interest to WSU Students:**

C&IT Help Desk	(313) 577-4778
C&IT News & Information	(313) 577-3614
Educational Technology Services	(313) 577-1111
Internet Services	(313) 577-4620
Network Help Desk/Operations Center	(313) 577-4746
Research Consulting	(313) 577-5804
Research Support Laboratory	(313) 577-5804
Television & Video Services	(313) 577-1111
TV Broadcast Operations	(248) 547-9370
Workshops by Request (for groups):	
On Internet Applications	(313) 577-4620
On Research Computing	(313) 577-4740

**Health Insurance**

Office of International Students and Scholars (OISS)  
 598 Student Center; 577-3422; Fax: 577-2962  
 Web: <http://www.oiss.wayne.edu>  
 Health Insurance Advocate: 577-0724

Students may choose to purchase an injury and sickness insurance plan for a reasonable fee. The policy provides stipulated amounts for outpatient prescription drugs (sickness only), hospitalization, surgery and emergency room fees, alcoholism and drug abuse treatment, and psychotherapy benefits. Forms to purchase this insurance are available by contacting the Health Insurance Advocate in the OISS; telephone 577-0724.

**Primary Care Nursing Service**

University Health Center; 745-4774

Students are encouraged to use the Primary Care Nursing Service for health care needs including illness, physical examinations, and family planning. Services are provided by certified Nurse Practitioners. X-rays and laboratory tests can be performed in the University Health Center. There are charges to students for these services. Visits are by appointment, which may be made by telephoning 745-4774 between 8:30 a.m. and 5:30 p.m., Monday through Friday; students should inquire about accepted insurance plans when making an appointment.

**Housing Office**

700 Merrick; 577-2116

This office administers on-campus housing owned by the University and provides information about these units to interested students, faculty and staff. Staff members are charged a ten per cent surcharge at all buildings and are limited to a one-year stay with the exception of Chatsworth Tower.

Wayne State Housing offers a variety of apartment dwellings for individuals and families wanting an eight- to twelve-month lease. Families are welcome in all buildings.

*The University Tower*, the newest apartment building, offers one-, two- and three-bedroom units (most with two bathrooms), central air conditioning, a computer lab, a day care center, and other facilities.

*The Forest Apartments* and the *Helen L. DeRoy Apartments* are modern, barrier-free high-rise buildings with both furnished and unfurnished apartments. Both buildings feature air-conditioning, carpeted units, and a twenty-four hour reception desk. (Only graduate students, faculty and staff may live in the DeRoy Apartments.)

*The Chatsworth Tower* is an elegant building particularly popular with faculty and staff. Most Chatsworth units are air conditioned. Families with children are welcome. Eligibility is restricted to faculty, staff, and graduate students.

*The Chatsworth Annex* offers spacious, unfurnished two-bedroom units. Families with children are welcome. Residents pay their own utility bills except for heat and water.

*The Sherbrooke Apartments* is a very reasonably-priced older building, rented unfurnished.

For further information and application forms, contact the Housing Office, 577-2116.

**Office of the University Ombudsperson**

1326 Faculty/Administration Building; 577-3487; Fax 577-9296

*Ombudsperson:* Victoria Asmar-Anderson

The Office of the Ombudsperson exists to assist students, faculty and staff in solving University-related problems. The Office can help students break through bureaucratic issues, overcome unfair treatment, or obtain consideration of extenuating circumstances by providing information and advice and by facilitating communication. The Office has no authority to change academic or administrative decisions, although it may be able to influence them.

Students may request assistance on academic problems related to admission, advising, degree requirements, discrimination, dishonesty, grades, harassment, records, registration, and teaching; and on nonacademic problems relating to financial aid, housing, parking, payroll, and tuition and fees.

The Ombudsperson's Office investigates appeals and complaints and exercises independent judgment regarding any action it may take. It is not required to fulfill any request or advocate a particular point of view. It will maintain student anonymity if requested to do so. Students, faculty and staff can improve the quality of University service by calling attention to problems they experience.

The Ombudsperson is the Chairperson of the Tuition and Fees Appeals Board (TFAB). The TFAB is charged by the President in Executive Order 96-1 to be the final arbiter of appeals for tuition and related fees. Each appeal is reviewed as an individual case, and cancellation of tuition and/or fees is granted only when circumstances warrant. 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.

**Police/Public Safety Services**

The Department of Public Safety serves the University community and the area immediately adjacent to the University. Police service is provided twenty-four hours a day, seven days a week. All Public Safety Officers are college graduates and are commissioned as police officers after training at a state-certified Police Academy. Any matter requiring the services of a police officer can be reported to the Department of Public Safety at any hour of the day or night (76 West Hancock; 577-2222).

*Blue Light System — Emergency Telephones (577-2222):* The University has installed outdoor emergency telephones throughout the campus. These emergency telephones are identified by bright blue lights.

*Emergencies (577-2222):* All emergencies should be reported immediately to the Department of Public Safety, i.e.:

All crimes	Missing/stolen property
Automobile accidents	Suspicious persons
Injured persons	Vandalism
Break-ins or burglaries	

*Accidents (577-2222):* Ambulatory patients will be transported to either Detroit Receiving Hospital or the University Health Center by Public Safety Officers. The Department of Public Safety does not provide ambulance service but utilizes the Detroit Fire Department Emergency Medical Service to handle any injury which is not minor in nature.

*Fire or Other Extreme Hazards (577-2222):* Emergencies such as fire, smoke, explosions, broken gas or water mains, severe electrical hazards, etc., should be reported to the Department of Public Safety.

*Community-Oriented Policing Section (COPS) (577-6064):* The Department of Public Safety, recognizing the special needs of the Wayne State University community, has established the Community Oriented Policing Section (COPS). COPS officers receive special training in crime prevention measures and techniques. Officers conduct orientation sessions for new students and staff as well as security surveys for University facilities. Customized personal safety seminars are available to any WSU-related group. Specialized training and information is available at no extra charge. For additional information, contact the Community Oriented Policing Section at 577-6064.

## UNIVERSITY LIBRARIES

The Wayne State University Library System is a dynamic organization operating within the challenging and rapidly changing environment of today's information age. The University Libraries support the education, research and service missions of the University and its user communities through comprehensive, high-quality services and resources. The University Libraries are leaders in providing accurate, timely and Web-based information throughout the metropolitan Detroit area and Michigan. Holdings in the University Libraries' total more than three million volumes, 18,000 serial subscriptions, and a broad range of electronic resources.

The Library System includes the David Adamany Undergraduate Library, the Arthur Neef Law Library, the Purdy/Kresge Library, the Science and Engineering Library, the Vera P. Shiffman Medical Library and its Learning Resource Center at the College of Pharmacy and Allied Health Professions, and the Library Services Center at the University Oakland Center in Farmington Hills.

All University Libraries offer reference and information services, inter-library loan, computer searching, photocopying and library and information literacy programs. The libraries make use of the latest computer technologies to provide state-of-the-art access to instructional and research materials.

### David Adamany Undergraduate Library

Telephone: (313) 577-8852  
<http://www.lib.wayne.edu/ugl/>

The David Adamany Undergraduate Library is designed to enhance and enrich the learning experience of undergraduate students by helping them to master the research skills necessary for academic success and for success as information-literate citizens of the twenty-first century. The Library features 700 public-access computers, three instructional labs, a twenty-four hour study area, collaborative study rooms, 2,700 comfortable seats for study, course reserves, and hands-on opportunities for learning to use multimedia and elec-

tronic information resources. It also houses the Academic Success Center, Office for Teaching and Learning, the UGE 1000 class, and the Media Collection which includes video tapes and lecture audio tapes.

### Arthur Neef Law Library

Telephone: (313) 577-3925  
<http://www.lib.wayne.edu/lawlibrary/index.html>

The Neef Law Library is located at the north end of the University main campus. Its collection of over 550,000 volumes makes it the second largest law library in Michigan. The Library subscribes to over 1,500 journals and 1,000 looseleaf services. An official depository since 1971, the Library holds over 100,000 U.S. documents including 3,500 current serials. Students and faculty have access to the two major legal databases, LEXIS and WESTLAW, as part of the educational program of the Law Library.

In addition to complete collections of federal and Michigan legal materials, the Library contains the reported cases of the highest courts of all states and territories, as well as their statutory compilations, digests and encyclopedias. The Library owns major microform collections of U.S. government publications; colonial, state, and territorial session laws; and the U.S. Supreme Court records, briefs, and oral arguments.

### Oakland Center Library Services Center

Telephone: (248) 553-6632

The Oakland Center Library Services Center provides services such as document delivery, interlibrary loan, instructional sessions, and circulation of materials from main campus libraries. A small collection of course reserves and reference materials is available, as well as access to the databases on the Imagine system and the Internet.

### Purdy/Kresge Library

Telephone: (313) 577-4042  
<http://www.lib.wayne.edu/purdy/>

The Purdy/Kresge Library is the primary research library for the social sciences, humanities, arts, education, and business disciplines at Wayne State University. The Library provides access to books, periodicals, government documents, and numerous electronic resources. Purdy/Kresge 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 Purdy Library houses a book collection of over 1.5 million volumes, an extensive microform collection, and a large document collection. The Library also provides access to numerous electronic resources. The Purdy Library houses 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.

### Science and Engineering Library

Telephone: (313) 577-4066  
<http://www.lib.wayne.edu/sel/>

The Science and Engineering Library serves the College of Engineering, the College of Nursing, and the Departments of Biology, Chemistry, Physics, Mathematics, Computer Science, Nutrition and Food Science, Geology, and Audiology/Speech-Language Pathology in the College of Science.

The Science and Engineering Library contains over 500,000 volumes and currently receives over 3,000 current serials. Special holdings include the System on Automotive Safety Information (SASI) collection, a unique resource for transportation research, as well as the River Rouge Collection, the Dubpernell Electrochemistry Collection,

and a large map collection. The Library also houses the Central Technical Services Department of the University Libraries. The Library provides access to a number of specialized electronic resources in the sciences, and an Advanced Computing Facility designed to support teaching and learning in the Colleges of Science, Engineering, and Nursing.

## Shiffman Medical Library and Learning Resources Centers

Telephone: (313) 577-1088  
<http://www.lib.wayne.edu/shiffman/>

The Shiffman Medical Library is located on the Detroit Medical Center campus adjacent to Scott Hall. Its collections cover the health sciences except nursing. The Library offers its services on-site and through Learning Resources Centers at the College of Pharmacy and Allied Health Professions in Shapero Hall and the Simons Library at the Karmanos Cancer Institute. Computers with access to all library resources, instructional software, and productivity tools, are available.

The Shiffman Medical Library provides access to MEDLINE and other databases and maintains a monthly schedule of information literacy workshops about MEDLINE, the Internet, and other topics for health sciences faculty and students. Librarians are available seven days per week and by appointment to assist students with their health sciences research needs. The Library has nearly 300,000 volumes with approximately 3,000 journal subscriptions, as well as an outstanding reference collection including a wide range of health and medicine statistical sources.

## University Archives

Walter P. Reuther Library; (313) 577-4024

The University Archives, a unit of the College of Urban, Labor and Metropolitan Affairs, was established in 1958 as a research/reference center for the University's historical records. In addition to being the official repository for records of Wayne State and its predecessor institutions, the Archives also collects faculty papers and the records of student and professional organizations which document the development of the University and higher or professional education.

The Archives' holdings of over 6,000 cubic feet include manuscripts, minutes, publications, photographs and reports. There are over 500 current and non-current titles, extensive vertical and biographical files, catalogs from 1868 to present, and the student newspaper from 1918 to present. Topics range from House Un-American Activities Committee, and Michigan Academy of Pharmacy, occupational health and safety, and teacher training, to student activities. Tours of the University Archives and the Reuther Library may be scheduled upon request.

## Archives of Labor and Urban Affairs

Walter P. Reuther Library; (313) 577-4024; Fax: 577-4300  
<http://www.reuther.wayne.edu>

The Archives of Labor and Urban Affairs, a unit of the College of Urban, Labor, and Metropolitan Affairs, enjoys an international reputation as the largest and finest labor archives in the world. In all, the Archives has some 95 million documents in addition to 20,000 books, monographs, union publications and proceedings; 2,000,000 photographs; and 20,000 films and tape recordings. A unique portion of the holdings is the labor journal and newspaper collection, which has nearly 1,600 current and non-current titles dating from the late 1800s to the present.

The Archives was established in 1960 to collect and preserve records of the American labor movement, related social, economic, and political reform groups, and twentieth century urban America. The Archives has since become the official depository for the inactive

files of the United Auto Workers, the Congress of Industrial Organizations, the American Federation of Teachers, 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, and many state and local labor organizations. Records have also been received from such 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. Many individuals who played leading roles in labor and urban affairs have also placed their papers in the Archives.



# SCHOOL OF BUSINESS ADMINISTRATION

DEAN: Harvey Kahalas

# Foreword

The School of Business Administration is a professional school concerned with the theory and practice of business administration. The primary objectives of the School are to provide relevant education of high quality for business administration students, and to develop new knowledge through research and 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 it brings a fine research faculty to teach undergraduate as well as graduate courses.

The School has a tradition of instructional programs exemplifying high standards for both faculty and students as is acknowledged by the accreditation of the AACSB (American Assembly of Collegiate Schools of Business), the international association for management education, 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 older 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 throughout the metropolitan area, during both day and evening hours. Most programs can be completed at each of our campus locations.

**The undergraduate program** begins after students have acquired an educational foundation in the basic sciences and arts in the first two years of undergraduate work. During the third and fourth years, the student follows a program of study in the School of Business Administration designed to provide professional education. Students may select majors in accounting, business logistics, finance, management, information systems and manufacturing, and marketing. Degrees of Bachelor of Science in Business Administration or Bachelor of Arts in Business Administration are awarded.

**The graduate program** leading to the Master of Business Administration degree is dedicated to educating graduate students for professional careers in business administration. The Master of Science in Taxation degree is offered to those exhibiting an advanced appreciation of the study of taxation. These graduate programs are offered primarily during the evening hours, with occasional course offerings at other times. For additional graduate program information, consult the Wayne State University Graduate School Bulletin.

The School of Business Administration also recognizes its obligation to community service. As a central part of an urban university, the School makes a special commitment to foster training, basic and applied research that will benefit business enterprises. Of primary importance is the dedication to excellence in the instructional programs that prepare the business leadership that is critical to the continuing revitalization of southeastern Michigan.

## Mission Statement

The mission of the School of Business Administration is excellence in management education, research, and service with an emphasis on metropolitan organizations and issues in a global environment.

The School of Business Administration aspires to be the leading business school among North America's public research universities with an urban mission. We will foster a spirit of partnership with students, alumni, employers, and other key stakeholders to assist us in achieving our mission and our aspiration.

**Teaching:** Our goal is to provide comprehensive, high impact business education that addresses the needs of our constituencies. We will achieve this goal in several ways, including: preparing students for useful professional and societal lives by providing a high impact educational experience; achieving continuous improvement of curricula to respond to the changing needs for business education; offering a comprehensive set of degree programs that are geographically accessible to a diverse set of students; making programs accessible to students through academic preparedness initiatives; infusing our

teaching with real world applicability; developing international alliances that add value to our research and teaching; and offering high quality executive development programs that are relevant to business needs.

**Research:** Our goal is to publish high quality scholarship and to conduct cutting-edge analyses of the issues confronting organizations. We will achieve our goal in several ways, including: publishing research in leading academic and professional journals; infusing our research with real world applicability; developing international alliances that add value to our research.

**Service:** Our goal is to contribute our expertise to professional organizations, the community, and the University.

## Degree Programs

### *BACHELOR OF SCIENCE in Business Administration with majors in*

- Accounting
- Business Logistics
- Finance and Business Economics
- Management and Organization Sciences
- Information Systems and Manufacturing
- Marketing

### *BACHELOR OF ARTS in Business Administration with majors in*

- all of the Bachelor of Science majors cited above

### *MINOR IN BUSINESS ADMINISTRATION*

### *MASTER OF BUSINESS ADMINISTRATION\**

### *MASTER OF SCIENCE IN TAXATION\**

## DIRECTORY OF THE SCHOOL

Dean . . . . .	226 Prentis Building; 577-4501
Associate Dean . . . . .	206 Prentis Building; 577-4503
Interim Associate Dean . . . . .	208 Prentis Building; 577-4213
Assistant Dean of Student Affairs	200 Prentis Building; 577-4510
Assistant Dean of Administrative Affairs	105M Prentis Building; 577-4502
Director, Computing and Information Services	6 Prentis Building; 577-4546
Director of Professional Development	240 Rands House; 577-4448
Director, Center for International Business Education and Research (CIBER). . . . .	100 Rands House; 577-4842
Director, Office of Student Services . . . . .	200 Prentis Building; 577-4510
Student Senate Office . . . . .	116 Rands House; 577-4783
Department of Accounting . . . . .	200 Rands House; 577-4530
Department of Finance and Business Economics	328 Prentis Building; 577-4520
Department of Information Systems and Manufacturing	100 Rands House; 577-9145
Department of Management and Organization Sciences	328 Prentis Building; 577-4515
Department of Marketing . . . . .	300 Prentis Building; 577-4525
Undergraduate Program Information . . . . .	577-4505
Graduate Program Information . . . . .	577-4510

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

\* For specific requirements, see the Wayne State University Graduate Bulletin.



# BACHELOR'S DEGREES

## Admission Requirements

The undergraduate program of the School of Business Administration is offered at the upper-division (junior-senior) level to Wayne State University students who have completed the pre-business administration course requirements (see below), and a minimum of fifty-four credits with at least a 2.5 cumulative grade point average; or transfer students who have completed the pre-business administration course requirements and a minimum of eighty quarter credits or fifty-four semester credits with at least a 2.5 cumulative grade point average. The maximum number of transfer credits that will be accepted from a junior or community college is ninety-six quarter credits or sixty-four semester credits. Equivalency tables have been developed with area community colleges which identify lower division community college courses that are equivalent to the lower-division pre-business administration courses at Wayne State University.

**Application** for admission and all official collegiate transcripts must be submitted by transfer students to the Undergraduate Admissions Office of Wayne State University. Qualified applicants will then be referred to the School of Business Administration's Office of Student Services.

Students seeking admission who are currently enrolled in the pre-business administration program at Wayne State University and who have a cumulative grade point average of less than 2.5 are encouraged to meet with a counselor in the School of Business Administration and will be required to present final grades before formal admission action is taken.

There is no guarantee of admission to the School of Business Administration. Formal appeals of admission denial may be made to the Assistant Dean of Student Affairs of the School of Business Administration. Guidelines for appeal are available in the Office of Student Services and in the Office of the Dean.

## Pre-Business Administration Curriculum

The undergraduate program in business administration begins after students have acquired an educational foundation during the freshman and sophomore years in the basic sciences and the arts. Additionally, basic courses in accounting, business computing, business law, mathematics, economics, and statistics will comprise a portion of the pre-business administration curriculum. Students complete prescribed courses as pre-business administration students formally enrolled in the College of Liberal Arts.

The Undergraduate Committee, under certain conditions, may admit students to the School of Business Administration with up to three deficiencies in pre-business administration course requirements. However, *no student will be admitted who lacks all THREE of the following courses: business computing, mathematics and statistics.*

**SPECIFIC COURSE REQUIREMENTS:** The courses listed below are required of all pre-business students prior to admission to the School of Business Administration. No substitute courses are permitted except as noted. A minimum grade of 'C' (2.0 g.p.a.) must be earned in course requirements indicated by an asterisk (\*).

### Accounting

\*ACC 3010 (3 cr.)Elementary Financial Accounting Theory  
Prereq: MAT 1500 or equiv; ECO 2010, 2020 or equiv.;  
coreq: ISM 2630.

\*ACC 3020 (3 cr.)Elementary Managerial Accounting Theory  
Prereq: ACC 3010 and ALL ACC 3010 prerequisites.

### Business Law

ACC 3510 (3 cr.) Business Law I  
Prereq: sophomore standing.

### Economics

\*ECO 2010 (3 cr.)(SS) Principles of Microeconomics  
and

\*ECO 2020 (3 cr.)(SS) Principles of Macroeconomics  
Note: Either ECO 2010 or 2020 will satisfy the basic  
Social Science Group Requirement.

### English

\*ENG 1020 (4 cr.)(BC) Introductory College Writing  
Prereq: placement through English Qualifying  
Examination or ENG 1010.

and

Pass the English Proficiency Examination in Composition.  
NOTE: Students must successfully pass this  
examination prior to the completion of 60 semester credits.

### Mathematics

Equivalent to:

\*MAT 1500 (3 cr.)Finite Mathematics for the Social & Management  
Science. Prereq: Qualifying Examination.

or higher level;

and

Pass the Mathematics Proficiency Examination.

### Statistics

\*ISM 3300 (3 cr.) Quantitative Methods I: Probability & Statistical  
Inference (recommended)Prereq: MAT 1500 or higher or equiv.

### General Education Requirements

Students must also satisfy University General Education competency and group requirements as part of the Pre-Business Administration curriculum.

## Bachelor of Science in Business Administration

**Admission Requirements:** see above.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science in Business Administration must satisfactorily complete 128 credits including the pre-business administration curriculum (see above), and all general education, core, major, and elective requirements as noted below. Within the student's degree program, no more than sixty-four credits in business administration subjects and upper division economics may be applied toward the degree.

To be eligible for the degree, students must have earned a minimum 2.0 grade point average in the major requirements and a minimum overall grade point average of 2.0 in all undergraduate course work completed at Wayne State University.

### — General Education Requirements

All undergraduate students are responsible for satisfactorily completing the University General Education Requirements (see page 29). In reviewing that material, students should note that MKT 4330 satisfies the Writing-Intensive major course requirement for business administration curricula; ISM 2630 (formerly ACC 263) or passing the Computer Literacy Competency Examination satisfies the Computer Literacy requirement; PSY 1010 (4 credits) is recommended for satisfaction of the Life Science group requirement; B A 1010 is recommended for satisfaction of the Critical Thinking requirement; and ECO 2010 or 2020 also satisfies the Basic Social Science group

requirement. Pre-business and Business Administration students should consult the University Advising Office or the School of Business Administration's Office of Student Services, for specific information regarding the satisfaction of these requirements, consistent with academic requirements of the School.

**Implementation Schedule:** Effective Fall Term 1987, Wayne State University has required undergraduate students to fulfill the University-wide General Education Requirements, implemented in accordance with the following schedule:

*Fall Term 1987:* The General Education Requirements apply to all entering freshmen and to students who transfer twelve or fewer credits.

*Fall Term 1990:* The General Education Requirements apply to the group of students cited above and to transfer students who began college work in Fall 1988 or thereafter.

*Fall Term 1991:* The General Education Requirements apply to all undergraduate students.

Students who have matriculated at Wayne State University prior to the years covered by the above schedule must fulfill all University and School/College requirements in force at the time of entry.

*Note:* All General Education competency requirements may be satisfied through required pre-business administration courses, except for mathematics. Students who elect MAT 1500 must satisfactorily pass the Mathematics Proficiency Examination.

## — Core Requirements

Following formal admission to the School of Business Administration and after completion of the pre-business administration curriculum (see above), all students must complete the following core courses. *Students are responsible for observing all course prerequisites and limitations.*

FBE 4290	Business Finance
ISM 4400	Quantitative Methods II: Statistical Methods
Must be satisfactorily completed in first sixteen credits after admission to the School of Business Administration	
ISM 4630	Business Information Systems
MGT 4530	Management of Organizational Behavior
ISM 4600	Production Operations Management
MGT 6890	Business Policy
To be taken as one of the last five courses toward bachelor's degree and after completion of all other core courses.	
MKT 4300	Marketing Management
MKT 4330	(WI) Business Communication
Prereq: successful completion of English Proficiency Examination in Composition and all other pre-business administration requirements.	

## — Major Requirements

Majors and specializations are offered through the School's five academic departments: Accounting, Finance and Business Economics, Information Systems and Manufacturing, Management and Organization Sciences, and Marketing. Majors in Accounting, Business Logistics, Finance, Management, Information Systems and Manufacturing, and Marketing require six courses (eighteen credits). Each of the undergraduate majors employs a capstone course as a vehicle to assess a student's knowledge of the discipline. Students in all of the majors also complete the capstone course for the undergraduate program: MGT 6890, Business Policy.

Students should refer to the respective departmental section for specific majors and specializations. After selecting a major, students should consult the Office of Student Services of the School of Business Administration to obtain an official Plan of Work. All courses

must be taken in accordance with an approved Plan of Work and all course prerequisites and limitations must be observed.

## — Elective Requirements

Electives form an integral part of an education in business administration. A student's selection of elective courses should be guided in part by his or her career objectives. These elective courses constitute study in addition to the pre-business administration, core, and major requirements listed on the student's Plan of Work.

**FREE ELECTIVES:** Elective credits for students admitted to the School of Business Administration total fifteen semester credits. The major or specialization may contain recommendations for electives. After admission to the School of Business Administration, elective credits may still be required in non-business elective courses and/or in free elective courses.

**NON-BUSINESS ELECTIVES:** In order to graduate, all business administration students, regardless of major, must satisfactorily complete a total of sixty-five semester credits of non-business course work, including any pre-business requirements that are considered non-business. If the requirement of sixty-four credits of non-business course work is not satisfied before admission to the School of Business Administration, students may have additional non-business electives to complete. Non-business electives must be taken from courses offered outside the School of Business Administration. After a student has been admitted to the School, any and all remaining non-business electives must be taken at the 3000 level (junior-senior) or higher in the College of Liberal Arts, the College of Lifelong Learning, the College of Science, the College of Engineering, or the College of Fine, Performing and Communication Arts, with the following exceptions:

1. Computer Science courses below the 3000 level, except CSC 1000, may be used to satisfy non-business elective course requirements;
2. Upper-division courses in the Department of Economics (3000 level or higher) and Physical Education or ROTC credits may not be used to satisfy this requirement.

**LANGUAGE ELECTIVES:** Students who are interested in employment opportunities overseas or with multinational corporations should consider electing certain foreign language courses. In addition, students who wish to earn the Bachelor of Arts degree may utilize their electives toward the satisfying of the Bachelor of Arts foreign language requirements (see below). For more information, contact the department in the College of Liberal Arts in which the language is taught.

## Bachelor of Arts in Business Administration

**Admission Requirements:** see above, page 65.

**DEGREE REQUIREMENTS** are the same as for the Bachelor of Science, cited above, with the additional stipulation that a student must attain a level of proficiency in a single foreign language equivalent to the completion of eleven credits through university-level course work or placement by examination administered by the appropriate W.S.U. foreign language department. In some instances, completion of the Bachelor of Arts foreign language requirements may result in course work beyond the 124 credit minimum.

## Minor in Business Administration

The School of Business Administration offers a minor in business administration for undergraduate students majoring in other disciplines. The Business Minor program consists of six courses, totaling eighteen credits. Students must also complete prerequisite courses with a minimum grade of 'C' (2.0 g.p.a.) for each course. The minor provides an excellent opportunity for non-business majors to broaden their knowledge of the business disciplines. In addition, the

program enhances career prospects and establishes a solid business base for pursuing a Master of Business Administration degree. To be eligible to apply for the Business Minor, students must have a minimum overall grade point average of 2.5.

### PREREQUISITE COURSES

(SS) Principles of Microeconomics . . . . . ECO 2010  
(SS) Principles of Macroeconomics . . . . . ECO 2020

Equivalent of:

Finite Mathematics for the Social and Management Sciences . . . . . MAT 1500

or higher level.

### REQUIRED COURSES

Elementary Financial Accounting Theory . . . . . ACC 3010  
Business Finance . . . . . FBE 4290  
Management of Organizational Behavior . . . . . MGT 4530  
Marketing Management . . . . . MKT 4300  
Plus two electives from School of Business Administration courses.

### Cooperative Education Program

The School of Business Administration actively participates in the University Cooperative Education (Co-op) Program in which students alternate semesters of work and academic study. Eligibility begins in the junior year or upon admission to the School of Business Administration if the student has previously earned more than the minimum fifty-four semester credits required for admission to the School. Students interested in this program should contact the Cooperative Education Coordinator, University Placement Services, 1001 Faculty Administration Building; 577-3390.

Students admitted to the program with minimum junior standing should recognize that an additional calendar year may be needed to fulfill the requirements for the bachelor's degree. No academic credit is granted for participation in the Co-op Program; Satisfactory/Unsatisfactory (S/U) grades are given, however, and are entered on the official University transcript.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information section of this bulletin, beginning on page 5. The following additions and amendments pertain to the School of Business Administration.*

*All students must fulfill the upper-division requirements of the School of Business Administration in effect at the time of admission to the School of Business Administration.*

### Admission to the School

Students seeking a business degree must be admitted to the School of Business Administration before enrolling in upper division business coursework. Students who violate this policy will be subject to administrative withdrawal from these courses.

### Admission to Class

Please consult each term's Schedule of Classes for appropriate dates and deadlines for registration, late registration, and add/drop period. *Students may not attend a class for which they are not officially registered and will not be added retroactively.*

### Application for Degree

Each candidate must file an *Application for Degree* in the Records Office, 1 West, Helen Newberry Joy Student Services Center, NO LATER THAN THE LAST DAY OF THE FINAL REGISTRATION PERIOD for the semester in which he or she expects to complete the requirements for the degree. If an Application for Degree was filed for a previous semester in which the student did not graduate, a new application is required. Applications are available from the University Records Office; or from the School's Office of Student Services, 200 Prentis Building.

### Attendance Policy

Regular attendance is a necessary condition for success in college study. This policy recognizes that the course content includes classroom lecture and discussion, certain aspects of which may not be covered on examinations, quizzes, term papers, or homework assignments. Each instructor will announce his or her attendance standards at the beginning of the term.

### Change of Major

Students wishing to change majors or Plans of Work within the School of Business Administration must submit a request in writing to the Undergraduate Advisor in the Office of Student Services, 200 Prentis Building. A Plan of Work for the requested major will then be mailed. Students are advised that such changes occurring late in their program may result in additional coursework beyond the minimum requirement of 124 credits.

### Conduct

Each student is subject to official regulations governing student activities and student behavior. Furthermore, it is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Thus, 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, i.e., 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.

## Degrees

Degrees are granted upon the recommendation of the faculty of the School of Business Administration. Consideration is given to both scholastic attainment and to compliance with the standards and rules of the School.

## Directed Study

A directed study involves advanced readings and research or a tutorial under the supervision of a faculty member in an area or areas of special interest to the student and faculty member; credits vary between one and three. A cumulative grade point average of 2.75 is required to be eligible for consideration for directed study work. Students must complete the Undergraduate Directed Study form and obtain the required signatures prior to registration. No more than three credits of directed study in one department are permitted in any semester. A total of no more than six credits of directed study may be used to fulfill graduation requirements. Contact the Office of Student Services, 200 Prentis, for further information.

## English Proficiency Examination

The English Proficiency Examination in Composition is a pre-business administration and a University requirement. *Each student must pass the examination prior to the completion of sixty semester credits.* Students who fail the examination and who have taken sixteen credits after admission to the School of Business Administration will be excluded from taking any further courses until the proficiency examination is successfully completed. Entering students should take the examination as soon as possible in order to avail themselves of remedial work if needed. Information regarding application, dates, and times of the examination may be obtained from the Testing and Evaluation Office, 698 Student Center; telephone: 577-3400. The fee is \$7.00.

*No credit toward a degree in business administration is granted for English 1010 or 1080. A maximum of four credits toward a degree in business administration is granted for English 1020, (BC) Introductory College Writing, or its equivalent.*

## Mathematics Competency or Proficiency Requirement

All undergraduate students who enrolled in credit programs at Wayne State University for the first time after Fall 1983 and prior to Fall 1987, either as freshmen or as transfer students, must demonstrate proficiency in mathematics. This proficiency requirement must be satisfied by the time a student has earned sixty credits; see page 33, under 'Proficiency Requirements in English and Mathematics.'

For students enrolled in Fall 1987 or after and prior to Fall 1990, the mathematics competency is fulfilled by the satisfactory completion of former MAT 150, 180, 201, or their equivalents, prior to the student earning thirty credits. For students enrolled in Fall 1990 or thereafter, MAT 150 or MAT 180 will no longer satisfy the competency requirement; students must also pass the Mathematics Proficiency Examination. Students should consult with their adviser regarding the various course or test options and procedures for satisfying the competency requirement.

Further information may be obtained from the University Advising Center, 3 West, Helen Newberry Joy Student Services Center, or from the Office of Student Services of the School of Business Administration, 200 Prentis Building. Information about registering for proficiency examinations may be obtained from the Testing Office of University Counseling Services, 698 Student Center.

## Graduation with Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: *Cum Laude*, *Magna Cum Laude*, and *Summa Cum Laude*. Graduation with distinction is indicated on the student's diploma and on the transcript. For information, see page 39.

## 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 School of Business Administration's grade appeal procedure is available in the Office of Student Services, 200 Prentis Building.

Non-grade-related grievances should be brought directly to the appropriate departmental chairperson or to the Assistant Dean of Student Affairs. Additionally, the University Ombudsperson (see page 59) is available to all students for assistance in the resolution of University-related problems.

## 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 considered a withdrawal ('W'), unless prior to the end of that year the student requests and the instructor agrees to certify in writing to the University Records Office that additional time is needed for the removal of the Incomplete.

The mark of 'I' is appropriate only when a student has completed all of the requirements for a course except for a specific assignment, such as a project or an examination, and only when the instructor agrees that a student has a valid reason for not completing the assignment.

## Normal Program Load

The normal academic load for an undergraduate student in the School of Business Administration is from nine to sixteen credits each semester, depending upon the particular courses elected. No student should expect to carry a full load and at the same time be employed full-time. Students desiring to carry more than eighteen credits must obtain written permission from the Office of Student Services prior to registration. Excess credits will not be honored when taken without prior written approval.

## Passed/Not Passed Registration

Undergraduate students in the School of Business Administration may *not* take courses offered by the School of Business Administration on a *passed-not passed* basis.

## Probation and Exclusion

A student who registers for, but repeatedly fails to complete his/her program and thus does not make normal progress toward graduation, may be placed on probation.

If a student's academic work is unsatisfactory (less than 2.0 cumulative grade point average or less than 2.0 grade point average in his or her major), the student will be placed on probation with the understanding that he or she will be expected to achieve a cumulative 2.0 grade point average within the next twelve credits completed, or a 2.0 major grade point average within the next six credits completed in the major. If probationary status is not removed within the prescribed number of credits, the student is subject to either temporary suspension or permanent dismissal from either the major or from the School of Business Administration.

The second (or subsequent) time(s) a student is placed on probation, he or she is subject to immediate dismissal from the School of Business Administration.

In the event of a temporary suspension, readmission to the School of Business Administration will be considered only with the recommendation of the Undergraduate Committee. (The Undergraduate Committee is composed of the four departmental chairpersons and is chaired by the Assistant Dean of Student Affairs.) If, after readmission to the School of Business Administration, the academic deficiency is not removed within the first nine credits attempted, the student will be permanently dismissed from the School. Class work completed at another institution during a period of temporary suspension will not be considered for transfer credit.

While on probation, a student may not represent the School in student activities.

The exclusion of any student will be reviewed by the Undergraduate Committee of the School of Business Administration. A student on probation who fails to complete the courses for which he or she registers, without good reason as determined by the Dean or designee, shall not be permitted to re-register in the School of Business Administration.

The Undergraduate Committee, upon the recommendation of the student's department chairperson, may permanently exclude a student from a major, if the student fails to remove himself or herself from probationary status within the prescribed number of credits.

In matters where the School's final decision is based upon the evaluation of a student's academic performance and when review procedures available to him or her within the School have been exhausted, the student may request the Provost to review that decision on the record.

## Retaking Courses

The University policy on retaking courses is stated on page 41. No course in which a student has received a passing grade or mark may be repeated without the prior written approval of the Assistant Dean of Student Affairs of the School of Business Administration.

## Residence Requirement

After admission to the School of Business Administration, a student may not take course work and receive transfer credit for courses taken at the lower division (freshman and sophomore) at other institutions. The final year and the last thirty-two credits must be taken at Wayne State University. In exceptional cases, a limited number of the last thirty-two credits toward a degree may be taken at another accredited college or university. All such cases must receive the approval of the Chairperson of the Undergraduate Committee before the work is undertaken.

Students returning to the School after a five-year absence are required to conform to the program requirements in effect at the time of their return.

## Retention of Instructors' Records

Term papers and examinations shall either be returned to the student or retained by the instructor for a period of ninety days. Thereafter, they may be destroyed. Instructors shall retain grade books for at least five years following the end of a term and instructors who leave the institution shall give grade books for courses conducted during the past five years to their department chairperson. Five years after the end of a course, grade books may be returned to the instructor or destroyed by the department.

## Waiver of Course Prerequisites

Students must comply with all course prerequisites as stated in this bulletin and in the Schedule of Classes. Exceptions may be granted in certain cases for which prior written approval of the Assistant Dean

of Student Affairs or the appropriate department chairperson is required.

## Waiver of Degree Requirements

Students must comply with degree requirements as listed in this bulletin and on their Plans of Work. They may petition for a modification in degree requirements by completing a waiver form and submitting it to the Office of Student Services of the School of Business Administration. Waiver of a *School requirement* requires the recommendation of the Undergraduate Committee and the approval of the Dean or his/her designee. Waiver of a *departmental requirement* requires the recommendation of the departmental chairperson and the *approval* of the Dean or his/her designee. Undergraduate students are advised that no faculty member is authorized to approve a change in degree requirements.

## Withdrawals from Class

See page 42 for the University policy on 'adjusting your schedule.' Tuition refund and withdrawal policy also appears each semester in the Schedule of Classes.

# FINANCIAL AIDS and AWARDS

## Scholarships and Awards

The scholarships listed below give preference to students in the School of Business Administration. While the School of Business Administration, through its scholarship committee, a departmental committee, or a joint committee of the School and an external organization, foundation, or agency is 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.

*Adcraft Club of Detroit Foundation Scholarship:* Award of \$1000 open to a student majoring in marketing. Fall semester deadline; contact Department of Marketing.

*Alumni Association Endowed Scholarship:* Designated for business administration students demonstrating high academic achievement, leadership, and service. Established in 1986. Winter semester deadline; contact the School's Student Services Office, 200 Prentiss.

*Ambassador Scholarship:* Established by five graduates who wish to recognize the ambassador spirit among students, this annual award is presented to a student who consistently promotes the images and ideals of the School to both the University and the business community.

*Richard H. Austin Excellence in Accounting Scholarship:* Award of variable amount established to recognize potential abilities and academic achievements of minority accounting students.

*Stanton P. Bocknek Memorial Scholarship:* Awarded for the first time in 1988, these awards (\$500 and \$1000) are designated for students demonstrating high academic achievement in accounting.

*Lawrence and Charlynnne Braun Endowed Scholarship:* Established to recognize students who have displayed excellence in leadership, character, and scholastic achievement.

*Theodore Buckwick Endowed Scholarship:* Established to recognize students majoring in management who are working to finance their own education.

*Budco Endowed Scholarship/Internship Program for Marketing Management:* Annually, two awards of \$1000 are given to undergraduate marketing or management students on the basis of financial need, leadership, character, and scholastic achievement.

*Business Marketing Association Scholarship — Detroit Chapter:* Annually award of \$1000 open to undergraduate marketing majors with high academic achievement, majoring in advertising/public relations.

*Comerica Incorporated Minority Scholarship:* Established to recognize the academic achievement of junior and senior minority students.

*Community College Scholarship:* Designed to recognize the academic achievements of recently-admitted community college students, this scholarship provides students with financial support to attend the School.

*The Croskey Family Academic and Athletic Endowed Scholarship:* Established in honor of all past, present and future student athletes who have been and will be able to extend their talents academically and athletically while attending Wayne State University. Awarded to full-time undergraduate business students who are actively participating in a University-sponsored athletic program.

*Barbara and Paul Czamanske/Compass Group Ltd. Endowed Scholarship:* Designed to recognize pre-business undergraduate students

for their outstanding contribution to the University in the area of student activities, leadership and service.

*Dana Corporation Foundation Minority Scholarship:* Established in 1989, this award is designated for minority business administration students demonstrating high academic achievement.

*Delta Sigma Pi Scholarship Key:* Awarded to the academically highest-ranked student in the graduating class of the School.

*Jack Demmer Ford, Inc., Endowed Scholarship in Business:* Established to recognize students of high scholastic achievement and strong leadership qualities who reside in the tri-county (metropolitan Detroit) area.

*Charles E. Dover Endowed Scholarship in Business Administration:* Recognizes excellence in scholastic achievement, leadership and character among full-time undergraduate business students.

*James D. and Shirley M. Ellis Endowed Scholarship:* Recognizes undergraduate business students of high achievement who evidence financial need.

*Marie Farrell-Donaldson Endowed Scholarship Fund:* Recognizes accounting majors with high academic achievement and financial need.

*Sidney and Jewel Fields Scholarship in Accounting:* Created by the Morris and Emma Schaver Foundation, this award was established in 1988 to honor the forty-two years of service and friendship that Sidney and Jewel Fields have given to the Schaver family. Award of \$2000 open to accounting majors.

*Financial Executives' Institute Award for Academic Excellence:* Recognizes the academically highest-ranked accounting or finance student in the December graduating class.

*Sam, Leonard and Jack Fink Memorial Scholarship:* Award of variable amount open to business administration students demonstrating high academic achievement.

*Ford Motor Company Minority Scholarship:* This scholarship is designated for academically-gifted minority business students.

*Irving H. Frank Memorial Award:* Established to encourage a student interested in the retail field.

*Raymond M. Genick Endowed Scholarship in Small Business Management/Entrepreneurship:* Awarded to an undergraduate or graduate student majoring or concentrating in small business management/entrepreneurship who exhibits excellence in scholastic and leadership efforts.

*Paul A. and Mary K. Glantz Family Endowed Scholarship:* recognizes full-time undergraduate students majoring in accounting.

*Charles and Katherine Hagler Scholarship in Public Relations:* Established in 1989 in memory of Charles and Katherine Hagler, this is an award of variable amount for recognition of an outstanding advertising/public relations student.

*David D. Henry Award:* Awarded to the outstanding male and female graduates of the University's December commencement class, based upon leadership, activities and service to the University, consistent with high scholarship.

*T. Horris and Vivilore Hitchman Endowed Scholarship and Mentorship Fund:* Established to recognize scholastic achievement of students majoring in management/entrepreneurship.

*George R. Husband Scholarship:* Awarded to accounting majors demonstrating high academic achievement, maintaining a minimum 3.0 g.p.a.

*Austin and Harriet Kanter Endowed Scholarship:* Designated to recognize a student majoring in marketing who displays outstanding scholarship, leadership, and service to the School of Business Administration.

*Mildred and Charles Kaye Endowed Scholarship Fund for Accounting Students:* Recognizes outstanding undergraduate students majoring in accounting.

*Wilfred Kean Memorial Scholarship:* Established in 1989 in memory of alumnus Wilfred Kean. Designated primarily for a student enrolled in evening classes in the School. Fall semester deadline; contact the School's Student Services Office, 103 Prentis.

*KPMG/Peat Marwick—Wayne State Alumni Scholarship:* Funded solely by Wayne State Alumni with Peat Marwick and Company, this award is designated for accounting majors demonstrating high academic achievement.

*Carl M. Krampert Memorial Scholarship:* Established to recognize business students who are employed a minimum of twenty hours per week and are in financial need.

*Jack Kuzminski Memorial Scholarship:* Established to recognize scholastic achievement of students majoring in finance.

*Team Al Long Endowed Scholarship in Business:* Established to recognize scholastic achievement and leadership efforts and to encourage continued progress for students who are graduates of Denby, Osborn, and Finney High Schools in Detroit.

*Dr. Ferdinand F. Mauser Scholarship in International Marketing:* Established to honor the memory of Dr. Mauser, a scholar, author, and internationalist who devoted over two decades to teaching and writing at the School of Business Administration.

*MBA Association Scholarship:* Funded through the generosity of the Chrysler Corporation, this scholarship is given to graduate business students who display high levels of service and scholarship.

*MichCon—Leon Atchison Scholarship:* Amount depends on funds available; open to any minority undergraduate student majoring in accounting, chemical engineering, mechanical engineering, or computer science, from the MichCon service area. Student must maintain a minimum 2.5 g.p.a., be a United States citizen, and demonstrate financial need. Application deadline is April 30; contact the University Office of Scholarships and Financial Aid.

*Bruce E. Mullican Memorial Scholarship:* Established in 1984 in memory of M.B.A. alumnus Bruce E. Mullican. Award of variable amount, designated for students with demonstrated interest and involvement in small business management.

*Robert H. Naftaly Endowed Scholarship:* Created to recognize Mr. Naftaly's service on the Wayne State Board of Governors as well as to Blue Cross/Blue Shield of Michigan, this scholarship honors students interested or involved in careers in health care administration and who display excellence in both scholarship and leadership.

*Marie L. Nash Memorial Scholarship Fund:* Recognizes scholastic achievement of female graduate students in the School of Business Administration.

*Pre-Business Scholarship:* Established through the Office of Student Services, this award recognizes a high achiever in the pre-business curriculum who shows strong potential for success in the School of Business Administration.

*Aubrey C. Roberts Memorial Scholarship:* Award open to accounting majors demonstrating high overall scholarship and outstanding academic achievement in accounting subjects.

*Serta Restokraft / Eugene and Mignon Kraft Family Endowed Scholarship:* Established to recognize scholastic achievement and continued progress of Detroit residents who intend to pursue a business or entrepreneurial career in the city of Detroit.

*Bruce H. and Rosalie Rosen Endowed Scholarship:* Established to recognize a full-time undergraduate majoring in management who exhibits excellence in academics, leadership, and character.

*George M. and Mabel H. Slocum Foundation Scholarship:* Award of variable amount open to marketing students of high academic achievement specializing in advertising/public relations.

*David A. Stulberg Endowed Scholarship:* Established to recognize scholastic achievement, to encourage continued progress, and to provide financial assistance to undergraduate business students.

*William H. Volz Endowed Scholarship:* Created to reward scholastic achievement and encourage continued progress for students interested in pursuing a law degree or a combined JD/MBA degree.

*Louise C. Wissman Endowed Memorial Scholarship:* This award recognizes African-American Detroit residents of high academic achievement who are dedicated to continued progress at Wayne State University.

## Recognition Awards

*Alpha Kappa Psi Scholarship Award:* Awarded annually to the graduating senior in business administration who has attained the highest scholastic average.

*American Marketing Association Award:* Awarded by the Detroit Chapter to the outstanding student in marketing.

*Corporate Awards:* Sponsored by Detroit-area corporations who have generously provided funds to recognize Business Administration students demonstrating leadership, service and scholarship.

*Dean's Award for Outstanding Service:* Award made in recognition of outstanding student service to the School of Business Administration. For information, contact the School's Student Services Office, 200 Prentis.

*Dean's List:* Each semester undergraduate students who have excelled in their academic studies are honored by placement on the Dean's List.

*Delta Sigma Pi Scholarship Award:* Awarded annually to the graduating senior with the highest scholarship in business administration.

*Distinguished Student Award:* Established in 1981, this award is presented annually to the student who has made the greatest contributions to the School of Business Administration and to the University.

*Outstanding Business Communication Awards:* Awarded by the business communication faculty for the most effective business reports, selected from a field of more than 150 reports.

*The Wall Street Journal Student Achievement Award:* Awarded annually to the business administration student in the Spring graduating class with the highest grade point average.

## Beta Gamma Sigma

Membership in Beta Gamma Sigma is the highest national recognition a student can receive in an undergraduate or master's program in business. To be eligible for membership in this honor society, a student must rank in the upper five per cent of the junior class, upper ten per cent of the senior class, or upper twenty per cent of the master's program.

# SUPPORT SERVICES and ORGANIZATIONS

## Office of Student Services

The Office of Student Services is responsible for credential evaluation, admissions processing, advising, and graduation certification of business administration students. In addition, Student Services personnel prepare and distribute the Plan of Work for students enrolled in graduate and undergraduate programs.

Any student seeking academic, vocational, or personal counseling should make an appointment to see a member of the counseling staff: 577-4510 or 577-4505.

## Center for International Business Education and Research

The Center for International Business Education and Research (CIBER) is the focal point of the School's instructional and research programs in the rapidly-expanding international business area. CIBER's director can be reached at 577-4842.

## Communications Laboratory

The Richard W. Marr Communications Laboratory provides an exciting, modern instructional facility, utilized in many business administration courses. Students have an opportunity to videotape, review and critique speeches, presentations and panel discussions required in their course work.

## Microcomputer Facilities

The School of Business Administration has established six modern computer laboratories with a total of 135 Macintosh and IBM compatible work stations. Four serve as computer classrooms, and two are designated for student walk-in traffic.

Students have access to leading-edge technology including laser printers, the University mainframe, a color printer, a color plotter, a CD-ROM reader containing COMPUSTAT, a financial database, and Macintosh and IBM compatible scanners.

Currently over 800 sets of software representing more than twenty-five different software packages are available. The computer laboratories are open to business administration students seven days per week, providing students with access during both the day and evening.

Additional computer facilities at other main campus and extension center locations are also available to students.

## Professional Development Division

*Mission Statement:* The mission of the Professional Development Division (PDD) is to provide organizations and entrepreneurs with business education, training, and consulting services of the highest quality and greatest value, thereby becoming their partner for continuous learning and creative change. To be successful in today's global market, companies must broaden their approach, develop alliances, and apply new skills to meet the challenges of today's changing business environment. PDD provides executive education and expert management, technical and training services to help organizations face those challenges and promote sustainable growth in the intensely competitive business environment. The PDD portfolio includes:

*Cutting Edge Business Courses and Programs:* Division programs respond to problems currently facing business, government, and industry. They deliver the strategies, tools, and knowledge needed to succeed in today's changing business environment. A wide variety of

programs are offered in a variety of formats. Areas of PDD expertise include:

Strategy Development . . . . . Purchasing Strategies  
Business Re-engineering . . . . . Quality Assurance  
ISO 9000 . . . . . Customer Service  
Information Systems . . . . . Communication Skills  
Networking . . . . . Marketing  
Financial Management . . . . . Management

*Certificate Programs:* PDD responds to industry's demand for a more comprehensive approach to continuing education by offering certificate programs that encompass several of today's management and business issues in multiple-session format. The content, duration, and format of the programs are customized to meet the needs of the organization. Continuing Education Units (CEUs) may also be earned through PDD programs.

*On-Site Consulting Services:* In conjunction with training, PDD provides business solutions in the following areas:

Total Quality Management  
Quality Strategies  
Management Audits  
Human Resources Management  
Computer Information Systems  
Strategic Business Planning  
Operations and Organization Review/Improvement  
Performance/Profitability Improvement  
Feasibility Studies  
Forecasting Industry Trends  
Customer Service Strategies  
International Linkages and Strategic Alliances

*Multimedia Training:* PDD can provide training using alternative delivery methods such as videoconferencing, on-line programs, and other computer-based programs.

## Small Business and Marketing Programs

**Small Business Services (SBS)** focuses on the needs of potential and existing small business owners by offering two practical, step-by-step programs on how to start and run a small business. 'Starting a PROFITABLE Small Business' concentrates on the issues facing the aspiring entrepreneur such as: developing a business plan, pricing a product or service, and finding sources of financing. 'Running a PROFITABLE Small Business' helps the established small business owner develop a more prosperous enterprise by addressing problems such as increasing sales, controlling inventory and overhead, and reducing taxes.

On a national level, SBS offers the Small Business Affiliate Program, which annually trains accountants/consultants from around the country to instruct our small business programs in their own protected territories. SBS currently has seventy affiliates. For more information on Small Business Services, please call (313) 577-4353.

**Small Business Technical Assistance Services** is a program that serves the needs of the small businessperson/entrepreneur through one-on-one counseling, with emphasis on the development of business plans, cashflow projections, market research, personnel planning, and many other aspects of operating a business. Numerous training programs offer in-depth information on a variety of subjects pertaining to starting and managing a business. For further information, call (313) 577-4176.

**The Procurement Technical Assistance Center** provides eligible business clients in the Detroit area with the marketing and technical assistance needed to sell their goods and services to the Department of Defense; it also educates small business owners on marketing opportunities in the public sector. Information on government contracts, as well as educational training programs and guidance over the course of the contract from bid preparation to obtaining payment, is available. For further information, call (313) 577-4850.



**The International Business Development Center (IBDC)** helps other countries develop small business and management programs that include training and counseling. In recent years, IBDC has established centers in Eastern Europe, the former Soviet Union, and the Middle East, including: the Institute of Modern Industry, Prague; Lvov Institute of Management, Ivan Franco University, Ukraine; Krasnodar, Russia; Kuban State Polytechnical University, Novorossiysk, Russia; and Hebron University, Hebron, West Bank. For further information, call (313) 577-4176.

## Placement Services

The School of Business Administration interacts with the University Placement Services office to assist students in finding employment both while going to school and upon obtaining their degrees. Prospective employers visit the University twice each year to recruit graduating seniors and M.B.A. students for positions with their firms. Career counseling and other placement services, including a career/placement library, are also available for business administration students. Some employment opportunities are posted on the Career Board located in the Prentis Building lower level.

## Student Organizations

**Alpha Kappa Psi**, the oldest national professional fraternity, established a local chapter at Wayne State University in 1941. The fraternity seeks to enhance the personal and professional development of its members through a wide variety of activities, including frequent interaction with the business community.

**The American Marketing Association (AMA)** is an 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 American Production and Inventory Control Society (APICS)** is a professional association whose goal is the professional education and development of its members in the field of production and operations in a manufacturing or service organization. APICS members attend a variety of seminars, workshops, tours, and conferences in which practitioners in the field sponsor and counsel students.

**The Association of Black Business Students (ABBS)** was formed in the fall of 1967, to better prepare students for the business world by providing an environment for professional growth and development, through the encouragement of interaction among business students and with the business community.

**Beta Alpha Psi** is a national scholastic and professional accounting fraternity open to qualified students who have declared a concentration in accounting and to full-time faculty of the Accounting Department. The fraternity objectives include: the promotion of the study and practice of accounting; the provision of opportunities for self-development and association among members and practicing accountants; and the encouragement of a sense of ethical, social and public responsibilities.

**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.

**The Business Marketing Association (BMA)** is a national organization consisting of over 5000 members who hold various positions

throughout the industry of business-to-business advertising and communication. The Wayne State Chapter members benefit by exposure to opportunities within the advertising industry, gaining practical experience and developing professional methods and techniques within the field. The BMA also provides opportunities for scholarships, internships, and chapter competition.

**Delta Sigma Pi**, 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.

**Finance Accounting Marketing Management and Information Systems (FAMMIS)** is the student chapter of the Association of Information Technology Professionals (AITP). Open to all business majors, FAMMIS-AITP promotes the dynamic, ever-changing field of business technology. The group provides valuable networking opportunities through guest lectures on campus and with ISM professionals.

**The Financial Management Association (FMA)** provides its members with a better understanding of the field of finance and develops relationships with practitioners in the Detroit metropolitan area. The club currently works with the National Investor Relations Institute, the Financial Analyst Society and the Economic Club of Detroit.

**Institute of Management Accountants** is a professional organization for promotion of the development of accounting students who plan careers in management accounting. Student chapter members participate fully in local professional chapter activities, sharing ideas and knowledge with experienced management accountants.

**The International Business Association (IBA)** was formed to promote an understanding of international business practices through programs and information dissemination to students. The organization aims to establish interaction between business students and the international business community.

**The Management Information Systems Association (MISA)** is a professional organization which strives to educate its members further in the practical application of computer technology and interact with leaders in the ISM field through various activities, including speakers and corporate tours. The organization welcomes members from all majors.

**The MBA Association** was established in 1987. This organization is designed to recognize outstanding M.B.A. students and to facilitate the academic and professional development of the graduate business student population.

**National Association of Black Accountants (NABA)** is a professional organization that sponsors speaking events, and provides tutoring and other services to its members and the community.

**The Student Senate** is the official student government body of the School of Business Administration 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 adviser, ex officio, and the Dean of the School of Business Administration, ex officio.

**Women in Business (WIB)** was established in 1991 to promote women in business and the role of business women in the community. The organization offers business seminars, mentoring, and scholarships, and is open to any student.

Additional information regarding specific student organizations can be obtained from the Business School Student Senate Office (577-4783) or the University Student Center and Program Activities Office (577-3444).

# ACCOUNTING

Office: 200 Rands House; 577-4530

Interim Chairperson: Thomas Anderson

## Professors

Charles R. Allberry (Emeritus), Gerald Alvin (Emeritus), B. Anthony Billings, Raymond J. Murphy (Emeritus), Alan Reinstein, William H. Volz

## Associate Professors

Donald E. Gorton (Emeritus), Albert D. Spalding, Jr., James F. Wallis (Emeritus)

## Assistant Professors

Angela Hwang, Deborah Jones, Arik Ragowsky

## Senior Lecturer

Susan D. Garr

## Lecturers

Melvin Houston, Leon Martin, Audrey Taylor

## Degree Programs

*BACHELOR OF SCIENCE in Business Administration with a major in accounting*

*BACHELOR OF ARTS in Business Administration with a major in accounting*

## Bachelor's Degrees

**Admission Requirements:** Admission to undergraduate degree programs in the School of Business Administration is granted to upper division students (junior and senior level) only after completion of a pre-business administration curriculum; for a list of required courses, as well as the admission policies of the School, see page 65.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 124 credits including satisfaction of the degree requirements stated on pages 65-66, as well as requirements for one of the specializations listed below. All course work must be completed in accordance with the academic procedures of the University and the School which apply to this degree; see pages 15 -46 and 65-69 respectively.

The accounting program is designed to prepare students for professional careers in public, corporate, or governmental accounting. While stressing fundamental accounting theory, the curriculum provides thorough coverage of the techniques accountants use to apply these concepts to practical situations. The major program in accounting employs a capstone course, ACC 5996, to assess students' knowledge of the discipline. Students who concentrate in accounting must complete the following courses:

ACC 5100	Asset Accounting
ACC 5110	Equity Accounting
ACC 5130	Accounting Systems Design and Control
ACC 5160	Managerial Accounting
ACC 5170	Taxes on Income
ACC 5996	Auditing, Assurance and Attestation

## ACCOUNTING SPECIALIZATIONS

An accounting specialization is not required for the major in accounting; however, the specializations described below include recommended courses for students who desire further study in a particular accounting area.

### Public Accounting

The courses listed below are designed to prepare students for professional careers in public accounting. They are necessary preparation for the Certified Public Accounting (CPA) Examination.

ACC 5120	Advanced Accounting
ACC 5180	Governmental and Not-for-Profit Accounting
ACC 5190	Business Law II
ACC 5270	Advanced Tax Topics

### Managerial Accounting

This specialization is designed to prepare students for professional careers in corporate, governmental, and not-for-profit accounting.

ACC 5120	Advanced Accounting
ACC 5180	Governmental and Not-for-Profit Accounting
ACC 5190	Business Law II
ACC 5230	Advanced Accounting Systems
ACC 5260	Advanced Managerial Accounting
ACC 5270	Advanced Tax Topics

### Accounting Systems

This specialization is designed to prepare students for professional careers by developing expertise in accounting systems. It incorporates several courses offered in the major in information systems management.

ACC 5230	Advanced Accounting Systems
ISM 5820	Systems Analysis and Design
ISM 5992	Database Systems
ISM 5860	Data Communications and Networks
ISM 5994	Software Tools for Business Applications

## UNDERGRADUATE COURSES

*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 page 493. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 4000 and above.*

## ACCOUNTING (ACC)

### 3010 Elementary Financial Accounting Theory. Cr. 3

Prereq: sophomore standing, ECO 2010 and ECO 2020, MAT 1500. Introduction to financial accounting principles; preparation and interpretation of balance sheets and income statements. (T)

### 3020 Elementary Managerial Accounting Theory. Cr. 3

Prereq: ACC 3010, sophomore standing, ECO 2010, ECO 2020, MAT 1500. Introduction to manufacturing and managerial accounting, analysis of cash flow and financial statements. Basic concepts of business data processing systems. (T)

### 3510 Business Law I. Cr. 3

Prereq: sophomore standing. Introduction to the domestic and international legal systems. Impact of the legal environment on management decision-making. Law of contracts and sales, including products liability. (T)

**4500 (MGT 4500) Business Administration Co-op Assignment. (FBE 4500) (MKT 4500) Cr. 0**

Offered for S and U grades only. No credit toward degree. Open only to School of Business Administration students; others by consent of adviser. Must be elected by Professional Development Co-operative Program students during work semester. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. (T)

**4990 Directed Study in Accounting. Cr. 1-3 (Max. 6)**

Prereq: 2.75 cumulative g.p.a. to be eligible; written approval on proposal form prior to registration; consent of chairperson of student's major department. Open only to School of Business Administration students; others by consent of adviser. Three credits maximum in an academic semester. Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. (T)

**5100 Asset Accounting. Cr. 3**

Prereq: ACC 3020. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Conceptual foundations of accounting principles. Analysis of various accounting theories concerning asset valuation. (T)

**5110 Equity Accounting. Cr. 3**

Prereq: ACC 5100. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Interpretation of equities in corporation assets and measurement of income. (T)

**5120 Advanced Accounting. Cr. 3**

Prereq: ACC 5110. Offered for undergraduate credit only. Open only to School of Business Administration students; others by consent of adviser. No credit after former ACC 6996. Consideration of advanced concepts pertaining to consolidated statements, analysis of funds flow and liquidity, and supplemental financial disclosures of the effects of changing prices. (T)

**5130 Accounting Systems Design and Control. Cr. 3**

Prereq: ACC 5100, ISM 4630. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Principles of design, control, and evaluation of computer-based systems for processing accounting information. Techniques for data base design and information systems auditing. (T)

**5160 Managerial Accounting. Cr. 3**

Prereq: ACC 3020. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Theory and practice of cost accumulation and analysis to facilitate managerial decisions and cost control systems. (T)

**5170 Taxes on Income. Cr. 3**

Prereq: ACC 3020 or 6010. Open only to School of Business Administration students; others by consent of adviser. Theory of taxes on income and practical application of related laws and regulations. (T)

**5180 Governmental and Not-for-Profit Accounting. Cr. 3**

Prereq: ACC 3020 or 6010. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Theory and practical application of accounting and management issues of governmental units and non-profit organizations. (T)

**5190 Business Law II. Cr. 3**

Prereq: ACC 3510 and sophomore standing. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Law of agency, corporations, partnerships and negotiable instruments. Professional liability. (T)

**5230 Advanced Accounting Systems. Cr. 3**

Prereq: ACC 5110, FBE 4600, and ISM 3630. Open only to students in School of Business Administration. Offered for undergraduate credit only. Detailed coverage of accounting and auditing issues in advanced, networked environment. (Y)

**5260 Advanced Managerial Accounting. Cr. 3**

Prereq: ACC 3010 or 3020. Offered for undergraduate credit only. Open only to School of Business Administration students; others by consent of adviser. Theory of constraints and management accounting including the development and testing of performance measurements for different production and service environments. Simulated environments will be studied and cause-effect models for testing new methods. (Y)

**5270 Advanced Tax Topics. Cr. 3**

Prereq: ACC 5170. Offered for undergraduate credit only. Open only to School of Business Administration students; others by consent of adviser. Problems and cases involving corporate organizations, gains and losses, distribution, reorganization and liquidations, partnership, estate and gift taxes. (Y)

**5996 Auditing, Assurance and Attestation. Cr. 3**

Prereq: ACC 5110, ISM 4400. Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. No credit after former ACC 5140. Principles and procedures of auditing; professional standards and responsibilities of the certified public accountant. (Y)

## BUSINESS ADMINISTRATION (B A)

**1010 (CT) Critical Thinking for Consumer Decisions. Cr. 3**

Development of critical thinking skills and the application of these skills in evaluation and decisions for a broad range of consumer issues including advertising interpretations, purchase decisions, job applications, and consumer protection. (T)

**4580 Business in the International Environment. Cr. 3**

Prereq: MGT 4530 or equiv. Open only to students admitted to School of Business Administration; others by consent of instructor. Theoretical and practical rationales for international business activities. Key concepts such as absolute and comparative advantage, mercantilism and the product cycle theory. (F,W)

**4590 U.S. - Japan Relations: The Business Perspective. Cr. 3**

Prereq: MGT 4530 or equiv. Open only to students admitted to School of Business Administration; others by consent of instructor. Japanese business structure, culture and practice. Dynamics of business activities and transactions between American and Japanese firms. Comparison of American and Japanese styles of management, negotiation, and decision-making. (Y)

**5880 U.S. - European Union Relations: The Business Perspective. Cr. 3**

Open only to students admitted to the School of Business Administration; others by consent of adviser. Prereq: MGT 4530. Overview of business relations between the U.S. and EU members. Business cultures and practices of major trading partners; dynamics of business activities between U.S. and EU. History and organization of the EU; progress toward European integration. (Y)

# FINANCE and BUSINESS ECONOMICS

Office: 328 Prentis Building; 577-4520

Chairperson: Margaret Smoller

## Professors

James L. Hamilton, Milton H. Spencer (Emeritus)

## Associate Professors

Mark E. Bayless, Robert C. Bushnell (Emeritus), Mbodja Mougoue, Kelly R. Price, Margaret A. Smoller, Frank L. Voorheis (Emeritus), John D. Wagster

## Senior Lecturers

Mark Copper, John Richard

## Lecturers

Clinton Andrews, George Vlachos

## Degree Programs

*BACHELOR OF ARTS in Business Administration  
with a major in finance and business economics*

*BACHELOR OF SCIENCE in Business Administration  
with a major in finance and business economics*

## Bachelor's Degrees

**Admission Requirements:** Admission to undergraduate degree programs in the School of Business Administration is granted to upper division students (junior and senior level) only after completion of a pre-business administration curriculum; for a list of required courses, as well as the admission policies of the School, see page 65.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 124 credits including satisfaction of the degree requirements stated on pages 65-66, as well as requirements for one of the specializations listed below. All course work must be completed in accordance with the academic procedures of the University and the School which apply to this degree; see pages 15 -46 and 65-69 respectively.

## SPECIALIZATIONS

Bachelor's degrees in finance and business economics are offered with two specializations: corporate finance, and financial markets and investments.

### Corporate Finance

The corporate financial specialization prepares individuals for careers as financial managers in non-financial corporations. Entry level positions are generally as financial analysts or staff accountants, while potential future responsibilities include management of working capital, operating budgets, financial statement preparation, bank relationships, long-term financial planning, capital budgeting, treasury operations and stockholder relations. FBE 6996 is a capstone course that assesses students' knowledge of corporation finance. Students should complete core courses FBE 4290 and ISM 4400 before beginning the following major requirements:

ACC 5100 ..... Asset Accounting  
FBE 5210 ..... Security Analysis and Valuation  
FBE 5270 ..... Advanced Business Finance  
FBE 6996 ..... Corporate Financial Strategies

Plus two of the following:

FBE 5220 ..... Portfolio Management  
FBE 5320 ..... Principles of International Business Finance  
FBE 5330 ..... Bank Management  
FBE 5350 ..... Real Estate Finance  
FBE 5370 ..... Risk Management  
FBE 6997 ..... Derivative Securities and Portfolio Management  
ACC 5110 ..... Equity Accounting

### Financial Markets And Investments

This specialization prepares individuals for careers in financial institutions such as commercial banks, savings and loan associations, credit unions, insurance companies and in other financial intermediaries such as investment banking firms, security and investment brokerage houses, and security and commodity exchanges. Responsibilities within such firms are highly varied and include commercial and personal lending, branch management, security analysis, portfolio and trust management, real estate management, and insurance, commodity and security brokerage. FBE 6997 is a capstone course that assesses students' knowledge of financial markets and investments. Students should complete core courses FBE 4290 and ISM 4400 before beginning the following major requirements:

ACC 5100 ..... Asset Accounting  
FBE 5210 ..... Security Analysis and Valuation  
FBE 5220 ..... Portfolio Management  
FBE 6997 ..... Derivative Securities and Portfolio Management

Plus two of the following:

FBE 5270 ..... Advanced Business Finance  
FBE 5320 ..... Principles of International Business Finance  
FBE 5330 ..... Bank Management  
FBE 5350 ..... Real Estate Finance  
FBE 5370 ..... Risk Management  
ACC 5110 ..... Equity Accounting

## FINANCE and BUSINESS ECONOMICS COURSES (FBE)

*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 page 493. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 4000 and above.*

### 3050 Personal Financial Planning. Cr. 3

Prereq: sophomore standing. Principles of finance applied to personal financial affairs. Topics include: goal formation, cash budgeting, time value of money, insurance, real estate, banking, investments, tax planning, pensions, estate planning. (F,W)

### 4230 Financial Markets, Institutions and Securities. Cr. 3

Prereq: ECO 2010; ACC 3020 recommended. Open only to students admitted to the School of Business Administration; others by consent of adviser. The framework of our financial system. The role of securities, interest rates, financial markets and intermediaries in promoting savings, investments and other economic goals. The function of the money, capital and equity markets in channeling funds to business. (T)

### 4290 Business Finance. Cr. 3

Prereq: ECO 2010, ACC 3020 and ISM 3300 or ECO 4100 or equiv. Principles of financial administration, with applications to problems of

financial analysis, control, and planning by firms under changing economic conditions. (T)

**4500 (MGT 4500) Business Administration Co-op Assignment. (ACC 4500) (MKT 4500) Cr. 0**

Offered for S and U grades only. No credit toward degree. Must be elected by Professional Development Co-operative Program students during work semester. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. (T)

**4990 Directed Study in Finance and Business Economics. Cr. 1-3 (Max. 6)**

Prereq: 2.75 cumulative g.p.a. to be eligible; written approval on proposal form prior to registration, consent of chairperson of department in which student is majoring. Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. (T)

**5210 Security Analysis and Valuation. Cr. 3**

Prereq: FBE 4290 or former 5290, ISM 4400 or former FBE 5400; coreq: ACC 5100. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Analysis of the investment environment; sources of investment information; measuring the risk and return of investments; security valuation models; factors influencing security prices; diversification effects on risk and return, and introduction to portfolio theory and management. (T)

**5220 Portfolio Management. Cr. 3**

Prereq: FBE 5210 or former 6210. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Principles of portfolio construction and administration applicable to various institutions including banks, insurance companies, mutual funds, and pension trusts. (T)

**5270 Advanced Business Finance. Cr. 3**

Prereq: FBE 5210 or former 6210. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Risk analysis, working capital management, capital budgeting and valuation theories. Role of financial management in maximizing value of the firm. (F,W)

**5320 Principles of International Business Finance. Cr. 3**

Prereq: FBE 4290. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Financial management of firms dealing in international money and capital markets. Analysis of international investments, currency problems and financial aspects of exporting and importing functions. (F,W)

**5330 Bank Management. Cr. 3**

Prereq: FBE 4290. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Analysis of the functional areas of management of banks and related financial institutions, including deposits, cash, loans and asset accounts. Discussion of current topics including liquidity, capital adequacy, electronic fund transfers and mortgages. (I)

**5350 Real Estate Finance. Cr. 3**

Prereq: FBE 4290. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Analysis of methods and problems of transferring real property. Examination and analysis of financing methods for real estate transactions and real estate investment strategies. (I)

**5370 Risk Management. Cr. 3**

Prereq: FBE 4290. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. The underlying principles of insurance as they apply to the entire field of insurance. Intended for the student who

wishes to get a general knowledge of insurance as a management tool in controlling risks. (I)

**5880 International Money and Banking in Transition Economies. (SLA 5880) Cr. 3**

Prereq: consent of instructor, upper division standing. The Communist model of investment through state-owned monopoly banks compared to new role of former monopoly banks. Financial system models of United States, Japan and Germany, and their evolution. (Y)

**5890 Internship in Finance and Business Economics. (FBE 7890) Cr. 3**

Prereq: FBE 4290, prior consent of instructor. Offered for S and U grades only. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Minimum ten-page paper (excluding exhibits) discussing a problem or opportunity facing the sponsor organization, application of financial concepts, and outcomes relative to the problem or opportunity; summary presentation to department chairperson. (T)

**6996 Corporate Financial Strategies. Cr. 3**

Prereq: FBE 5270 or former 6270. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Advanced financial strategies dealing with cost of capital, mergers and other corporate reorganizations, investment banking and capital acquisition, dividend policy, lease financing, pension funds, convertible securities, international perspectives. (F,W)

**6997 Derivative Securities and Portfolio Management. Cr. 3**

Prereq: FBE 5220 or former 6220. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Recent developments in futures and options. Principles and theories applicable to pricing of, and markets for, futures and options; analysis and management of financial portfolios. Principles of valuation of options and futures investments; brief review of empirical evidence. (T)

# INFORMATION SYSTEMS and MANUFACTURING

Office: 100 Rands House; 577-9145

Interim Chairperson: Toni M. Somers

## Associate Professors

Timothy Butler, Narasimhaiah Gorla, K.S. Krishnan, Barbara Price, Arik Ragowsky, Toni M. Somers, Myles Stern, Harish Verma, David Verway

## Lecturers

John Heinrichs, William Pritchard

## Degree Program

*BACHELOR OF ARTS in Business Administration*  
with a major in information systems and manufacturing

*BACHELOR OF SCIENCE in Business Administration*  
with a major in information systems and manufacturing

## Bachelor's Degree

**Admission Requirements:** Admission to undergraduate degree programs in the School of Business Administration is granted to upper division students (junior and senior level) only after completion of a pre-business administration curriculum; for a list of required courses, as well as the admission policies of the School, see page 65.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 124 credits including satisfaction of the degree requirements stated on pages 65-66, as well as requirements for one of the specializations listed below. All course work must be completed in accordance with the academic procedures of the University and the School which apply to this degree; see pages 15 -46 and 65-69 respectively.

Information Systems and Manufacturing (ISM) refers to the use of computer-based systems to gather and analyze complex information about all aspects of a business. This information is used by managers to make business decisions. The use of computers has spread into virtually every industry in America, and, at present, there is a great demand for information systems professionals. The major program in management information systems employs a capstone course, ISM 6997, to assess students' knowledge of the discipline. Students specializing in ISM frequently pursue career positions as communications analysts, data base administrators, and information systems managers. Students must complete the following:

ISM 5820. . . . . Systems Analysis and Design  
ISM 5992. . . . . Database Systems  
ISM 5860. . . . . Data Communications and Networks  
ISM 5994. . . . . Software Tools for Business Applications  
ISM 6997. . . . . Information Systems Policy and Management  
Elective . . . . . Students can select specialized topics in ISM (e.g., Expert Systems, Decision Support Systems, Computer Aided Design) or an advanced programming course from the Computer Science Department.

Including ONE of the following:

CSC 1050 . . . . . (CL) Introduction to C and UNIX  
(Since CSC 1050 is a two-credit course, students may need to elect an additional credit.)  
CSC 2000 . . . . . Introduction to C++

CSC 2110 . . . . (CL) Introduction to Data Structures and Abstraction  
ACC 4990 . . . . . Directed Study

## INFORMATION SYSTEMS and MANUFACTURING (ISM)

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 page 493. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 4000 and above.

### 2630 (CL) Fundamental Computer Skills. Cr. 3

No credit after former ACC 2630. Introduction to management information systems, programming, data base management, spread sheets, word processing, telecommunications, graphics, electronic mail, teleconferencing, internet and applications. Material fee as indicated in the Schedule of Classes. (T)

### 3300 Quantitative Methods I: Probability and Statistical Inferences. Cr. 3

Prereq: MAT 1500 or higher or equiv. No business or free elective credit. Repeat of ECO 4100, STA 1020, or equiv. Measures of central tendency and dispersion. Introduction to probability; normal, binomial, exponential, and Poisson distributions. Statistical inference and sampling methods. Computer techniques. (T)

### 4400 Quantitative Methods II: Statistical Methods. Cr. 3

Prereq: ISM 3300 or ECO 5100 or equiv. Open only to students admitted to School of Business Administration; others by consent of adviser. Must be satisfactorily completed in first 16 credits after admission to the School. Uses of statistical techniques in business. Topics include: sampling, hypothesis testing, confidence interval estimation, regression, analysis of variance and chi-square tests. Application to accounting, market research, finance, production and forecasting. Computer techniques. (T)

### 4500 Business Administration Co-op Assignment. Cr. 0

Offered for S and U grades only. No degree credit. Open only to School of Business Administration Students, others by consent of instructor. Practical application of theory to on-the-job experience. Students will normally be assigned to cooperating business organization for internship periods of one semester. Must be elected by Professional Development Cooperative Program students during work semester. (Y)

### 4600 Production Operations Management. Cr. 3

Prereq: ISM 2630 or equiv., ISM 3300 or ECO 5100, and MGT 4510 or 4530. No graduate credit. Open only to students admitted to School of Business Administration; others by consent of adviser. Analysis of the production system. Identification of problems in a production system and solution of problems. Topics include: forecasting, production planning and scheduling, quality control, cost control and inventory control. (T)

### 4990 Directed Study in Information Systems and Manufacturing. Cr. 1-3 (Max. 6)

Prereq: 2.75 cumulative g.p.a.; written approval on proposal form prior to registration; consent of Chairperson of student's major department. Open only to Business Administration students, others by consent of instructor. Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to the student and faculty member. (Y)

### 5820 Systems Analysis and Design. Cr. 3

Prereq: ISM 4630. No credit after former ACC 5820. Open only to School of Business Administration students; others by consent of adviser. Structured, formal approach to information systems development. Analysis, logical requirements specification, general and

detailed design, control, and implementation of information systems. Technical and managerial factors. (T)

**5860 Data Communications and Networks. Cr. 3**

Prereq: ISM 5820. No credit after former ACC 5993. Open only to School of Business Administration students; others by consent of instructor. Data communication concepts and terminology, communication system design approaches, data communications standards, data communications software and hardware, network architecture, distributed management information systems. (Y)

**5890 Internship in Information Systems and Manufacturing. Cr. 3**

Prereq: ISM 4630 and consent of instructor; open only to School of Business Administration students, others by consent of advisor. Offered for undergraduate credit only. Written assignments discussing problem or opportunity facing the sponsor organization; application of information systems and manufacturing concepts, and outcomes relative to the problem or opportunity; summary presentation to the Department Chairperson. (Y)

**5992 Data Base Systems. Cr. 3**

Prereq: ISM 4630. No credit after former ACC 5992. Open only to School of Business Administration students; others by consent of adviser. Effective use of data base management systems for processing management information; design and administration of systems. Material fee as indicated in the Schedule of Classes. (Y)

**5994 Software Tools for Business Applications. Cr. 3**

Prereq: ISM 5820. No credit after former ACC 5994. Open only to School of Business Administration students; others by consent of instructor. Application of software to business information processing and decision-making. Alternative programming languages, non-procedural languages and application generators, customizing application packages. Role of the end-user. (Y)

**5995 Global Issues in Information Systems. Cr. 3**

Prereq: ISM 4360. Opportunities and problems of managing global information systems and information resources across national borders, time zones, and cultures. (T)

# MANAGEMENT and ORGANIZATION SCIENCES

Office: 328 Prentis Building; 577-4515

Chairperson: Yitzhak Fried

## Professors

Bruce E. DeSpelder (Emeritus), Victor C. Doherty (Emeritus), Harvey Kahalas, James E. Martin, John G. Maurer (Emeritus), Richard O. Osborn, Irvin D. Reid

## Associate Professors

Yitzhak Fried, Edwin F. Harris (Emeritus), Catherine Kirchmeyer, Thomas J. Naughton, Harvey Nussbaum, Donald H. Palmer (Emeritus), Irving Paster (Emeritus), Fred P. Unruh (Emeritus), Alice Schnoor (Emeritus)

## Assistant Professor

Sabine Reddy

## Senior Lecturers

Ariel S. Levi, Paul Reagan, Linda Slowik

## Lecturers

Christine Miller, R. Raja, William Spaulding

## Degree Programs

*BACHELOR OF ARTS in Business Administration with a major in management and organization sciences*

*BACHELOR OF SCIENCE in Business Administration with a major in management and organization sciences*

## Bachelor's Degrees

**Admission Requirements:** Admission to undergraduate degree programs in the School of Business Administration is granted to upper division students (junior and senior level) only after completion of the pre-business administration curriculum; for a list of required courses, as well as the admission policies of the School, see page 65.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 124 credits including satisfaction of the degree requirements stated on pages 65-66, as well as the management core courses and requirements for one of the specializations listed below. All course work must be completed in accordance with the academic procedures of the University and the School which apply to these degrees; see pages 15-46 and 65-69, respectively.

## Management Core

The management major prepares individuals to compete in a technology-intensive manufacturing or service economy. The required courses have students analyze contemporary management problems involving organizational design, organization learning, technology management, team projects, managing diversity, quality management, and the development and management of alliances in a global market place.

**Core Courses:** Students specializing in general management, operations management, human resource management and labor rela-

tions, and small business/entrepreneurship will complete the following three core courses, and then select from the designated courses in the area of specialization listed below.

MGT 5510 . . . . . Advanced Organizational Theory  
 MGT 5530 . . . . . Advanced Organizational Behavior  
 MGT 6995 . . . . . Seminar in Management

## SPECIALIZATIONS

Bachelor's degrees in management are offered in the following four specializations: General Management, Small Business/Entrepreneurship, Operations Management, and Human Resource Management and Labor Relations.

### General Management

This specialization focuses on the overall skills required of managers. It is the broadest of the four specializations. Students complete three courses from the following:

MGT 5540 . . . . . Managing Diversity  
 MGT 5650 . . . . . The Entrepreneur and Venture Creation  
 MGT 5660 . . . . . Managing Small & Emerging Enterprises  
 ISM 5680 . . . . . Operations Strategy in a Global Environment  
 MGT 5700 . . . . . Human Resource Management  
 MGT 5740 . . . . . Collective Bargaining  
 MGT 5770 . . . . . Advanced Human Resource Management  
 MGT 5780 . . . . . Designing Compensation & Reward Systems  
 ISM 5996 . . . . . Advanced Topics in Operations Management

### Small Business/Entrepreneurship

This specialization provides the knowledge and skills needed to create a successful new business venture (entrepreneurship) and to manage effectively in an established small business. The specialization is applications-oriented, with an emphasis on problem solving and decision making. It is designed for students who plan to become entrepreneurs or who plan to work in a smaller organization. Students complete the following:

MGT 5650 . . . . . The Entrepreneur and Venture Creation  
 MGT 5660 . . . . . Managing Small and Emerging Enterprises

Related courses from other business disciplines that are recommended for students in this specialization include:

ACC 5190 . . . . . Business Law II  
 FBE 5370 . . . . . Risk Management  
 MKT 5450 . . . . . Consumer Behavior

### Operations Management

The operations management specialization prepares the student for a career as a production or operations manager. It provides knowledge and skills (both qualitative and quantitative) to solve management problems relating to work-flow planning, scheduling, quality control, inventory control, and productivity. Students complete the following:

ISM 5680 . . . . . Operations Strategy in a Global Environment  
 ISM 5996 . . . . . Advanced Topics in Operations Management

Plus one of the following:

ACC 5160 . . . . . Managerial Accounting  
 BLG 5600 . . . . . Transportation and Distribution Management  
 BLG 5620 . . . . . Business Logistics Management

## Human Resource Management and Labor Relations

This specialization prepares students for positions in human resource management and/or labor relations in a variety of public and private sector organizations, including business, labor, non-profit enterprises and government. Students complete three of the following:

MGT 5700 . . . . . Human Resource Management  
 MGT 5740 . . . . . Collective Bargaining  
 MGT 5770 . . . . . Advanced Human Resource Management  
 MGT 5780 . . . . . Designing Compensation and Reward Systems

## MANAGEMENT COURSES (MGT)

*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 page 493. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 4000 and above.*

### 4500 Business Administration Co-op Assignment. (ACC 4500) (FBE 4500) (MKT 4500) Cr. 0

Offered for S and U grades only. No credit toward degree. Must be elected by Professional Development Co-operative Program students during work semester. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. (Y)

### 4510 Organizational Structure. Cr. 3

Prereq: PSY 1010 or PSY 1020. No graduate credit. Effect of the organization's size, type of technology employed, goals and strategy, and external environment on the design of an effective organization structure. Influence of organization structure on: innovations and change, information and control, decision-making, authority, power and politics, intergroup relationships, culture, and organization learning and renewal. (T)

### 4520 Managing Organizational Behavior. Cr. 3

Prereq: PSY 1010 or PSY 1020. No graduate credit. Dynamics of behavior in organizational settings, at the individual, interpersonal, and group levels. A problem-solving approach to management with emphasis on interpersonal and group skills. Topics include: motivation, communication, leadership, organizational development, group functions and processes. (T)

### 4530 Management of Organizational Behavior. Cr. 3

Prereq: PSY 1010 or 1020. No credit after MGT 4510 or 4520. Applied issues in management examined through a focus on the organization and its external environment, group functions and processes, and employee attitudes and behaviors. (T)

### 4890 Social and Political Influences on Business. Cr. 3

Prereq: MGT 4510 or consent of instructor. Open only to students admitted to School of Business Administration; others by consent of adviser. Influence of the external environment on the corporation. Roles and responsibilities of business persons, public policy issues, corporate governance; and application of ethical reasoning to contemporary issues in business. (T)

### 4990 Directed Study in Management. Cr. 1-3 (Max. 6)

Prereq: 2.75 cumulative g.p.a.; written approval on proposal form prior to registration; consent of major chairperson. Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. (T)



**5510 Advanced Organizational Theory. Cr. 3**

Prereq: MGT 4510 or 4530. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Analysis of strategic pressures on the organization. Application of advanced concepts of structured organizational change to contemporary organizational design problems. (F,W)

**5530 Advanced Organizational Behavior. Cr. 3**

Prereq: MGT 4520 or 4530. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Analysis and application of advanced organizational behavior concepts relevant to managing in a complex and changing environment. Topics include: leading and managing organizational change; solving workplace problems creatively; communicating effectively in a diverse work environment; building and empowering effective teams. (F,W)

**5540 Managing Diversity. Cr. 3**

Prereq: MGT 4520 or 4530 or senior standing. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Managing an increasing diverse work force from an organizational or structural perspective. Students complete a case study of an organizational setting. (Y)

**5650 The Entrepreneur and Venture Creation. Cr. 3**

Prereq: ACC 3010, FBE 4290, MGT 4510 or 4530, MKT 4350. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Nature of entrepreneurship and the role of the entrepreneur in American society. Focus on the critical factors and special problems associated with the process of creating new business ventures. Emphasis on development of a business plan. (Y)

**5660 Managing Small and Emerging Enterprises. Cr. 3**

Prereq: ACC 3010, FBE 4290, MGT 4510 or 4530, MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Differences between small and large company environments and problems. Focus on knowledge and skills required for efficient and effective small business management; emphasis on technology-intensive enterprises. Selected students may replace library research project with an actual small business counseling project. (T)

**5700 Human Resource Management. Cr. 3**

Prereq: MGT 4510 and 4520 or 4530 or consent of instructor. Open only to students admitted to school of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Theory, policies, procedures and practices in employment relationships. Topics include: job design, employment planning, selection, training and development, performance appraisal, compensation, labor relations and affirmative action within the legal parameters set forth by the Federal and state governments. (T)

**5740 Collective Bargaining. Cr. 3**

Prereq: MGT 4510 and 4520 or 4530, or consent of instructor. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Development of union-management relationships, including legal environment of labor relations; philosophy and practice of collective bargaining. A bargaining simulation is normally utilized. (T)

**5770 Advanced Human Resource Management. Cr. 3**

Prereq: MGT 5700 or consent of instructor. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. In-depth study of selected areas within the personnel function such as selection, performance appraisal and compensation; emphasis on application of human resource management theory. Specific personnel techniques discussed and utilized. (F,W)

**5780 Designing Compensation and Reward Systems. Cr. 3**

Prereq: nine credits in personnel and industrial relations. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Investigation of principles of design and implementation of employee compensation and reward systems; two-tier wage systems, merit pay, pension benefits. (Y)

**6890 Business Policy. Cr. 3**

To be taken after completion of core curriculum and as one of the last five courses toward bachelor's degree. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Development of conceptual and administrative skills required of managers in their strategy determination, policy formulation, and policy implementation roles. Managing the firm as an integrated unit under conditions of uncertainty. Integration of concepts and skills covered in previous specialized courses. (T)

**6995 Seminar in Management. Cr. 3**

Prereq: MGT 5510, 5530, six additional credits in management courses. Open only to students admitted to School of Business Administration; others by consent of adviser. Advanced topics in organizational behavior, organization theory, human resource management, operations management from strategic and global perspective. (Y)

# MARKETING

Office: 300 Prentis Building; 577-4525

Chairperson: Frank Carmone

## Professors

Richard F. Beltramini, Hugh M. Cannon (Adcraft Club/ Simons—Michelson Professor in Advertising), Frank Carmone, J. Patrick Kelly (Kmart Chair in Marketing Emeritus), Irvin D. Reid, Edward A. Riordan, Jone M. Rymer, Attila Yaprak

## Associate Professors

John D. Beard, Mary S. Irwin (Emerita), George C. Jackson, Leon R. Klein (Emeritus), James T. Low, Louis L. Stern (Emeritus), Jeffrey J. Stoltman, David L. Williams

## Senior Lecturer

John C. Taylor

## Degree Programs

*BACHELOR OF ARTS in Business Administration  
with a major in marketing*

*BACHELOR OF SCIENCE in Business Administration  
with a major in marketing*

*BACHELOR OF ARTS in Business Administration  
with a major in business logistics*

*BACHELOR OF SCIENCE in Business Administration  
with a major in business logistics*

## Bachelor's Degrees

**Admission Requirements:** Admission to undergraduate degree programs in the School of Business Administration is granted to upper division students (junior and senior level) only after completion of a pre-business administration curriculum; for a list of required courses, as well as the admission policies of the School, see page 65.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 124 credits including satisfaction of the degree requirements stated on pages 65-66, as well as the requirements for one of the specializations listed below. All course work must be completed in accordance with the academic procedures of the University and the School which apply to these degrees; see pages 15-46 and 65-69 respectively.

## Marketing Major

The marketing major is designed to prepare students for a variety of careers in marketing. As a complement to the basic major, students may elect to pursue specializations in advertising, automotive marketing, business logistics, international marketing, marketing management, personal selling and sales management, and retailing. Furthermore, within the marketing management specialization, students can develop customized specializations such as health care marketing, marketing of the arts, and sports marketing.

Note that course offerings in support of marketing specializations are subject to demand. If they are not available at times convenient for individual student registrations, students can make appropriate substitutions in consultation with their adviser.

All students majoring in marketing must complete the requirements of their specializations and subsequently take MKT 6996, Marketing Policy.

## Advertising/Marketing Communications

This specialization prepares students for work in a wide variety of businesses, advertising agencies, public institutions, and other organizations. It may serve as a background for people who plan to work in the advertising/marketing communications industry, or for general marketing jobs where promotional issues play a particularly prominent role. Required courses include:

MKT 5490 ..... Principles of Advertising  
MKT 5410 ..... Marketing Research and Analysis  
MKT 5450 ..... Consumer Behavior  
MKT 6996 ..... Marketing Policy

Two electives chosen from the following:

MKT 5500 ..... Advertising Copy  
MKT 5510 ..... Advertising Media Planning  
MKT 5520 ..... Public Relations  
MKT 5850 ..... Promotional Strategy

## Automotive Marketing

This specialization is designed to prepare students for careers in automotive marketing at the corporate, wholesale or retail levels. This specialization addresses the unique role played by the automotive industry in Detroit. It draws on the singular expertise of local automotive firms as well as Wayne State University, and addresses the numerous employment opportunities available in the southeast Michigan market. Required courses include:

MKT 5820 ..... Marketing in the Automotive Industry  
MKT 5410 ..... Market Research and Analysis  
MKT 5450 ..... Consumer Behavior  
MKT 6996 ..... Marketing Policy

Two electives from a Departmental list including:

MKT 5700 ..... Retail Management (highly recommended)

## International Marketing

This specialization is designed to help prepare students for careers in global enterprises and government agencies which focus on issues of international commerce. In this specialization students learn to develop comprehensive and integrated marketing programs for products and services targeted to consumers in all parts of the world. Required courses include:

MKT 5750 ..... International Marketing Management  
MKT 5450 ..... Consumer Behavior  
MKT 6996 ..... Marketing Policy  
Three elective courses from a Departmental list

## Marketing Management

This specialization is designed to provide students with broad exposure to the discipline of marketing management. In addition to the general focus on marketing management, the marketing management specialization provides a vehicle for designing a program directed toward a specific occupation or industry such as, health care, marketing in the arts, and sports marketing. Required courses include:

MKT 5410 ..... Marketing Research and Analysis  
MKT 5450 ..... Consumer Behavior  
MKT 6996 ..... Marketing Policy  
Three elective courses from a Departmental list

## Personal Selling and Sales Management

This specialization addresses the needs of students interested in the large and highly rewarding field of personal selling and sales management. Required courses include:

MKT 5460 ..... Sales Management  
MKT 5430 ..... Professional Selling

MKT 5650 .....Purchasing Management  
 MKT 6996 .....Marketing Policy  
 Three electives from a departmental list.

## Retail Management

This specialization is designed to prepare students interested in careers in, or related to, retail or wholesale organizations. As markets mature, they become saturated with competitively similar products. This increases the importance of the retailer in the marketing process since he/she controls the availability of products to the consumer. The retailing specialization addresses the needs of students anticipating careers in this marketing process either at the wholesale or retail level. Required courses include:

MKT 5700 ..... Retail Management  
 MKT 5450 ..... Consumer Behavior  
 MKT 5650 .....Purchasing Management  
 MKT 6996 .....Marketing Policy  
 Two electives from a Departmental list.

## Business Logistics Major

This major focuses on the management of the flow of goods and information from the source of raw materials through the channels of distribution to the final consumer, and beyond, to recycling and disposal. In today's highly competitive environment, the management of transportation, inventory, product planning and scheduling, and information flows are ever more critical to an organization's ability to satisfy customers and create a competitive advantage. This is reflected in an increasing number of jobs in logistics management. Required courses include:

BLG 5600 ..... Transportation and Distribution Management  
 BLG 5620 ..... Business Logistics Management  
 BLG 6997 .....Business Logistics Analysis and Planning

Three electives from a Departmental list, including:  
 MKT 5650 ..... Purchasing Management (highly recommended)

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-5999 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 page 493. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 4000 and above.*

## MARKETING (MKT)

### 2350 Foundations of Business and Entrepreneurship. Cr. 3

Introduction to role of business in our economic system, emphasis on entrepreneurship. Business concepts and processes, unique characteristics of entrepreneurial business. Tasks, requirements and challenges of starting and operating a business. (F,W)

### 4300 Marketing Management. Cr. 3

Prereq: ECO 2010. Planning the marketing program within social, economic and legal environments. Market segmentation and behavior, market systems and strategy, international marketing. (T)

### 4330 (WI) Business Communication. Cr. 3

Prereq: successful completion of English Proficiency Examination in Composition. Open only to students admitted to the School of Business Administration. Fundamental principles and skills of business communication, both written and oral. Systematic procedures for designing and preparing professional documents (especially reports) and oral presentations. Material fee as indicated in the Schedule of Classes. (T)

### 4350 Marketing Analysis and Decision Making. Cr. 3

Prereq: MKT 4300 and ISM 4400. Open only to students admitted to School of Business Administration; others by consent of adviser. Application of marketing principles in the analysis of problems in the areas of marketing objectives, and product, price, promotion and distribution strategy. (T)

### 4500 (MGT 4500) Business Administration Co-op Assignment. (ACC 4500) (FBE 4500) Cr. 0

Offered for S and U grades only. No credit toward degree. Must be elected by Professional Development Co-operative Program students during work semester. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. (T)

### 4990 Directed Study in Marketing. Cr. 1-3 (Max. 6)

Prereq: 2.75 cumulative g.p.a. to be eligible; written approval on proposal form prior to registration; consent of chairperson of student's major department. Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. (T)

### 5410 Marketing Research and Analysis. Cr. 3

Prereq: MKT 4300, ISM 4400. Open only to students admitted to School of Business Administration; others by consent of instructor. Methods of gathering and analyzing data which will facilitate the identification and solution of marketing problems. Planning the project, data sources for exploratory and conclusive research. Questionnaire construction, sample design, and design of marketing experiments. (T)

### 5430 Professional Selling. Cr. 3

Prereq: MKT 4300. Offered for undergraduate credit only. Open only to School of Business Administration students; others by consent of adviser. Process in exchange of product, service or idea to mutual satisfaction of buyer and seller. Topics include: understanding the customer, prospecting for customers, creating a sales presentation, closing the sale, ethics. (Y)

### 5450 Consumer Behavior. Cr. 3

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Concepts and theories to explain consumer and organizational buyer behavior. Application of this understanding to marketing management and public policy decision making. (T)

### 5460 Sales Management. Cr. 3

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Organization and direction of a sales organization including selection, training, compensation, supervision, motivation, budgets, quotas, territories, and sales analysis. (T)

### 5490 Principles of Advertising. Cr. 3

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Advertising principles relevant to a wide variety of organizations; research, advertising copy, layout; media of advertising; advertising management of departments and agencies; campaign strategy; budgeting, and testing effectiveness. (T)

### 5500 Advertising Copy. Cr. 3

Prereq: MKT 5490 or consent of instructor. Open only to students admitted to School of Business Administration; others by consent of adviser. Principles of effective advertising copy and application in consumer and industrial advertisements. Exercises in writing, criticizing, testing, and revising magazine, newspaper, radio, television, outdoor and direct mail advertisements. (F,W)

### 5510 Advertising Media Planning. Cr. 3

Prereq: MKT 5490 or consent of instructor. Open only to students admitted to School of Business Administration; others by consent of

adviser. Influence of marketing, creative and media objectives upon media planning. Information systems, budgeting approaches, media characteristics, media models, schedule construction, execution, and auditing. (F,W)

**5520 Public Relations of Business. Cr. 3**

Philosophy of public relations of business, history of public relations, study of public opinion, the public relations process, tools of communication, uses of mass media in public relations work, and analysis of methods employed in establishing sound public relations programs. (T)

**5650 Purchasing Management. Cr. 3**

Prereq: Open only to School of Business Administration students; others by consent of adviser. Offered for undergraduate credit only. Principles of the purchasing function. Topics include: negotiating, relationship to the supply chain, quality issues, supplier selection, quantity and delivery, and price determination. Strategic, ethical, legal, international issues. (Y)

**5700 Retail Management. Cr. 3**

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Retailing concepts and problems. Competitive structure, store location, organization, buying, inventory control, sales promotion, pricing, credit policy, customer services, research and franchising. (F,W)

**5750 International Marketing Management. Cr. 3**

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. The sociopolitical-legal-economic environment of international marketing operations, cross-national consumer behavior, international marketing research, forms of international involvement, direct foreign investment; international product, pricing, distribution and promotion policies; world trade patterns, trade policy, multinational corporations and the world economy. (Y)

**5820 Marketing in the Automotive Industry. Cr. 3**

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Offered for undergraduate credit only. Topics include: history, brand management, customer perception of satisfaction and quality, organizational issues. Corporate, retail, and wholesale levels. (Y)

**5830 Business in Transition in the Emerging Republics. (SLA 5830) Cr. 3**

Prereq: upper division standing, consent of instructor. Comparative review of economic liberalization and transformation in socialist and market economies. Analysis of liberalization attempts and outcomes; ethical norms and dilemmas occurring in transitional economies. (Y)

**5840 Special Topics on Economic Transition in Emerging Republics. (SLA 5840) Cr. 3**

Issues in Eastern Europe's transition from a centrally-controlled command economy to a free-market economy. Topics include: infrastructure reform, decentralization and privatization, the banking system, reforms and changes in social structures. (Y)

**5850 Promotion Strategy. Cr. 3**

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Development of integrated strategies, plans and programs in advertising, personal selling, publicity and promotion, and their implementation in the overall marketing effort. (T)

**5860 The Cultural Environment of Ukrainian Business. (UKR 5860) Cr. 3**

Prereq: upper division standing, consent of instructor. Culture and history of the Newly Independent States (NIS). History, past cultural achievements, commercial evolution in Ukraine as compared to other cultures. Topics include: Stalinist repression, Khrushchev thaw, 1960s Renaissance, implosion of Soviet empire. (Y)

**5890 Internship in Marketing. Cr. 3**

Prereq: 3.0 g.p.a.; MKT 4300; consent of instructor prior to enrollment. Offered for S and U grades only. Open only to marketing undergraduate students. Offered for undergraduate credit only. Required paper (minimum ten pages) discussing: problem or opportunity facing sponsor organization; application of marketing concepts; outcomes relative to identified problem or opportunity. Presentation to class summarizing internship experience. (T)

**6996 Marketing Policy. Cr. 3**

Prereq: MKT 4300, 4330, five additional courses in marketing concentration and core courses. Open only to marketing majors. Offered for undergraduate credit only. Capstone course in the marketing sequence; includes four components designed to develop skills in planning of development of strategies to solve marketing problems. (T)

## BUSINESS LOGISTICS (BLG)

**5600 Transportation and Distribution Management. Cr. 3**

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of instructor. Management of the movement of raw materials and finished products including the development of transportation strategies and objectives, and the selection of modes and carriers. Emphasis upon the interface of transportation policies with production and marketing plans. (F)

**5620 Business Logistics Management. Cr. 3**

Prereq: MKT 4300. Open only to students admitted to School of Business Administration; others by consent of adviser. Management of flow of materials and information from source of raw materials through the supply chain to the consumer, and beyond to disposal and recycling. (F)

**6997 Business Logistics Analysis and Planning. Cr. 3**

Prereq: BLG 5600 and BLG 5620. Open only to students admitted to School of Business Administration; others by consent of adviser. Application and synthesis of logistical concepts to solve problems encountered in the management of the supply chain. (I)

# COLLEGE OF EDUCATION

DEAN: Paula C. Wood

# Foreword

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 educators who have the knowledge, commitment and competence to help young people achieve academic success, preserve individuality, develop democratic values, and find self-fulfillment.

Professional field experiences are an important aspect of the preparation program; they bring the prospective teacher face-to-face with the realities of the classroom, the school and the community, as well as provide opportunities for participation in the study, research and analysis of contemporary educational issues. These field experiences occur in numerous school districts and cultural institutions throughout the metropolitan Detroit area.

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 prospective teacher many opportunities for developing a high level of teaching 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.

## Accreditation

The programs of the College of Education have been accredited by the National Council for Accreditation of Teacher Education since 1954. The College has been reaccredited regularly since that time. Full accreditation for its programs was again granted in 1997 for a seven-year period. In addition, Wayne State University is accredited by the North Central Association of Colleges and Secondary Schools.

## Degrees and Certificates

*BACHELOR OF ARTS in Education*  
with majors in the following areas:

Art Education  
Career and Technical Education-- Secondary  
Elementary Education  
English Education-- Secondary  
Mathematics Education-- Secondary  
Physical Education  
Science Education-- Secondary  
Social Studies Education-- Secondary  
Special Education-- with concentrations in  
Speech Impaired  
Mentally Impaired  
Speech Education-- Secondary

*BACHELOR OF SCIENCE in Education*  
with majors in the areas listed above

*\*\*BACHELOR OF SCIENCE in Recreation and  
Park Services<sup>1</sup>*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

\*\* An admission moratorium is in effect for this program.

1. This is a degree program only and does NOT lead to teacher certification.

### *\*MASTER OF ARTS IN TEACHING Majors*

Elementary Education -- with concentrations in  
Bilingual-Bicultural Education  
Early Childhood Education  
General Elementary Education  
Physical Education

Secondary Education -- with concentrations in  
Bilingual-Bicultural Education (Minor)  
Career and Technical Education  
English Education  
Foreign Language Education  
Mathematics Education  
Physical Education  
Science Education  
Social Studies Education

### *\*MASTER OF ARTS with majors in*

Counseling  
Recreation and Park Services\*\*  
School and Community Psychology  
Sports Administration  
Rehabilitation Counseling and Community Inclusion

### *\*MASTER OF EDUCATION with majors in*

Art Education  
Bilingual-Bicultural Education -- with concentration in  
English as a Second Language  
Career and Technical Education  
Counseling  
Early Childhood Education  
Educational Leadership  
Educational Psychology  
Educational Sociology  
Elementary Education -- with concentrations in  
Early Childhood Education  
Language Arts and Reading  
Literature for Children  
Mathematics Education  
Science Education  
Social Studies Education  
English Education (Secondary) -- with concentrations in  
English Education  
English as a Second Language  
Evaluation and Research  
Foreign Language Education (Secondary)-- with concentrations in  
Foreign Language Education  
English as a Second Language  
Health Education  
History and Philosophy of Education  
Instructional Technology  
Mathematics Education  
Physical Education  
Reading  
Science Education  
Social Studies Education-- Secondary  
Special Education -- with concentrations in  
Early Childhood  
Emotionally Impaired  
Mentally Impaired  
Learning Disabilities

### *\*EDUCATION SPECIALIST CERTIFICATES* with concentrations in

Counseling  
Curriculum and Instruction -- with concentrations in:  
Bilingual-Bicultural Education  
Career and Technical Education  
Early Childhood Education  
Elementary Education

English Education  
Mathematics Education  
Middle Level Education  
Science Education  
Secondary Education  
Social Studies Education  
General Administration and Supervision  
Instructional Technology  
Reading, Language and Literature  
Special Education

*\*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  
Mathematics Education  
Science Education  
Secondary Education  
Social Studies Education-- Secondary  
Educational Psychology  
Evaluation and Research  
General Administration and Supervision  
Instructional Technology  
Reading, Language and Literature (Ed.D. only)  
Special Education

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information section of this bulletin, beginning on page 5. The following additions and amendments pertain to the College of Education.*

## Normal Program Load

*The normal undergraduate student load is sixteen credits per semester. Only in exceptional cases is a student allowed to elect a heavier program. Approval of the adviser and authorization by the Director of the Division of Academic Services must be secured in those cases where the student petitions to carry more than eighteen credits within a full semester.*

If a significant portion of a student's time is spent in outside work, corresponding adjustments must be made in his/her college schedule. Undergraduate students who are working full time may elect a maximum of eight credits with approval of the adviser.

## Readmission Following an Interruption in Residence

Undergraduate students whose attendance at Wayne State has been interrupted for three or more years will be required to apply at the College of Education Division of Academic Services for readmission to the College. Deadline dates for such applications are the same as those for regular admission to the College. In instances of prolonged absences of five years or more, it may be necessary to revalidate credits, either through examinations or refresher courses, within the student's major and the professional education sequences.

## Attendance

Regularity in attendance and performance is necessary for success in college work. *Although there are no officially excused absences as far as College policy is concerned, 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.

## Transferred Credits and Residence Requirements

College credits earned in accredited institutions other than Wayne State University may be transferred by an undergraduate to apply toward meeting requirements for degrees and teaching certificates in the College, provided (1) the student has been accepted as a matriculated student in the College, (2) the grades received in courses where transfer is desired have been satisfactory, and (3) credits so earned are applicable to the student's curriculum.

In general, a maximum of fifteen credits may be earned by correspondence and extension courses and applied toward an undergraduate degree.

**Weekend College (College of Lifelong Learning):** Weekend College credit may be used toward a College of Education degree; however, it does not count toward fulfillment of major or minor requirements.

An applicant for a degree from the College must complete at least thirty credits as a registered student in the College.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

During the senior year, not more than ten transfer credits may be accepted. The student must be in residence during the semester in which he/she completes requirements for graduation.

*When the student has a degree from an accredited institution and is meeting the requirements of the College for a Michigan Provisional Teacher's Certificate, some credits may be applied toward the certificate by transfer but at least fifteen credits must be completed at Wayne State.*

## Probation and Withdrawal

If, at any time, an undergraduate's scholastic average falls below 2.5, the student is automatically placed on probation. If the general average is acceptable but work in professional courses, especially in student teaching is unsatisfactory, the student may be placed on probation. Before registering for subsequent work in the College, a student on probation must secure approval from the Office of Academic Services, 469 Education Building. 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.

# ACADEMIC SERVICES

Office: 469 Education; 577-1601

Assistant Dean: Janice Green

Graduate Advising: Sheri Bent, Stuart Itzkowitz

Undergraduate Advising: Stephanie McPhee, Sharon Sellers-Clark, Ja'hon Vance

## Purposes

The Academic Services Office is responsible for admitting undergraduate students to the programs of the College of Education, maintaining all student files, processing and certifying that degree and teaching certificate requirements have been met, and assisting graduates in securing professional positions. As the initial contact point for prospective students at all degree levels, the Office provides information and advice concerning programs offered, admission procedures, teacher certification, degree requirements, and regulations and policies pertaining to the College and the University.

## Services to Students

**ADVISING:** Counselors in the Academic Services Office may act as temporary advisers for students who have not been assigned permanent advisers or who have special needs. Usually, the counselors act as advisers for in-service teachers working for professional certification and for those seeking additional certificate endorsements.

Freshman and sophomore students enrolled in the pre-teaching curriculum prior to admission to the College of Education are advised by the University advising staff located in 2 East, Helen Newberry Joy Student Services Building.

Each student admitted to the College at the undergraduate level is assigned to a faculty member who acts as the adviser. The adviser guides the student in the selection of courses and counsels the student in solving problems.

**EDUCATION PLACEMENT OFFICE:** This office serves graduates of the College who have completed initial teacher-preparation or advanced graduate programs, and in-service teachers enrolled either now or previously in the University. All persons qualifying for teachers' certificates are urged to register with this office.

Close contact is maintained with school systems in Michigan and in other states. Attempts are made to keep informed of current trends in teacher supply and demand. College and university staff vacancies for professional positions throughout the United States are also listed with this office.

## Scholarships

Scholarships listed below are available to students enrolled in the College of Education whose cumulative grade point average is no less than 3.0 (unless stated otherwise). Interested students may obtain application forms and additional information from the Office of the Dean, 441 Education. *Application deadline is February 21.*

*Art Education Alumni Scholarship:* Award of \$350 per semester open to students who have successfully completed at least one semester in art education at Wayne State University.

*Margaret Ashworth Scholarship:* Award of \$500 open to minority undergraduates of junior or senior standing pursuing teacher certification, with a minimum 3.0 g.p.a. and a dedication to teaching in economically-depressed areas.

*C.C. Barnes Memorial Scholarship:* Award of a paid membership in the National Council for Social Studies open to any student with a 3.0 g.p.a. majoring in Social Studies Education.

*Augustus Calloway Scholarship:* Award of \$500 open to graduate or undergraduate students in Education with a minimum 3.0 g.p.a. and demonstrable financial need. Minority student encouraged to apply.

*College of Education Alumni Scholarship:* Award of up to twelve credit hours of tuition open to full-time undergraduate student with



junior standing, a minimum 3.0 g.p.a., demonstrable financial need and potential for leadership in teaching.

*College of Education Memorial Scholarship:* Award of \$500 open to full-time undergraduate or part-time master's level student with minimum 3.5 g.p.a. and demonstrable financial need.

*Dean's Scholarship Award:* Award of \$500 open to undergraduate (with minimum 3.5 g.p.a.) or graduate (with minimum 3.75 g.p.a.) student who exhibits interest in urban education.

*Delta Kappa Gamma Scholarship:* Award of \$500 open to undergraduate or graduate (master's level) student with minimum 3.5 g.p.a., demonstrable social and intellectual maturity and financial need.

*Detroit Area Council of Teachers of Mathematics:* Award of \$500 open to a junior or senior resident of the tri-county area with minimum 3.0 g.p.a.

*Dr. Murray A. Douglas Scholarship:* Award of \$500 open to undergraduate and post-degree art education majors.

*Donna Evans Scholarship:* Award of \$500 open to undergraduate students in elementary education or graduate students in school counseling.

*Faculty Leadership Award:* Award of \$500 open to students who show evidence of leadership and potential to become outstanding educators in the field of education; minimum 3.5 g.p.a.

*Professor Freda A. Harrington Scholarship:* Award of \$500 open to art education majors with at least twelve credits in methods and materials courses, and at least one semester of demonstrated excellence in the program.

*Evelyn Reed Havens Scholarship:* Award of \$100 per semester open to full-time art education major with a minimum 3.0 g.p.a. and demonstrated financial need.

*Health, Physical Education and Recreation Scholarship:* Award of \$500 open to major in the field planning to work in an urban setting, with at least twelve credits in professional course work and a minimum 3.5 g.p.a.

*James E. House Scholarship for Educational Leadership:* Award of \$500 open to students in education leadership program, with demonstrated evidence of leadership potential and intellectual maturity and a minimum 3.5 g.p.a.

*James Alvin Hutchinson Memorial Scholarship:* Award of \$500 open to full-time students in special education, with cumulative 3.0 g.p.a., demonstrated evidence of social and intellectual maturity and financial need.

*Mary Jane Kruse Scholarship:* \$500 award open to a mature woman continuing her education within the College of Education; scholastic achievement, desirable qualities of character and leadership, and financial need are considered.

*J. Wilmer Menge Memorial Endowed Scholarship Fund in Education:* Award of \$500 open to undergraduate students in mathematics education planning to teach at the secondary school level, with a minimum 3.0 g.p.a. and demonstrated financial need.

*Louis D. Monacel Memorial Scholarship:* Award of \$500 open to full-time student who is a graduate of a Detroit Public high school and demonstrated scholastic achievement and financial need.

*David Morgan Scholarship:* Award of \$1000 open to majors in special education with a minimum 3.0 g.p.a. and demonstrated financial need; minority students are encouraged to apply.

*Otis W. Morris Memorial Scholarship:* Award of \$500 open to full-time majors in English education, with a minimum 3.0 g.p.a.

*Sally Patterson Memorial Scholarship:* Award of \$500 open to any physically-challenged student with a minimum 3.0 g.p.a. and demonstrated financial need.

*Phi Delta Kappa Scholarship:* Award of \$500 open to full-time undergraduates with a minimum 3.0 g.p.a. and demonstrated financial need.

*Pi Lambda Theta Scholarship:* Award of up to \$500 in tuition assistance during the senior year, open to any full-time student who has completed junior standing with a minimum 3.5 g.p.a. and has demonstrated financial need.

*Special Education Scholarship Fund:* Award of \$500 open to students preparing to teach exceptional children, who have a minimum 3.0 g.p.a. and demonstrated financial need.

*Sports Administration Scholarship Fund:* Award of \$500 open to students in sports administration with potential to become outstanding professionals in the field, with minimum g.p.a. of 3.0 and demonstrated financial need.

*Sweeney-Comfort Scholarship:* Award of \$500 open to senior students who aspire to be teachers, and have a minimum 3.0 g.p.a. and demonstrated financial need.

*WSU Teacher of the Year Scholarship:* Award of \$500 open to students who have demonstrated excellence in the field component of the teacher education professional sequence.

*Dr. Earl A. Weiley Scholarship:* Award of \$500 per academic year open to art education majors with at least twelve credits in methods and materials courses, who have demonstrated excellence in the program for at least one semester and show outstanding potential as an art teacher.

*Dr. Jane Betsey Welling Scholarship:* Award of \$350 per semester open to an outstanding student majoring in art education who demonstrates financial need, good academic performance, and has completed at least one semester of study.

*Professor Fern E. Zwickey Scholarship:* Award of \$500 per academic year for art education majors with at least twelve credits earned in methods and materials courses, who have demonstrated excellence in the program for at least one semester and show outstanding potential as an art teacher.

## Alumni Association

The College of Education Alumni Association (formerly Detroit Teachers College Alumni Association) was organized in 1893 in connection with the Detroit Normal Training School. In the years since its origin, its membership has continually increased.

The aims of the Association, as set forth in its constitution, are (a) to foster a spirit of loyalty to the College, (b) to raise the standards of the teaching profession, (c) to assist professionally and financially those who need help, (d) to keep alive the spirit of real fellowship, and (e) to encourage worthwhile contacts between the student body and the Alumni Association. In addition to being supportive of the University and meeting the needs of the membership through appropriate programs, the Association, in recent years, has addressed itself to ways in which it can be of service to the broader community, recognizing that only through this commitment can it be a viable force in an urban university setting.

The Alumni Association has been generous in its gifts to the College. A gift provided complete furnishings for two rooms in the College of Education building-- the Alumni Conference Room and the Faculty Lounge. The Alumni Association provides scholarships for deserving students, sponsors the Golden Anniversary Tea in honor of fifty-year graduates of the College, honors both alumni and faculty with awards and recognition, and supports the work of the Dean in carrying forward many activities of mutual interest and concern. In becoming active members of the Association, the graduates of the College have ample opportunity to uphold and develop the best movements and ideals set forth by educational leaders and to lead in professional friendliness among all teachers.

## COLLEGE OF EDUCATION DIRECTORY

### *Dean of the College of Education:*

Paula C. Wood . . . . . Room 441, Education Building; 577-1620

### *Associate Dean, Research:*

Steven Ilmer. . . . . Room 441, Education Building; 577-1620

### *Assistant Dean, Academic Services:*

Janice Green . . . . . Room 489, Education Building; 577-1605

### *Interim Assistant Dean, Administrative and Organizational Studies:*

Joann Holbert . . . . . Room 341, Education Building; 577-1721

### *Assistant Dean, Health, Physical Education and Recreation:*

Sarah Erbaugh . . . . . Room 261, Matthaei Building; 577-6210

### *Assistant Dean, Teacher Education:*

Sharon Elliott . . . . . Room 241, Education Building; 577-0902

### *Assistant Dean, Theoretical and Behavioral Foundations:*

Joanne Holbert . . . . . Room 341, Education Building; 577-1721

### *Annenberg Project and Public School Liaison:*

Burnis Hall . . . . . Room 369, Education Building; 577-1701

*Website:* <http://www.coe.wayne.edu/>

Mailing address for all offices: Wayne State University, 5425 Second Avenue, Detroit, Michigan 48202

# HEALTH, PHYSICAL EDUCATION, and RECREATION

*Office:* 261 Matthaei Building; 577-4265

<http://www.hpr.wayne.edu>

*Assistant Dean:* Sarah J. Erbaugh

### *Associate Professors*

David B. Blievernicht, Herman J. Engels, Sarah J. Erbaugh, Jeffrey Martin

### *Assistant Professors*

Mariane Fahlman, Randall Gretebeck, Avanelle Kidwell, Pamela Kulinna, Qin Lai, Peter A. Roberts, William W. Sloan, Delano Tucker, John C. Wirth

### *Lecturers*

Roy Allen, Bob Benham, Judy Bowen, Steve Singleton

## Degree and Certificate Programs

*BACHELOR OF SCIENCE in Education*

*with a major in physical education*

*BACHELOR OF ARTS in Education*

*with a major in physical education*

*BACHELOR OF SCIENCE in Recreation and Park Services \*\**

*\*MASTER OF EDUCATION with a major in health education*

*\*MASTER OF EDUCATION with a major in physical education and specializations in exercise and sport science, physical education pedagogy, and wellness*

*\*MASTER OF ARTS IN TEACHING with a major in Physical Education*

*\*MASTER OF ARTS with a major in recreation and park services and specializations in recreation administration, therapeutic recreation, and therapeutic recreation--gerontology\*\**

*\*MASTER OF ARTS with a major in sports administration and with emphases in interscholastic athletic administration, intercollegiate athletic administration, professional sports administration, and commercial sports administration*

Health, physical education, and recreation, as integral parts of a general education, focus attention upon the vital needs of the human being to acquire knowledge, skills and attitudes necessary for regular participation in healthful living and physical and leisure time activities. The decreased demands for physical vigor, as well as the increased tensions caused by the technological progress of the modern era, demand a scientific approach to these vital phases of well being.

The Division of Health, Physical Education, and Recreation provides degree programs and courses of instruction in driver education, health education, physical education and recreation and park services.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

\*\* An admission moratorium is in effect for this program.

Courses in these areas may be used to meet degree and curricular requirements of the various schools and colleges of the University. Students are advised to consult their academic advisers in their respective schools or colleges prior to registration.

## Bachelor of Science in Education with a major in Physical Education

**Admission Requirements:** All students who enter the University directly from high school, or transfer to Wayne from other colleges and who declare their intent to major in physical education are admitted directly to the College of Education; for requirements, see page 101. Upon application, students should request admission into the physical education major program.

Students already admitted into any other college of Wayne State University must apply for transfer to the physical education program through the College of Education, Room 469 Education Building. (Forms for transfer of college are available at either Room 267 Matthaei or Room 469 Education Building.)

Eligibility for admission as transfer students from other colleges or universities, or from other colleges within Wayne State, is based on the following criteria:

1. A minimum overall grade point average of 2.5.
2. Completion of English 1020 or equivalent.
3. Satisfactory completion of the University English Proficiency Examination and Mathematics Proficiency Examination. Students in the Teacher Certification Program must also pass the state basic skills test.
4. Attendance at a College of Education Orientation session.
5. Documentation of group work with children at the time of application (teacher certification track only).
6. Possession of personal attributes most desirable for teachers, including a high standard of moral conduct and an understanding of the nature of responsible citizenship (teacher certification track only).
7. Physical and emotional health commensurate with the demands of the physical education profession.
8. Negative TB test (teacher certification track only).

**Post Degree:** Students should follow the procedures for application and file a Post Degree Form in Room 469 Education Building.

**DEGREE REQUIREMENTS:** A total of 124 credits are required for completion of this degree: a minimum of forty credits in general education (including satisfaction of the University General Education requirements, see page 29); forty-seven credits in physical education; eight credits in health, anatomy, and physiology; and twenty-three credits in education courses for the teacher certification track, or a minimum of twenty credits in education courses for the exercise science track. Students in the teacher certification track must develop a minor or a second major. Electives to complete the 124 credit requirement may be used in any area. All course work must be completed in accordance with the academic procedures of the College of Education and University governing undergraduate scholarship and degrees; see pages 87 and 101, and 15-46, respectively. All major, minor, and education courses must be completed with grades of 'C' or better and an overall 2.5 grade point average, to meet College graduation requirements. Course changes may occur through periodic curriculum revision and students are urged to consult assigned advisers prior to each registration period to insure that all requirements are met.

**Teacher Certification Track:** This degree track prepares students for careers in teaching school physical education. Specific goals of this track include acquisition of: skills in and knowledge of a variety of movement activities, including fundamental motor skills, dance, fitness, and leisure activities; the ability to apply knowledge about human movement acquired from its subdisciplines to the teaching of

physical education; the ability to analyze and evaluate individual human motor performance in a variety of age groups and skill levels; and the capacity to systematically evaluate one's own teaching performance and to plan, implement and manage effective lessons.

**Exercise Science Track:** This degree track is designed to provide self-directed students with a specialized background for graduate-level study and professional work in the field of exercise science. This track is basic to careers in such fields as adult fitness, corporate fitness, exercise physiology, athletic training, cardiac rehabilitation; and it is prerequisite to the necessary post-graduate study or additional certification requirements of the field. (For additional information, please see Division website.)

### HEALTH FOUNDATION SEQUENCE

<i>(Required with each option)</i>	<i>credits</i>
BIO 2870 -- Anatomy and Physiology . . . . .	5
HEA 2330 -- First Aid and CPR . . . . .	3

### PHYSICAL EDUCATION CORE

<i>(Required with each option)</i>	
P E 1991 -- Professional Perspectives in Physical Education . . . . .	2
P E 3400 -- Lifespan Growth and Development . . . . .	3
P E 5540 -- Cultural Foundations of Physical Education . . . . .	3
P E 3550 -- (WI) Motor Learning and Control . . . . .	3
P E 5570 -- Physiology of Exercise I . . . . .	3
P E 3580 -- Biomechanics . . . . .	3
P E 5500 -- Evaluation and Measurement in Health & Physical Education . . . . .	3
<b>Total:</b>	<b>20</b>

### TEACHING CERTIFICATION TRACK

P E 2580 -- Physical Education in Secondary Schools I (Cr. 3, Max. 6) . . . . .	6
P E 2590 -- Physical Education in Secondary Schools II (Cr. 3, Max. 6) . . . . .	6
P E 5440 -- Physical Education for Elementary School Children I . . . . .	3
P E 5450 -- Physical Education for Elementary School Children II . . . . .	3
P E 3440 -- Aquatic Leadership . . . . .	4
P E 5400 -- Inclusion in P E . . . . .	3
Lifelong Leisure Activity (PEA) . . . . .	2
<b>Total:</b>	<b>27</b>

### Professional Education Requirements

P E 5460 -- Instructional Methods in Physical Education . . . . .	3
P E 5780 -- Student Teaching and Seminar I . . . . .	8
P E 5790 -- Student Teaching and Seminar II . . . . .	5
EDP 3310 -- Educational Psychology . . . . .	3
RDG 4430 -- (WI) Teaching Reading in Subject Matter Areas . . . . .	3
<b>Total:</b>	<b>22</b>

### EXERCISE SCIENCE TRACK

HEA 2310 -- Dynamics of Personal Health . . . . .	3
P E 2010 -- Psycho/Physiological Fdns. of Physical Activity . . . . .	2-4
P E 5350 and/or P E 5360 -- Exercise Science Internship . . . . .	2-4
-- Senior Research Project . . . . .	4
P E 6320 -- Fitness Assessment and Prescription . . . . .	3
H E 3440 -- Nutrition and Health . . . . .	3
Approved electives in emphasis areas of exercise science, athletic training, sport and exercise psychology, fitness and nutrition, or clinical exercise physiology . . . . .	20-24
Additional required courses for athletic training emphasis:	
P E 5330 -- Principles of Athletic Training . . . . .	3
P E 5340 -- Prevention, Care, and Evaluation of Athletic Injuries . . . . .	3
<b>Total:</b>	<b>40</b>

*Physical Education Activities . . . . . 10*

## Bachelor of Arts in Education with a major in Physical Education

The admission and degree requirements for the Bachelor of Arts are similar to those for the Bachelor of Science degree (as described above), with the exception that the student's work must include twelve credits in a foreign language. If two or more units of a foreign language are offered for admission, this requirement may be satisfied by completing eight credits in the same language beyond the freshman level.

**Teacher Certification Track:** The following requirements apply to students in the teacher certification program:

1. Students must apply for and complete two semesters of student teaching/seminar, elementary and secondary levels.

2. Students must obtain forms from their academic adviser and make an appointment with the coordinator of student teaching. Completed applications **MUST** be turned in within the appropriate application periods in order to reserve a student teaching assignment. Student teaching application periods are as follows:

*Term I (Fall Semester):* November 1 to January 31 of the preceding academic year.

*Term II (Winter Semester):* April 1 to July 31 of the preceding academic year.

3. Students must have a satisfactory health record and a tuberculosis test within six months before the assignment begins. A copy of the test results must be submitted with the application.

4. Students must meet the following conditions to qualify for student teaching:

a) Ninety-two credits must be completed (incomplete grade credits will not count).

b) 'C' or better grades must be earned in all major, minor, and professional education courses.

c) A 2.5 grade point average overall and in the major is required. The major g.p.a. includes all professional courses as well as BIO 2870.

d) Successful completion of the Michigan Test for Teacher Certification (MTTC), basic skills, and subject matter tests.

5. The following courses must be satisfactorily completed. (An incomplete grade does not constitute satisfactory completion.): BIO 2870, EDP 3310, P E 1991, 2580, 2590, 5440, 5450, 5460, 3550, 5570, and 3580.

6. The following certifications are required before the secondary student teaching contact:

a) Current Red Cross Lifeguard Training Certificate.

b) Current Water Safety Instructor Certificate.

7. CPR and First Aid certification is required for placement.

## Teaching Certification

Students who complete all of the Physical Education and College of Education requirements may apply for a Michigan Secondary Provisional Teaching Certificate at the same time they apply for graduation. This certificate qualifies the holder to teach grades K-12 in his/her major and grades 7-12 in his/her minor subject. Initial certification is provisional for a six-year period. For further information contact the College of Education.

## Minor in Physical Education

Future teachers seeking a teaching/coaching position may find the physical education minor a valuable program option. This minor (listed below) may be elected by students completing any teaching major, however, students must complete the minor at the level appropriate for their particular teaching major and have approval of a Physical Education adviser-- i.e., secondary majors complete the

secondary course requirements, and elementary majors complete the elementary course requirements.

Students not involved in a teacher certification program may elect a physical education minor only after consultation with a program adviser.

### PHYSICAL EDUCATION CORE credits

Select two of the following:

P E 3400 -- Lifespan Growth and Development . . . . . 3

P E 3550 -- (WI) Motor Learning and Control . . . . . 3

P E 5570 -- Physiology of Exercise I (Prereq: BIO 2870 or equiv.) . 3

P E 3580 -- Biomechanics (Prereq: BIO 2870 or equiv.) . . . . . 3

### SPECIALIZED TEACHING CORE (Fifteen Credits -- One of the following options required)

#### Secondary

P E 2010 -- Psycho/Physiological Fdns. of Physical Activity . . . . . 3

P E 2580-- Physical Education in Secondary Schools I (Cr. 3, Max. 6)

P E 2590 -- Physical Education in Secondary Schools II  
Cr. 3, Max. 6) . . . . . 6

*Secondary minors* must also complete P E 5460, Instructional Methods in Physical Education.

#### Elementary

P E 2010 -- Psycho/Physiological Fdns. of Physical Activity . . . . . 3

P E 2580-- Physical Education in Secondary Schools I  
(Cr. 3, Max. 6) . . . . . 3

P E 2590 -- Physical Education in Secondary Schools II  
Cr. 3, Max. 6) . . . . . 3

P E 5440 -- Physical Education for Elementary School Children I . 3

P E 5450 -- Physical Education for Elementary School Children II . 3

## Training Program for Adaptive Physical Education

A program leading to State endorsement in this speciality is available to physical education and special education majors. The program requires thirteen credits in approved special education courses and eleven to fifteen credits in adapted physical education courses. To be admitted to this program the student must possess a valid Michigan teaching certificate in physical education or any area of special education, or be enrolled in one of the above programs. Endorsements will not be granted without a teaching certificate in physical education or special education. Physical education majors must consult with their advisers, prior to electing courses for this endorsement.

### ENDORSEMENT REQUIREMENTS

P E 5400 -- Inclusion in P E . . . . . 3

P E 5410 -- P E for Special Needs Student: Methods & Materials . . 3

P E 5420 -- Sports & Recreation for Children with Special Needs . . 3

P E 5430-- Practicum in Adaptive P E . . . . . 2-6

SED 5030 -- Education of Exceptional Children . . . . . 3

SED 5110 -- Mental Impairment and the Cognitive Process . . . . . 3

SED 5140 -- Behavior Management: Mental Impairments . . . . . 3

SED 5260 -- Strategies for Learners with Low Incidence Disabilities 4

Total: 24-28

## Health Education Minor

Health education plays an educational role in the promotion of health and the prevention of disease. A minor in health education provides opportunities for involvement in school health education, as well as an introduction to a career as a health education professional in a clinical or community setting.

In the State of Michigan, a commitment has been made to a comprehensive health education curriculum, the Michigan Model. Promoted

by the state departments of public health and education, the Michigan Model has been adopted by an increasing number of schools. The minor in health education qualifies individuals for a health teaching endorsement at the elementary and secondary levels as well as in some of the Michigan Model adopted schools. In addition, a minor in this field may be combined with nursing or other allied health science fields.

The requirements for a minor in health education include courses in five areas: 1) professional preparation; 2) physical health; 3) mental health; 4) nutrition; 5) personal health; and 6) substance abuse. Students must see an adviser in health education to file a Plan of Work prior to electing courses.

**MINOR REQUIREMENTS:** A total of twenty-four credits is required for the completion of the health education minor, as follows:

	<i>credits</i>
BIO 1510 -- (LS) Basic Life Mechanisms . . . . .	3
HEA 2310 -- Dynamics of Personal Health . . . . .	3
HEA 2330 -- First Aid and CPR . . . . .	3
H E 3300-- Health of the School Child . . . . .	3
H E 3330 -- School Health Education . . . . .	3
H E 3440 -- Nutrition and Health Ed. . . . .	3
H E 4340 -- Family and Reproductive Health . . . . .	3
H E 5440 -- Mental Health and Substance Abuse. . . . .	3
Total: 24	

## Fitness and Leisure Skills (PEA) Activities

Physical Education Activities (PEA) courses offer experience in a wide variety of fitness and leisure skills to both undergraduate and graduate Wayne State students; however, these courses are not offered for graduate credit. PEA courses may also be elected by non-matriculated and visiting students.

## Bachelor of Science in Recreation and Park Services\*

Undergraduate degrees in recreational leadership were first offered at Wayne State University in 1950, and graduate degrees in 1954. Students majoring in this discipline are prepared for careers in city/county recreation departments, youth agencies, military recreation, outdoor education centers and camps, senior centers, physical rehabilitation centers, hospitals, substance abuse programs, and long term care facilities, among others. All majors are members of the Student Recreation and Park Association. Yearly, Professional Development Seminars are sponsored by this association and are open to students and professionals in the metropolitan area.

**Admission Requirements:** Prospective Recreation and Park Services students should apply through the regular admission procedures to the University Undergraduate Admissions Office, requirements for which are stated on page 15 of this bulletin. Students entering directly from high school, or with less than fifty-three semester credits from another college or university, or transferring from another unit of Wayne State University are admitted to the College of Education at the junior college level. Upon completion of fifty-three credits of college work with a minimum overall grade point average of 2.5, students may apply for admission to the College of Education. All students intent upon pursuing a major in Recreation and Park Services must make arrangements for a personal interview with an undergraduate adviser in this program area prior to admission into the program. For further information, students are urged to contact an adviser; telephone: 577-6212.

\* An admission moratorium is in effect for this program.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science in Recreation and Park Services must complete 124 credits, sixty-

three of which are in general and professional education (including satisfaction of the University General Education Requirements, see page 29), and sixty-one credits in Recreation and Park Services courses. All course work must be completed in accordance with the academic procedures of the College of Education and the University governing undergraduate scholarship and degrees; see pages 87 and 101, and 15-46, respectively. Since changes in courses may occur through periodic curriculum revision, students should consult with their adviser prior to each registration period to insure that all requirements are met. An overall grade point average of 2.5 and a 2.5 average in Recreation and Park Services courses must be attained for graduation. All R P courses must be completed with grades no lower than 'C'. Mathematics and English competency examinations must be satisfied prior to registration for R P 3620. All competency examinations must be completed prior to registering for R P 4620.

The following general and professional education courses (which include the University General Education Requirements) are required of all majors:

### COMMUNICATION SKILLS (Ten Credits)

(Additional course work may be required of students having difficulty in this area)

ENG 1020 -- (BC) Introductory College Writing . . . . .	4
ENG 3010 -- (IC) Intermediate Writing . . . . .	3
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	2
UGE 1000 -- (GE) Information Power . . . . .	1

### HUMAN INTERACTION (Nineteen Credits)

PSY 1010 -- (LS) Introductory Psychology . . . . .	4
SPC 3270 -- Group Communication and Human Interaction. . . . .	3
HEA 2330-- First Aid and CPR . . . . .	3
P E 3400 -- Life Span Growth and Development. . . . .	3
Education Electives (chosen with adviser approval) . . . . .	6

### NATURAL SCIENCE (Eleven to Sixteen Credits)

<sup>1</sup> AST 2010 or GEL 1010	
-- (PS) Descriptive Astronomy . . . . .	4
-- (PS) Geology: The Science of the Earth . . . . .	4
P E 5500 -- Evaluation and Measurement. . . . .	3

Required only for Recreation Administration students

BIO 1510 -- (LS) Basic Life Mechanisms. . . . .	4
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Required only for Therapeutic Recreation students:

BIO 1510 and BIO 2870	
-- (LS) Basic Life Mechanisms. . . . .	4
-- Anatomy and Physiology . . . . .	5

### BEHAVIORAL SCIENCE (Twenty-three Credits)

<sup>1</sup> P S 1010 -- (AI) American Government . . . . .	4
<sup>1</sup> HIS 1400 or HIS 1995	
-- (HS) The World since 1945 . . . . .	3
-- (HS) Society and the Economic Transition. . . . .	3
<sup>1</sup> SOC 2000 or SOC 2020	
-- (SS) Understanding Human Society . . . . .	3
-- (SS) Social Problems . . . . .	3
<sup>1</sup> ANT 3150 or NUR 4800	
-- (FC) Anthropology of Business . . . . .	3
-- (FC) Transcultural Health through the Life Cycle . . . . .	3
<sup>1</sup> HUM 1020 -- (VP) Experiencing the Arts . . . . .	3
<sup>1</sup> PHI 2320 -- (PL) Introduction to Ethics . . . . .	3
PSY 3310 -- Abnormal Psychology	
(Required only for Therapeutic Recreation students) . . . . .	4

1. Or other elective fulfilling University General Education Requirement.

## COMPETENCY EXAMINATIONS

Competency must be demonstrated in subject areas indicated by passing the following examinations: English Proficiency, Critical/Analytical Thinking, Computer Literacy, and Mathematics.

**MAJOR REQUIREMENTS:** Concurrent with the general and professional education requirements, students must complete sixty-one credits in Recreation and Park Services courses consisting of the following core courses, and elective credits. No grade below a 'C' may be used to fulfill major requirements. Attendance at two program area Professional Development Seminars is also required prior to graduation.

### CORE REQUIREMENTS

*(Thirty-seven to Thirty-eight Credits)*

R P 2600 -- Principles of Leadership and Recreation Programming	4
R P 2640 -- Camp Leadership and Administration	3
R P 2650 -- Cultural Arts in Recreation	3
R P 3600 -- Social Recreation Programming	3
R P 3620 -- Introductory Field Work	3
R P 3670 -- Introduction to Therapeutic Recreation <sup>1</sup>	3-4
R P 4620 -- Internship	9
R P 4630-- (WI) Philosophy of Recreation and Park Services	3
R P 4650 -- Recreation and Park Administration	3
HPR 6640 -- Legal Issues in HPR	3

*ELECTIVES (Twenty-three to Twenty-four Credits chosen from the following:)*

R P 5630 -- TR: Program Development (Required for Therapeutic Recreation students)	3
R P 5660-- Independent Study	1-2
R P 5760 -- Readings in Recreation and Park Services	1
R P 5780-- TR: Mental Health	3
R P 6600 -- Outdoor and Environmental Education	3
R P 6630 -- TR: Program Implementation (Required for Therapeutic Recreation students)	3
R P 6670 -- Outdoor Recreation and Tourism	3
R P 6730-- TR: Physical Disabilities	3
R P 6780 -- Leisure Education	3
HPR 6650 -- Health and Recreation Services for the Aged	3
HPR 5740 -- Facility Planning, Design, and Construction	3
HPR 6540 -- Workshop in HPR	5-6

## Scholarships and Financial Aids

Scholarships, loans, work-study, and other types of financial aid are available through the University and interested students should contact the Office of Scholarships and Financial Aids (see page 20); a list of athletic scholarships appears on page 27; see also the section on scholarships beginning on page 88. Several scholarships are also awarded each spring, for the following academic year, by the Michigan Recreation and Park Association to students with financial need who are majoring in recreation at any college or university within the State. Applications are available from a program adviser after January 1 of each year

## UNDERGRADUATE COURSES

All of the course numbers have been standardized to four digits in this edition of the Bulletin. The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### DRIVER EDUCATION (D E)

**5730 Teaching Driver Education and Traffic Safety. (TED 5994) Cr. 3**

Prereq: valid Michigan driver's license. (F,W)

**5740 Problems in Driver Education and Traffic Safety. (TED 5740) Cr. 3**

Prereq: D E 5730. Issues and concerns in professional preparation to meet traffic safety needs of schools and communities. (F,S)

**5750 Seminar in Driver Education and Traffic Safety. (TED 5750) Cr. 3**

Prereq: D E 5740. Behavioral, administrative, and professional aspects of the teaching role in driver and traffic safety education. (W,S)

### HEALTH (HEA)

**2310 Dynamics of Personal Health. Cr. 3**

Critical health issues relevant to both traditional and non-traditional college students today. In-depth study of varied health issues and applications to personal, family and community needs. (T)

**2320 Dynamics of Community and Environmental Health. Cr. 2**

Ecological factors associated with human health; environmental pollution and other health problems of communities; organized efforts to deal with them. Field trips. (T)

**2330 First Aid and CPR. Cr. 3**

Theory and practice of First Aid and CPR. Students can qualify for national certificates in First Aid and CPR. Material fee as indicated in the Schedule of Classes. (T)

**3990 Individual Problems in Health. Cr. 1-3 (Max. 3)**

Prereq: HEA 2310 or 2320 and consent of instructor. Solving a specific personal health problem or studying a specific community health problem under the guidance of divisional staff. (T)

### HEALTH EDUCATION (H E)

**3300 Health of the School Child. (TED 4300) Cr. 3**

Health status and problems of school-age children. Role of teacher and schools in promoting healthy behavior. Emphasis on impact of institutional forces (e.g., family, media) on development of children's health beliefs and behavior. (F,W)

**3330 School Health Education. Cr. 3**

Prereq: H E 3300. Principles, curriculum development, and techniques in teaching health at elementary and secondary school levels. (F)

**3440 Nutrition and Health Education. Cr. 3**

Relationships between dietary intake and health status in various populations. Role and responsibilities of health educators in nutrition programs. Concepts from health psychology applied to school and community approaches. (F)

1. Four credits required for Therapeutic Recreation emphasis.

**4340 Family and Reproductive Health. Cr. 3**

Program planning, curriculum development and classroom teaching strategies in the areas of human sexuality, reproductive health and venereal disease, family planning and family health. Course will satisfy Michigan Department of Education requirements for teaching in these areas. (W)

**5440 Mental Health and Substance Abuse. Cr. 3**

Prereq: HEA 2310 or consent of instructor. 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. (Y)

**6350 Health Education and the Nation's Health. Cr. 3**

Introductory course for graduate health program. Current national health status; contributory factors including: policies, controversies, hazards, proposed solutions to problems in health care system and delivery of health care. (F)

**6420 Introduction to Health Education Program Design. Cr. 3**

Prereq: graduate major in Health Education. Overview of health education program process in all practice settings. Introduction to needs assessment, objective writing, staff training, and evaluation in health education. (W)

**6500 Comprehensive School Health Education. Cr. 3**

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. (Y)

**6530 Principles and Practice of Health Education and Health Promotion. Cr. 3**

Prereq: graduate standing and H E 6420 or consent of instructor. 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 classroom management to produce effective health instruction. (W)

**HEALTH, PHYSICAL EDUCATION and RECREATION (HPR)**

**5520 Introduction to Sport Psychology. Cr. 3**

Major psychological theories and principles found in applied sport psychology; topics include: self-esteem, anxiety, confidence, motivation, goal-setting, attention, arousal, imagery. (Y)

**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)

**6200 Principles of Exercise Science. Cr. 2**

Prereq: admission to exercise science graduate program or graduate program in closely related field; or senior standing with two or more courses in any of the following: biomechanics, exercise physiology, measurement and evaluation, motor development/learning/control, or sports psychology. Survey of sub-disciplines in the field. (S)

**6540 Workshop in Health, Physical Education, and Recreation. Cr. 1-3**

Prereq: consent of adviser prior to registration. Future and current professionals explore topics of current interest, or work cooperatively on current problems in the field. (T)

**6550 Publicity, Promotion and Public Relations. Cr. 2**

Practical marketing methods and procedures used in promotion of athletics and HPR-related fields. Development of proposals, workshops, public relations policies. (F)

**6560 Media Design and Communication. Cr. 2**

Prereq: basic computer/word processing skills. Fundamentals of graphic design and layout for publication; use of computers in promoting, marketing, and managing health, physical education, 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)

**6600 Role of the Health Professional in Substance Abuse. Cr. 3**

Health professional's role in identification, treatment and prevention of substance abuse. Basic drug terminology, theoretical perspectives in substance abuse; community and school environments. (W)

**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)

**6650 Health and Recreation Services for the Aged. Cr. 3**

Physical, social and emotional aspects of aging. Emphasis on health maintenance and the leisure needs and opportunities of the elderly. (B)

**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)

**6750 Fieldwork in Health, Physical Education, and Recreation. Cr. 1-4**

Prereq: consent of adviser. 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. (F,W)

**PHYSICAL EDUCATION (P E)**

**1991 Professional Perspectives in Physical Education. Cr. 2**

Required upon admission to the professional curriculum. Introduction to the profession and academic dimensions of physical education. (F)

**2010 Psycho-Physiological Foundations of Physical Activity. Cr. 3**

Physiological and psychological foundations of physical activity evaluated using the scientific method. Laboratories demonstrate relevant concepts and principles. (T)

**2560 Individual Problems in Physical Education. Cr. 1-3 (Max. 4)**

Prereq: consent of adviser and chairperson. Solving a specific problem under the guidance of the divisional staff. (F,W)

**2580 Physical Education in Secondary Schools I.  
Cr. 3 (Max. 6)**

Open only to physical education majors, minors, and special education students. Skill development, methods and materials of teaching individual sports at the middle and high school levels, including classroom management and motivation, organization of personnel and use of facilities. (F,W)

**2590 Physical Education in Secondary Schools II.  
Cr. 3 (Max. 6)**

Open only to physical education majors, minors, and special education students. Skill development, methods and materials of teaching team sports at the middle and high school levels, including classroom management and motivation, organization of personnel and use of facilities. (F,W)

**3400 Lifespan Growth and Development. Cr. 3**

Study of change in motor behavior from infancy to older adulthood. Competency in: ability to formulate a developmental perspective, knowledge of changing behavior across life-span, knowledge of factors affecting motor development, ability to apply knowledge in instructional and recreational settings. (F)

**3440 Aquatic Leadership. Cr. 4**

Prereq: swimmer level. Water safety and survival skills; instructional methods; program development, administration of aquatic programs; leads to Lifeguard Training, Lifeguard Instructor, and Water Safety Instructor certifications. (F)

**3550 (WI) Motor Learning and Control. Cr. 3**

Prereq: BIO 2870 or equiv. Study of motor skill acquisition and motor control with applications to physical education. Focus on cognitive processes and neural mechanisms which contribute to motor learning and control. (W)

**3580 Biomechanics. Cr. 3**

Prereq: BIO 2870 or equiv. Application of knowledge of human physical structure and function in the analysis and appreciation of human movement; theory and practice of human movement analytic techniques. Material fee as indicated in the Schedule of Classes. (F)

**5330 Principles of Athletic Training. Cr. 3**

Prereq: BIO 2870 or equiv. Philosophy of athletic training and basic training room protocol. Theory of evaluation techniques, nutrition, emergency techniques. (B)

**5340 Prevention, Care and Evaluation of Athletic Injuries.  
Cr. 3**

Prereq: BIO 2870 or equiv. The training room: its purpose, equipment and management. Principles and techniques of treating sprains, strains, and other injuries of the locomotor system and of the skin; evaluation techniques for these injuries. Application of heat, water, massage, electrical stimulation, ultrasound, and special exercises. Basic first aid procedures; training table; observation and directed experiences. Material fee as indicated in the Schedule of Classes. (B)

**5350 Exercise Science Internship. Cr. 2-4 (Max. 8)**

Prereq: P E 6320, HEA 2330; written consent of instructor. Supervised experience in health and exercise programs with various populations at approved sites. (F,W)

**5360 Senior Research Project. Cr. 4 (Max. 8)**

Prereq: consent of instructor. Students conduct scientific research in exercise science; review of literature, data collection, assisting with data transformation, help with formal presentation of written or oral materials of findings from the study. (T)

**5400 Inclusion in Physical Education. Cr. 3-4**

Prereq: BIO 2870 and P E 3400 or equiv. Conditions that impair students' health, mental and/or physical functioning. Motor characteristics, developmental sequences associated with differently-abled individuals. Integration of individual education plan as part of curricu-

lum practices. Transcending of school environment to prepare children and youth for lifelong activity. Review of adaptive physical education and special education terminology, legislation, and student placement models. (F)

**5410 Physical Education for Students with Special Needs:  
Methods and Materials. Cr. 3**

Prereq: P E 5400, consent of instructor. Writing behavioral objectives for students with special needs. Adaptation of teaching methods and materials to meet the needs individuals with special needs in physical fitness, fundamental motor skills, individual and group games, and lifetime sport skills. (F,W)

**5420 Sports and Recreation for Children with Special Needs.  
Cr. 3**

Prereq: P E 5400 and consent of instructor. Implementation of appropriate physical education curriculum for students with special needs. Coaching and training techniques for working with students with special needs in school, recreational, and competitive sports. (F,W)

**5430 Practicum in Physical Education for the Exceptional  
Student. Cr. 2-6**

Prereq: P E 5400, 5410, 5420, and consent of instructor. Offered for S and U grades only. Directed fieldwork placement in teaching physical education to students with special needs in school, camp, sport, or recreational setting. Required for State of Michigan Approval in Teacher of Physical Education for the Handicapped. (F,W)

**5440 Physical Education for Elementary School Children I.  
(DNC 5430) (DNE 5430) Cr. 3**

Prereq: P E 3400. Developmental approach to teaching elementary physical education in schools. Beginning movement concepts and fundamental motor skills that are developmentally appropriate for children to participate in games, gymnastics, dance, and fitness activities. Curriculum design and implementation of activities in practicum application. (F)

**5450 (Physical Education for Elementary School Children II.  
(DNC 5435) (DNE 5435) Cr. 3**

Prereq: P E 5440. Continuation of P E 5440, focusing on a developmental approach to teaching elementary physical education in schools. Investigation of various teaching methods and styles using movement, themes, fundamental motor skills, games, gymnastics, dance and fitness activities. Implementation of developmentally appropriate activities in practicum application. (W)

**5460 Instructional Methods in Physical Education. Cr. 3**

Planning for instruction in physical education with emphasis on unit and lesson planning, teaching styles, principles of motor learning and developmental curriculum planning. (W)

**5500 Evaluation and Measurement in Health and Physical  
Education. Cr. 3**

Prereq: senior standing. Elementary statistical methods and evaluative techniques applied to health, physical education, and recreation. Test construction and standard measurement approaches. (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. (F,W)

**5540 Cultural Foundations of Physical Education. Cr. 3**

Nature and methods of analysis of different kinds of philosophical problems as they arise in sport, dance and general physical education context; examination of the historical foundations and contemporary social significance of sport, dance and physical education. (F)

**5570 Physiology of Exercise I. Cr. 3**

Prereq: BIO 2870 or equiv. Basic physiological concepts as they relate to exercise and human performance. Practical applications incorporated into the laboratory component. (W)



**5780 Student Teaching and Seminar I.**  
**Cr. 6-8 (FLD: 0;SMR: 0)**

Prereq: admission to student teaching. Offered for S and U grades only. First experience in student teaching in the schools for students pursuing physical education teacher certification. Includes weekly seminar covering topics related to teaching physical education in schools. (F,W)

**5790 Student Teaching and Seminar II. Cr. 4-5**

Prereq: P E 5780. Offered for S and U grades only. Continuation of P E 5780. Directed teaching in the schools; includes weekly seminar. (F,W)

**6310 (PSL 6010) Physiology of Exercise II. Cr. 3**

Prereq: P E 5570 or 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)

**6320 Fitness Assessment and Prescription. Cr. 3**

Prereq: P E 6310. Physiological and anatomical principles of physical fitness. Optimum nutrition for health, weight control and performance. Construction of fitness programs and evaluation of fitness levels. Material fee as indicated in the Schedule of Classes. (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)

## PHYSICAL EDUCATION ACTIVITY (PEA)

**1020 Individualized Skills Development Laboratory.**  
**Cr. 1-2 (Max. 4)**

Prereq: written consent of chairperson for non-varsity athletes. Varsity athletes may elect only once per year for one credit per sport during the term of competition. Physical education credit for significant development and improvement of skills and associated knowledge in activity areas beyond the general education curriculum of the Division. (F,W)

**1050 Wellness: Concepts, Principles and Applications. Cr. 3**

Research data from exercise science, medicine, and the allied health professions provide the cognitive basis to present the wellness concept as it is scientifically observed. A laboratory component serves to illustrate selected wellness principles and applications. (F,W)

**1100 Swimming: Elementary. Cr. 2 (Max. 4)**

Fundamental skills and knowledge in aquatics for beginners. (T)

**1170 Scuba Diving. Cr. 2**

Prereq: level IV swimming skills; certain physical conditions may require prior medical examination; student rents or provides own equipment. Theory and practice of the proper use of self-contained underwater breathing apparatus. (F,W)

**1190 Lifeguard Training. Cr. 2**

Prereq: level IV swimming skills. Lifeguarding and water safety procedures. Leads to lifeguard training certification. (F,W)

**1200 Theory and Practice of Aquatics: Water Safety Instructor. Cr. 2**

Prereq: lifeguard certification. Instructional methods and techniques in aquatics, water safety and survival; swimming program development; pool and waterfront administration and management. Can lead to American Red Cross Lifeguard Instructor and Water Safety Instructor certifications. (F,W)

**1220 Cardio-Fit Kickboxing. Cr. 2**

Time-efficient workout that stimulates the cardiorespiratory and musculoskeletal systems. Structured routines for all fitness levels (basic,

intermediate, advanced); utilizes only basic kickboxing techniques. (T)

**1230 Sculpt, Stretch, and Tone. Cr. 2 (Max. 6)**

Total-body resistance exercise program using hand weights, ankle weights, rubber tubing, adjustable step, and other flexible sources of resistance. High-repetition exercises concentrating on proper technique, body alignment, muscular development, sound biomechanical principles. (T)

**1240 Step and Tone. Cr. 2**

Cardiovascular and muscular endurance and strengthening program using the adjustable step, rubber tubing, and hand-held weights. Low-impact, high-intensity workout. Energy cost controlled by step height, music tempo, tubing tension, size of weights. (T)

**1260 Step Aerobics. Cr. 2 (Max. 4)**

Cardiovascular and muscular endurance program using the adjustable step; designed for a low-impact, high-intensity workout. Energy cost as controlled by step height, music tempo, choreography. (Y)

**1270 Aquaerobics. Cr. 2 (Max. 4)**

Cardiovascular and muscular endurance program using water resistance exercises performed to music; shallow water, low-impact; variable workout intensity, controlled by music tempo, choreography, and optional use of additional resistance devices. Swimming skills not necessary. (Y)

**1290 High/Low Aerobics. Cr. 2 (Max. 4)**

Rhythmic exercise designed to improve cardiovascular capability. Emphasis on popular dance routines. Includes theoretical components concerned with monitoring heart rate, significance of oxygen uptake, establishing appropriate aerobic training zones, and implications for cardiovascular health. (F,W)

**1300 Running: Techniques and Training. Cr. 2 (Max. 8)**

Carefully controlled, personalized program activities designed to maintain or improve the level of cardio-respiratory conditioning of the participant; prescription for future levels of activity from the class experience. (T)

**1310 Rock Climbing: Basic. Cr. 1**

Prereq: good physical condition. Two Friday field trips required. Introduction to the basic principles and techniques of technical rock climbing. Field trips. (F)

**1330 Distance Running: Training and Principles. Cr. 2**

Long distance running training; principles to develop and implement personalized training program; nutrition and psychological considerations for peak performance. (Y)

**1350 Pocket Billiards: Beginning. Cr. 2 (Max. 4)**

Vendor's fee: \$25. Basic skills and technique; history, rules, equipment and game courtesy. (F,W)

**1360 Billiards: Intermediate/Advanced. Cr. 2 (Max. 4)**

Prereq: basic billiards skills. Vendor's fee: \$25. Analysis and practice of more advanced skills and strategies; introduction of 14.1 pocket billiards and other billiards games. (F,W)

**1380 Bowling. Cr. 2 (Max. 4)**

Bowling lane rental fee: \$25. Analysis and practice of skills. Information on scoring procedures, rules, tournament play. (F,W)

**1410 Golf. Cr. 2 (Max. 4)**

Analysis and practice of fundamentals focused on development of correct form in the use of different clubs. (F,W)

**1480 Yoga. Cr. 2 (Max. 4)**

Yoga physical exercises to shape and strengthen the human body. Psychosomatic influences used to develop resistance against stress and to train the body and mind to relax. Utilization of autosuggestion to influence lifestyle. (F,W)

**1490 Continuing Yoga. Cr. 2 (Max. 8)**

Prereq: basic Yoga skills. Continuing training and instruction in Iyengar hatha yoga, providing breadth and depth of skills and knowledge to enable the student to practice yoga independently as a recreational activity. (T)

**1500 Racquetball: Beginning. Cr. 2 (Max. 4)**

Basic strokes, history, rules, equipment and game courtesy. Introduction to singles and singles game competition. (T)

**1530 Basketball: Fundamental Skills. Cr. 2 (Max. 4)**

Analysis and practice of fundamental skills, team play, and rules of basketball. (I)

**1540 Basketball: Shooting Skills and Strategies. Cr. 2 (Max. 6)**

Analysis and practice of intermediate and advanced shot-making skills and game strategies. (I)

**1600 Tennis: Beginning. Cr. 2 (Max. 4)**

Analysis and practice of basic strokes, singles and doubles play, strategy, rule interpretation. (T)

**1640 Weightlifting and Training. Cr. 2 (Max. 4)**

Analysis and practice of approved lifting techniques and use of weight training for conditioning purposes. (T)

**1710 Fencing: Beginning. Cr. 2 (Max. 4)**

Analysis and practice of skills, rules, strategy, conduct of competitive means. (F,W)

**1720 Fencing: Intermediate/Advanced. Cr. 2 (Max. 8)**

Prereq: basic fencing skills. (F,W)

**1730 Judo: Beginning. Cr. 2 (Max. 4)**

Analysis and practice of fundamental skills; strategy and philosophy of judo as a method of personal defense and competitive sport. (I)

**1750 Karate: Beginning. Cr. 2 (Max. 4)**

Analysis and practice of fundamental skills; strategy and philosophy of karate as a method of personal defense and competitive sport. (T)

**1760 Karate: Continuing. Cr. 2 (Max. 8)**

Prereq: basic karate skills. Analysis and practice of more advanced skills including combination training, kumite, and kata. (F,W)

**1770 Personal Defense. Cr. 2**

Personal defense theory, increased defense awareness, anticipation and avoidance of confrontation, basic self-defense skills and techniques. (F,W)

**1780 Tai Chi Chuan: Beginning. Cr. 2 (Max. 4)**

An ancient Chinese exercise, Tai Chi is a series of postures and transitional movements, used to improve balance, strength, circulation, and relaxation. (F,W)

**1790 Tai Chi Chuan: Continuing. Cr. 2 (Max. 8)**

Prereq: basic Tai Chi Chuan skills. This course builds on basic knowledge of Tai Chi Chuan and enables students to refine their movement and understanding of this sport. Continuation of PEA 1780. (F,W)

**1800 Tae Kwon Do: Beginning. Cr. 2**

Analysis and practice of fundamental skills, movements, and philosophy of Tae Kwon Do as a modern martial art and competitive sport. (T)

**1810 Tae Kwon Do: Continuing. Cr. 2 (Max. 8)**

Analysis and practice of more advanced skills of Tae Kwon Do as a modern martial art, and especially as a competitive sport. (F,W)

**1820 Aikido: Beginning. Cr. 2 (Max. 4)**

Analysis and practice of fundamental skills, movements and philosophy of Aikido as a modern martial art. (F,W)

**1830 Aikido: Continuing. Cr. 2 (Max. 8)**

Prereq: basic Aikido skills. Analysis and practice of more advanced skills, techniques and philosophy of Aikido as a modern martial art. (F,W)

**1992 Volleyball: Beginning. Cr. 2 (Max. 4)**

Analysis and practice of skills, team play, strategy, rule interpretation. (F,W)

## RECREATION and PARK SERVICES (R P)

**2600 Principles of Leadership and Recreation Programming. Cr. 4**

Theories and dynamics of individual and group leadership; recreation programming for general and special populations in a variety of leisure settings. (B)

**2640 Camp Leadership and Administration. Cr. 3**

Values and objectives of organized camps; programming and administrative responsibilities; camp-related skills development. Opportunity for A.C.A. certification; weekend trip required. (B)

**2650 Cultural Arts in Recreation. Cr. 3**

Exploration of arts and crafts, music, dance, literature, and drama techniques in programming at recreation facilities. (B)

**3600 Social Recreation Programming. Cr. 3**

Techniques and practice in planning and conducting social activities with emphasis on social development and group participation. Field programming and leadership assignments. (B)

**3620 Introductory Field Work. Cr. 3**

Observation and leadership in an approved recreation/park setting under professional supervision. Arrangements must be made with Department supervisor two months prior to registration in order to arrange placement. (T)

**3670 Introduction to Therapeutic Recreation. Cr. 3-4**

Offered for 4 credits to therapeutic option majors only. Scope and rationale of the special area; examination of the needs of special populations; program considerations. (B)

**4620 Internship. Cr. 9**

Supervised full-time placement in an approved recreation/park setting in line with student's professional goals. Arrangements must be made with Department supervisor four to six months prior to registration in order to arrange placement. (T)

**4630 (WI) Philosophy of Recreation and Park Services. Cr. 3**

Nature of the recreation experience and its importance; history and development of the profession; organizations, trends, and directions in leisure services. (B)

**4650 Recreation and Park Administration. Cr. 3**

Administration of recreation and park systems with emphasis on urban agencies. Administrative functions, departmental structures and responsibilities. (B)

**5620 Advanced Field Work. Cr. 3-6 (Max. 12)**

Leadership/management in an approved recreation/park setting under professional supervision. Arrangements must be made with Department supervisor two months prior to registration to arrange placement. (F,W)

**5630 TR: Program Development. Cr. 3**

Prereq: R P 3670 or equivalent experience. Development of therapeutic recreation programs for persons with disabilities: planning, objectives, facilitation techniques, resources and evaluation. Knowledge of health care system, laws and regulations, inter-agency procedures. (B)

**5660 Independent Study. Cr. 1-2 (Max. 6)**

Supervised research, applied or action, in the student's area of concentration or interest. (F,W)

**5760 Readings in Recreation and Park Services. Cr. 1 (Max. 4)**

Supervised, independent readings in the field of recreation and/or parks designed to expand the student's knowledge of the field or a specific part of the field. (F,W)

**5780 TR: Mental Health. Cr. 3**

Relationships of mental health and leisure; roles of recreation and the leisure services as preventative and rehabilitation approaches; terminology and techniques for client-patient management discussed and analyzed. (B)

**6600 Outdoor and Environmental Education. Cr. 3**

Philosophical and historical background, facilities, programming, and administration of outdoor education experiences. Emphasis on outdoor interpretation activities for all age levels. (B)

**6630 TR: Program Implementation. Cr. 3**

Prereq: R P 3670 or equivalent experience. Principles and techniques of analysis, modification, assistance, assessment, and interpretation of results of therapeutic leisure activities for special populations. Theory and techniques of therapeutic interventions and medical record charting. (B)

**6670 Outdoor Recreation and Tourism. Cr. 3**

Meaning, significance, historical background; facilities, agencies and programs at the federal, state and local levels; organizations and future projections. (B)

**6730 TR: Physical Disabilities. Cr. 3**

Examination of various congenital and traumatic disabilities; sports for the disabled; resources; activities of daily living from therapist's point of view; equipment for mobility. (B:W)

**6780 Leisure Education. Cr. 3**

Theory and techniques of leisure counseling and leisure education; implications for program development in public, commercial, industrial and other leisure-time settings. (B)

# TEACHER EDUCATION

*Assistant Dean:* Sharon Elliott

*Office:* 241 Education Building; 577-0902

## *Professors*

Janice Hale, Leonard Kaplan, Michael Peterson, Gary R. Smith

## *Associate Professors*

Rudi Alec, Navez Bhavangri, John S. Camp, Thomas Edwards, Sharon Elliott, Karen Feathers, Steve Ilmer, John T. Norman, Jr., Gerald Oglan, R. Craig Roney, Joseph Sales, Sr., Jacqueline Tilles, Paula Wood

## *Assistant Professors*

James H. Blake, Gina DeBlase, Maria Ferreira, Mark Larson, Randy Lattimore, Manuel Mazon, Sally K. Roberts, Marc Rosa, Lorraine Ross, Jo-Ann Snyder, Marshall Zumberg

## *Lecturers*

Anne Williamson Blake, Hal Dittenber, Holly Feen, Placidia Frierson, Carole Hamilton, Anna Miller, Bob Pettapiece, Janet Windemuth

## Degree and Certificate Programs

### *BACHELOR OF ARTS in Education* *with majors in the following areas:*

Art Education  
Career and Technical Education  
Elementary Education  
English Education-- Secondary  
Mathematics Education  
Science Education  
Social Studies Education-- Secondary  
Special Education-- with concentrations in  
    Speech Impaired  
    Mentally Impaired  
Speech Education-- Secondary

### *BACHELOR OF SCIENCE in Education* *with majors in the areas listed above*

### *\*MASTER OF ARTS IN TEACHING* *with majors in:*

Elementary Education-- with concentrations in:  
    Bilingual-Bicultural Education  
    Early Childhood Education  
    General Elementary Education  
Secondary Education-- with concentrations in  
    Bilingual-Bicultural Education (Minor)  
    Career and Technical Education  
    English Education  
    Foreign Language Education  
    Mathematics Education  
    Science Education  
    Social Studies Education

*All of the baccalaureate degree programs listed above lead to Michigan Provisional Certification.*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

*\*MASTER OF EDUCATION with majors in*

Art Education  
Bilingual-Bicultural Education -- with a concentration in  
English as a Second Language  
Career and Technical Education  
Early Childhood Education  
Elementary Education-- with concentrations in  
Early Childhood Education  
Language Arts and Reading  
Literature for Children  
Mathematics Education  
Science Education  
Social Studies Education  
English Education-- Secondary  
-- with concentrations in  
English Education  
English as a Second Language  
Foreign Language Education-- Secondary  
-- with concentrations in:  
Foreign Language  
English as a Second Language  
Mathematics Education  
Reading  
Science Education  
Social Studies Education-- Secondary  
Special Education-- with concentrations in  
Early Childhood  
Emotionally Impaired  
Learning Disabilities

*\*EDUCATION SPECIALIST CERTIFICATE*

Curriculum and Instruction-- with concentrations in  
Bilingual Education  
Career and Technical Education  
Early Childhood  
Elementary Curriculum and Instruction  
Mathematics Education  
Middle Level Education  
Science Education  
Secondary Curriculum and Instruction  
Reading, Language and Literature  
Special Education

*\*ED.D. AND PH.D. DEGREE MAJORS*

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  
Mathematics Education  
Science Education  
Secondary Education  
Social Studies Education-- Secondary  
Reading, Language and Literature (Ed.D. only)  
Special Education

**Post-degree programs** are also available to those who wish to qualify for elementary or secondary certification (with the exception of special education) in the above named areas but who do not wish to enter a Master of Arts in Teaching degree program.

**Combined programs in secondary education** are available in the following curriculum areas in which students complete requirements leading to baccalaureate degrees in the College of Liberal Arts, the College of Science, or the College of Fine, Performing and Communication Arts, and the teaching certificate requirements in the College of Education:

COLLEGE OF LIBERAL ARTS

Economics	Italian
English	Latin
French	Political Science
Geography	Russian
German	Spanish
History	

COLLEGE OF FINE, PERFORMING and COMMUNICATION ARTS

Communication	Music
Dance	

COLLEGE OF SCIENCE

Biology	Mathematics
Chemistry	Physics
Geology	

\* For specific requirements, see the Wayne State University Graduate Bulletin.

# BACHELOR'S DEGREES

## ADMISSION REQUIREMENTS

### Freshmen and Sophomores

*--entering with less than two years of college credit*

All students intending to pursue a teaching curriculum (except in the fields of art education, recreation and park services, or physical education) who enter the University directly from high school, or transfer from other colleges with less than fifty-three semester credits, are admitted by the University Admissions Office into the College of Liberal Arts for pre-education course work.

Students intending to prepare for teaching in any of the areas cited as exceptions above, with less than fifty-three semester credits, are admitted directly to the College of Education. Admission for each of these groups is through the University Office of Admissions, 3 East, Helen Newberry Joy Student Services Center, Detroit, Michigan 48202; telephone: 577-3577.

For information regarding application procedures, admission requirements and fees please refer to the General Information section of this bulletin, pages 15-46.

### College Admission Criteria

*--for students entering with two or more years of college credit*

The standards listed below apply to those students entering the College of Education for the first time with junior year or higher standing, those working for a secondary or elementary school teaching certificate, those in a combined degree program, and those previously admitted at the freshman or sophomore level to the College of Education in the fields listed above.

Eligibility for admission is based on the following criteria:

**1. Satisfactory Completion of Two Years of College Work:** A minimum of fifty-three semester or eighty quarter credits of work must be completed with an overall grade point average of 2.5 or above. In addition, the grade point average for any course work taken at Wayne State University must also be 2.5 or above. This work should generally conform to the two years of pre-professional work prescribed by the College for students who expect to prepare for teaching. The quality of work, especially in the major area, must indicate a strong potential for success in a teacher-education program.

**2. English and Mathematics Competency Examinations:** All Education students must satisfactorily complete the University English Proficiency Examination and fulfill the University Mathematics Proficiency Requirements prior to admission to the College of Education (see page 29).

**3. State Basic Skills Test:** All students must pass the Michigan State Basic Skills Test prior to admission. For information and test dates, contact 469 Education Building (telephone: 313-577-1601).

**4. Physical Health:** Definite standards of health must be met by all students entering the College. All students are required to pass a T.B. test prior to admission to the College.

Any student with a speech defect that may prove unacceptable for participation as a classroom instructor should seek diagnosis and early remedy at the Speech Clinic, 503 Manoogian, before applying to the College of Education. Satisfactory verbal communication is a prerequisite for teacher certification.

**5. Group Work Experience:** All students must have verifiable successful group work experience with children.

**6. Specific Prerequisites** or other special requirements of the curriculum area for which the student is applying.

## College Admission Application

Upon completion of two years of college course work (a minimum of fifty-three semester credits) at Wayne State University, students who intend to teach should apply to the College of Education for admission. Applicants who have completed college work in institutions other than Wayne State must first apply for admission through the University Admissions Office, 3 East, Helen Newberry Joy Student Services Center. Students who intend to receive degrees from other colleges in the University and a teaching certificate from the College of Education must apply to the Combined Program through Academic Services, 469 Education Building. All applicants to the College of Education must attend an orientation session.

## BACHELOR'S DEGREE REQUIREMENTS Leading to Michigan Provisional Certification

Candidates for the Bachelor of Arts or Bachelor of Science degree in Education must complete at least 124 credits in course work with a minimum grade point average of 2.5. The following outline presents the general distribution of credits to be fulfilled by the student's choice of curricula from the subsequent program descriptions, below. NOTE: Some programs require more than 124 credits; note also the addendum cited below for the Bachelor of Arts degree.

1. Forty credits in pre-professional coursework including 6-8 credits in English (ENG 1020, plus one course at the 2000 level or above) and courses specified by individual program areas.
2. Completion of the appropriate professional education sequence.
3. Completion of majors and minors appropriate to the student's intended level of certification.
4. Three credits in hygiene, first aid, health of the school child, or comprehensive school health education.
5. Completion of University General Education and Competency requirements (see page 29).
6. Michigan Test for Teacher Certification:
  - a. *Elementary Education:* Elementary Education Test. Examination in major subject area is also recommended in order to teach grades 6-8.
  - b. *Secondary Education:* Tests in major and minor subject areas.

*Bachelor of Arts in Education Language Requirement:* In addition to the above requirements, the Bachelor of Arts degree requires twelve credits in a foreign language.

## Bachelor's Degree Programs in Elementary Education Leading to K-8 Certification

The elementary certificate qualifies the holder to teach all subjects in kindergarten through grade five and all K-8 subjects in a self-contained classroom. Additionally, the major and minor subjects may be taught in the sixth through eighth grade.

**Admission Requirements:** see above, page 101.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined above.

**PRE-PROFESSIONAL REQUIREMENTS:** The following courses and course options are required of all students seeking K-8 certification, regardless of selection of major and minor studies. Some of these courses may also satisfy the University General Education Requirements (see page 29), but the dual application of any course to both College and University General Education categories cannot be used to reduce the total degree requirement below 124 credits.

<i>ENGLISH (Two Courses)</i>	credits
ENG 1020 -- (BC) Introductory College Writing . . . . .	4
Intermediate Composition (IC) -- see General Education Requirements, page 29	
<i>FOREIGN CULTURE (see General Education Requirements, page 29)</i>	
<i>HEALTH (One Course)</i>	
H E 3300 -- Health of the School Child . . . . .	3
HEA 2310 -- Dynamics of Personal Health . . . . .	3
HEA 2330 -- First Aid and CPR . . . . .	3
H E 6500 -- Comprehensive School Health Education . . . . .	3
<i>HISTORICAL STUDIES (One Course)</i>	
HIS 1100 -- (HS) The Ancient World . . . . .	3-4
HIS 1200 -- (HS) The Medieval World . . . . .	3-4
HIS 1300 -- (HS) Europe and the World: 1500-1945 . . . . .	3-4
HIS 1400 -- (HS) The World Since 1945 . . . . .	3-4
HIS 1600 -- (HS) African Civilizations to 1800 . . . . .	4
HIS 1610 -- (HS) African Civilizations Since 1800 . . . . .	4
HIS 1800 -- (HS) (N E 203) The Age of Islamic Empires: 600-1600 . . . . .	3
HIS 1810 -- (HS) (N E 204) The Modern Middle East . . . . .	3
HIS 1995 -- (HS) Society and the Economic Transition . . . . .	3
ANT 3200 -- (HS) Lost Cities and Ancient Civilizations . . . . .	3
<i>HUMANITIES (see General Education Requirements, page 29)</i>	
<i>NATURAL SCIENCE (Three Courses, one of which must include an approved laboratory, which is associated with all of the following courses when elected for maximum credit, except BIO 1030)</i>	
<i>PHYSICAL SCIENCES (elect one)</i>	
AST 2010 -- (PS) Descriptive Astronomy . . . . .	4-5
CHM 1000 -- (PS) Chemistry and Your World . . . . .	3-4
CHM 1020 -- (PS) General Chemistry I . . . . .	4
CHM 1220 -- (PS) Chemical Structure, Bonding & Reactivity . . . . .	4
CHM 1230 -- (PS) Chemical Principles in the Lab . . . . .	1
CHM 1410 -- (PS) Chemical Principles I: General/Organic . . . . .	6
GEL 1010 -- (PS) Geology: The Science of the Earth . . . . .	4
PHY 1020 -- (PS) Conceptual Physics: The Basic Science . . . . .	3-4
PHY 1040 -- (PS) Einstein, Relativity & Quanta: Cpt. Intro. . . . .	3-4
PHY 2130 -- (PS) General Physics . . . . .	3
PHY 2131 -- General Physics Lab . . . . .	1
PHY 2170 -- (PS) General Physics . . . . .	4
PHY 2171 -- General Physics Lab . . . . .	1
PHY 3100 -- (PS) The Sounds of Music . . . . .	4
<i>LIFE SCIENCES (elect two):</i>	
PSY 1010 -- (LS) Introductory Psychology (Required Course) . . . . .	4
BIO 1510 or BIO 1030 or BIO 1050	
-- (LS) Basic Life Mechanisms . . . . .	3-4
-- (LS) Biology Today . . . . .	3-4
-- (LS) An Introduction to Life . . . . .	3-4
<i>MATHEMATICS (Two Courses)</i>	
MAE 5050 and 5060 -- Math. for Ele. School Teachers I & II . . . . .	6
<i>SOCIAL STUDIES (Three Courses)</i>	
<i>AMERICAN SOCIETY AND INSTITUTIONS:</i>	
P S 1010 or P S 1030	
-- (AI) American Government . . . . .	4
-- (AI) The American Governmental System . . . . .	3
<i>BASIC SOCIAL SCIENCES:</i>	
GPH 1100 -- (SS) World Regional Patterns . . . . .	4
HIS 2040 or HIS 2050	
-- United States to 1877 . . . . .	3-4
-- United States since 1877 . . . . .	3-4
<i>SPEECH (One Course)</i>	
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	3
<i>INFORMATION POWER: Required of all newly-matriculated undergraduate students who transfer twelve or fewer credits to Wayne</i>	

State, prior to completion of thirty credits at Wayne State, preferably during the **first** semester in residence:

UGE 1000 -- (GE) Information Power . . . . .	1
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**PROFESSIONAL EDUCATION REQUIREMENTS:** The following courses are required of all students seeking K-8 certification, regardless of selection of major or minor studies.

*The following courses may be taken while in the College of Liberal Arts:*

ELE 3200 -- Literature for Children . . . . .	3
SCE 5010 or SCE 5020	
-- Biological Sciences for Ele. & Middle School Teachers . . . . .	3
-- Physical Sciences for Ele. & Middle School Teachers . . . . .	3

*The following courses (except those marked with \*) may be taken only after admission to the College of Education:*

**CAMPUS COURSES**

BBE 5000 -- Multicultural Education in Urban America* . . . . .	2
EDP 3310 -- Educational Psychology . . . . .	3
ELE 3400 -- Teaching Mathematics: Preprimary-9 . . . . .	3
ELE 3500 -- Teaching Science: Preprimary-9 . . . . .	3
ELE 3600 -- Teaching Social Studies: Preprimary-9 . . . . .	3
RDG 4430 -- Teaching Reading in Subject Matter Areas . . . . .	3
SED 5010 -- Exceptional Child in the Regular Classroom* . . . . .	2
TED 6020 -- Computer Applications in Teaching I* . . . . .	3
ELE 6070 -- Family, Community, and School Partnerships . . . . .	3

**FIELD COURSES (Off-Campus):** Courses listed under Phases I-III are taken in public schools in the Detroit metropolitan area. The phases must be completed in the order given. All of the courses in the professional sequence must be completed before entering TED 5780.

*Phase I*

TED 3550 -- Teaching: Research, Theory & Practice (Coreq: ELE 3320) . . . . .	5
ELE 3300 -- Teaching Language Arts: Preprimary-9 (Coreq: TED 3550) . . . . .	3

*Phase II*

TED 3560 -- Pre-Student Teaching Field Experiences (Coreq: ELE 3320) . . . . .	3
ELE 3320 -- Teaching Reading: Preprimary-9 (Coreq: TED 3560) . . . . .	3

*Phase III*

TED 5780 -- Directed Teaching and Conference . . . . .	10
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*Phase III -- EARLY CHILDHOOD PROGRAM*

TED 5790 -- Student Teaching & Conference for Special Groups . . . . .	5
ELE 6080 -- Preprimary Goals and Practices . . . . .	3

All students enrolling in the Early Childhood program for Phase III must have a Minor in Early Childhood.

*Phase IV*

TED 5780 -- Directed Teaching and Conference . . . . .	8
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**MAJOR AREAS OF STUDY:** Students seeking a K-5 certification must complete a major and a minor, or three minors:

*ENGLISH MAJOR (Minimum Thirty Credits)*

ENG 2800 -- Imaginative Writing . . . . .	4
ENG 2390 or ENG 5480	
-- (IC) Intro. to African American Lit. (AFS 2390) . . . . .	4
-- Topics in African American Literature . . . . .	3
ENG 2720 -- (PL) Basic Concepts in Linguistics . . . . .	3
ENG 3010 -- (IC) Intermediate Writing . . . . .	3
ENG 3110 -- (PL) English Literature to 1700 . . . . .	3
ENG 3120 -- (PL) English Literature after 1700 . . . . .	3
ENG 3140 -- (PL) Survey of American Literature . . . . .	3

ELE 3200 -- Literature for Children	3
Literature Elective	4
<b>LANGUAGE ARTS GROUP MAJOR (Minimum Thirty-six Credits)</b>	
ENG 2390 or ENG 5480	
-- (IC) Intro. to African-American Lit. (AFS 2390)	4
-- Topics in African American Literature	3
ENG 2720 -- (PL) Basic Concepts in Linguistics	3
ENG 2800 -- Imaginative Writing	4
ENG 3010 -- (IC) Intermediate Expository Writing	3
ENG 3110 -- (PL) English Literature to 1700	3
ENG 3120 -- (PL) English Literature after 1700	3
ENG 3140 -- (PL) Survey of American Literature	3
ELE 3200 -- Literature for Children	3
EED 6310 -- Young Adult Literature	3
SPB 1500 -- Survey of Mass Communications	3
SPC 2500 -- Oral Interpretation of Literature	3
Speech Elective	3
<b>FOREIGN LANGUAGE MAJOR (Thirty Credits)</b>	
French and Spanish are the only languages in which Major concentrations are offered. Computation of the thirty required credits includes any and only courses taken at the university level. Courses taught in English translation will not apply toward fulfilling major.	
<b>MATHEMATICS MAJOR (Minimum Thirty Credits)</b>	
The following courses plus all of the courses listed under the Mathematics Minor; see below, under 'Minor Areas of Study.'	
MAT 1110 -- Math. for Elementary School Teachers I	3
MAT 1120 -- Math. for Elementary School Teachers II	3
MAE 5100-- (MAT 5180) Math. for Middle/Junior High School Teachers I	3
MAE 5120 -- Number Theory & Algebra for Middle School Teachers	3
MAT 1800 -- Elementary Functions <sup>1</sup>	4
MAT 2010 -- Calculus I <sup>1</sup>	4
STA 1020 or MAT 2210	
-- Elementary Statistics	3
-- Elementary Probability and Statistics	4
Plus ONE of the following options:	
<i>Option I:</i>	
MAT 1860 -- Discrete Mathematics for Computer Science I	4
MAE 5130 -- Problem Solving for Middle School Teachers	3
<i>Option II:</i>	
MAT 2020 -- Calculus II	4
MAT 2860 -- Discrete Mathematics	4
<b>NATURAL SCIENCE GROUP MAJOR (Thirty-six Credits)</b>	
AST 2010 -- (PS) Descriptive Astronomy	4
PHY 1020 -- (PS) Conceptual Physics: The Basic Science	3-4
BIO 1500 -- Basic Life Diversity	4
BIO 1510 -- (LS) Basic Life Mechanisms	4
GEL 1010 -- (PS) Geology: The Science of the Earth	4
CHM 1020 -- (PS) General Chemistry I	4
CHM 1030 -- General Chemistry II	4
SCE 5010 -- Biological Scis. for Elementary & Middle School Teachers	3
SCE 5020 -- Physical Scis. for Elementary & Middle School Teachers	3
SCE 5040 -- Field Course Exploring the Natural Environment	3
<b>SOCIAL STUDIES GROUP MAJOR (Thirty-six Credits)</b>	
P S 1010 or P S 1030	
-- (AI) American Government	4
-- (AI) The American Governmental System	3
P S elective	3-4
GPH 1100 -- (SS) World Regional Patterns	4

1. May be elected while in the College of Liberal Arts.

GPH elective	3-4
HIS 2050 -- United States Since 1877	3-4
HIS 2240 -- History of Michigan	3-4
HIS 3150 -- Black Experience in America II: 1865-Present (AFS 3150)	3-4
HIS elective (non-Western history)	3-4
HIS elective	3-4
ECO 1000 --(SS) Survey of Economics	4
ECO elective (ECO 2010 or 2020) (SS)	3-4

**MINOR AREAS OF STUDY:** Additional endorsement areas available to elementary students:

**BILINGUAL-BICULTURAL MINOR (Twenty-five Credits)**

BBE 5000 -- Multicultural Education in Urban America	2
BBE 5020 -- Effective Involvement of Parents in School & Community	3
BBE 5500 -- Introduction to Bilingual/Bicultural Education	3
BBE 6560 -- Teaching Methods in Bilingual/Bicultural Education	3
BBE 6600 -- Internship in Bilingual/Bicultural Teaching	5
BBE 6850 -- Applied Linguistics: Issues in Bilingual Education	3
LED 6580 -- Culture as Basis for Language Teaching	3
LED 6520 -- Teaching English as Second/Foreign Language: Methods I	3

**DANCE MINOR (Twenty-seven Credits)**

DNC 2000 -- (VP) Introduction to Dance	4
DNC 2010 -- Technique Laboratory I: Part I	2
DNC 2020 -- Technique Laboratory I: Part II	2
DNC 2210 -- Ballet III	2
DNC 2310 -- (VP) Historical Perspectives of Dance	3
DNC 3010 -- Technique Laboratory II	4
DNC 2500 -- Choreography I	2
DNC 5610 -- Dance Company I	2
DNE 4810 -- Methods in Modern Dance & Ballet	3
DNE 5810 -- Creative Dance for Children	3

A Dance Minor carries K-12 certification. For information, contact Dr. Georgia Reid, 577-4273.

**EARLY CHILDHOOD MINOR (Minimum Twenty-four Credits)**

ELE 3200 -- Literature for Children <sup>1</sup>	3
ELE 6020 -- Seminar in Early Childhood	3
ELE 6040 -- Role of Content Areas in Early Childhood Education	3
ELE 6070-- Family, Community and School Partnerships	3
ELE 6080-- Preprimary Goals and Practice	2
ELE 6340 -- Teaching Reading in Early Childhood Education	3
PSY 3430 -- Infant Development <sup>1</sup>	3
PSY 3440 -- Psychology of Child Behavior & Development	3
Early Childhood Electives	3-4

**ENGLISH MINOR (Twenty Credits)**

ENG 2800 -- Imaginative Writing	4
ENG 2390 or ENG 5480	
-- (IC) Intro. to African-American Lit. (AFS 2390)	4
-- Topics in African American Literature	3
ENG 2720-- (PL) Basic Concepts in Linguistics	3
ENG 3120 -- (PL) English Literature after 1700	3
ENG 3140 -- (PL) Survey of American Literature	3
ELE 3200 -- Literature for Children	3

**LANGUAGE ARTS GROUP MINOR (Twenty-six Credits)**

ENG 2800 -- Imaginative Writing	4
ENG 2390 or ENG 5480	
-- (IC) Intro. to African-American Lit. (AFS 2390)	4
-- Topics in African American Literature	3
ENG 2720 -- (PL) Basic Concepts in Linguistics	3
ENG 3010 -- (IC) Intermediate Writing	3
ENG 3120 -- (PL) English Literature after 1700	3
ENG 3140 -- (PL) Survey of American Literature	3
ELE 3200 -- Literature for Children	3

SPB 1500 -- Survey of Mass Communications . . . . .	3
SPC 2500 -- Oral Interpretation of Literature . . . . .	3

**FOREIGN LANGUAGE MINOR (Twenty Credits)**

French, Latin, and Spanish are the only languages in which Minor concentrations are offered. Computation of the twenty required credits includes any and only courses taken at the university level. Courses in literature in English translation cannot be used to fulfill foreign language requirement.

**HEALTH EDUCATION MINOR (Twenty-four Credits)**

BIO 1510 -- (LS) Basic Life Mechanisms . . . . .	4
HEA 2310 -- Dynamics of Personal Health . . . . .	3
HEA 2330 -- First Aid and CPR . . . . .	3
H E 3300 -- Health of the School Child . . . . .	3
H E 3440 -- Nutrition and Health Education . . . . .	3
H E 3330 -- School Health Education . . . . .	3
H E 4340 -- Family and Reproductive Health . . . . .	3
H E 5440 -- Mental Health and Substance Abuse . . . . .	3

**MATHEMATICS MINOR (Minimum Twenty Credits)**

MAT 1110 -- Mathematics for Elementary School Teachers I . . . . .	3
MAT 1120 -- Mathematics for Elementary School Teachers II . . . . .	3
MAE 5100 -- Mathematics for Middle & Junior High School Teachers I . . . . .	3
MAE 5110 -- Mathematics for Middle & Junior High School Teachers II . . . . .	3
MAT 5120 -- Number Theory & Algebra for Middle School Teachers . . . . .	3
MAT 1800 -- Elementary Functions . . . . .	4
MAT 2010-- Calculus I . . . . .	4

**MIDDLE SCHOOL LEVEL**

**EDUCATION MINOR (Minimum Twenty-four Credits)**

EDP 5480 -- Adolescent Psychology . . . . .	2-3
CED 6700 -- Role of Teacher in Guidance . . . . .	2
TED 5250 -- Teaching the Emerging Adolescent . . . . .	3
TED 5260 -- Seminar: Middle School Teaching (Coreq: ED 5998) . . . . .	3
RLL 7600 -- Current Developments in Literacy Education . . . . .	3
RDG 6400 -- Practicum in Developmental Reading . . . . .	3
Middle School Level electives (selected with consent of Faculty Adviser) . . . . .	3-6
ED 5998 -- Field Studies . . . . .	3

Plus six credits from the following:

RLL 7740 or RLL 7720	
-- Literature for Older Children: Grades 4-8 . . . . .	3
-- Current Literature for Children: Grades PS-3 . . . . .	3
MAE 6050 -- Teaching Mathematics in the Middle Grades . . . . .	3
SSE 6730 -- New Perspectives in Social Studies Education . . . . .	3
SCE 6030 -- Adv. Studies: Teaching Science in Jr. High & Middle School . . . . .	3
RLL 7600 -- Current Developments: Teaching Reading/Middle Level 3 . . . . .	3

**NATURAL SCIENCE GROUP MINOR (Twenty-four Credits)**

AST 2010 -- (PS) Descriptive Astronomy . . . . .	4
BIO 1050 -- (LS) An Introduction to Life . . . . .	4
PHY 1020 -- (PS) Conceptual Physics: The Basic Science . . . . .	3-4
CHM 1000 -- (PS) Chemistry and Your World . . . . .	3-4
GEL 1010 -- (PS) Geology: The Science of the Earth . . . . .	4
SCE 5010 -- Biological Scis. for Elementary & Middle School Teachers . . . . .	3
SCE 5020 -- Physical Scis. for Ele. & Middle School Teachers . . . . .	3

**PHYSICAL EDUCATION MINOR (Twenty-one Credits)**

REQUIRED CORE (Fifteen Credits):

P E 5440 -- Physical Education for Elementary School Children I . . . . .	3
P E 5450 -- Physical Education for Elementary School Children II . . . . .	3
P E 2580 -- P E in Secondary Schools I . . . . .	3
P E 2590 -- P E in Secondary Schools II . . . . .	3
P E 2010 -- Psycho/Physiological Foundations of Physical Activity . . . . .	3

Plus two courses (six credits) from the following:

P E 3400 -- Lifespan Growth and Development . . . . .	3
P E 3550 -- (WI) Motor Learning and Control . . . . .	3
P E 5570 -- Physiology of Exercise I (Prereq: BIO 2870 or equiv.) . . . . .	3
P E 3580 -- Biomechanics (Prereq: BIO 2870 or equiv.) . . . . .	3

Students must contact the Physical Education Department for advising: appointments may be made by calling 577-4265. Courses may be taken only after admission to the College of Education.

**SOCIAL STUDIES GROUP MINOR (Twenty-four Credits)**

P S 1010 or P S 1030	
-- (AI) American Government . . . . .	4
-- (AI) The American Governmental System . . . . .	3
P S elective . . . . .	4
GPH 1100-- (SS) World Regional Patterns . . . . .	4
GPH elective . . . . .	3-4
HIS elective (HIS 3310, 3320, 3330, 3996, 5200, or 5210) . . . . .	3-4
HIS 2240 -- History of Michigan . . . . .	3-4
HIS elective (non-Western history) . . . . .	3-4
HIS 2050 -- United States Since 1877 . . . . .	3-4
HIS 1100-- (HS) The Ancient World . . . . .	3-4
ECO 1000 -- (SS) Survey of Economics . . . . .	4
ECO elective (ECO 2010 or 2020) (SS) . . . . .	3-4

**Bachelor's Degree Programs in Secondary Education Leading to Grades 7 - 12 Certification**

The secondary education curriculum leads to a bachelor's degree in education and secondary school teaching certification in the major and minor areas listed below. Whereas this degree is granted by the College of Education, students also have the option of earning secondary school certification in conjunction with a bachelor's degree from the College of Liberal Arts, the College of Fine, Performing and Communication Arts, or the College of Science. For information regarding these combined degree programs, see pages 172 and 401, respectively.

**Admission Requirements:** see page 101.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined above (see page 101).

**PRE-PROFESSIONAL REQUIREMENTS:** The following courses and course options are required of all students seeking secondary (grades 7-12) certification regardless of selection of major or minor studies. Some of these courses may also satisfy the University General Education Requirements, but the dual application of any course to both College and University General Education categories cannot be used to reduce the total degree requirement below 124 credits.

**GENERAL COURSE REQUIREMENTS**

ENG 1020 -- (BC) Introductory College Writing . . . . .	4
Intermediate Composition (IC) course . . . . .	3-4
One 2000-level (or above) English course . . . . .	3-4
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	3
HEA 2330 or H E 3300 or HEA 2310 or H E 6500	
-- First Aid and CPR . . . . .	3
-- Health of the School Child . . . . .	3
-- Dynamics of Personal Health . . . . .	3
-- Comprehensive School Health Education . . . . .	3
TED 2250 -- Introduction to Education (optional) . . . . .	3

**FOREIGN CULTURE (see General Education Requirements, page 29)**

**HISTORICAL STUDIES (One Course)**

HIS 1100 -- (HS) The Ancient World . . . . .	3-4
HIS 1200 -- (HS) The Medieval World . . . . .	3-4
HIS 1300 -- (HS) Europe and the World: 1500-1945 . . . . .	3-4
HIS 1400 -- (HS) The World Since 1945 . . . . .	3-4



HIS 1600 -- (HS) African Civilizations to 1800	4
HIS 1610 -- (HS) African Civilizations Since 1800	4
HIS 1800 -- (HS) The Age of Islamic Empires: 600-1600	3
HIS 1810 -- (HS) (N E 2040) The Modern Middle East	3
HIS 1995 -- (HS) Society and the Economic Transition	3
ANT 3200 -- (HS) Lost Cities and Ancient Civilizations	3

*HUMANITIES (see General Education Requirements, page 29)*

*NATURAL SCIENCE (Three Courses, one of which must include an approved laboratory, which is associated with all of the following courses when elected for maximum credit, except BIO 1030)*

<b>PHYSICAL SCIENCES (elect one):</b>	
AST 2010-- (PS) Descriptive Astronomy	4-5
CHM 1000 -- (PS) Chemistry and Your World	3-4
CHM 1020 -- (PS) General Chemistry I	4
CHM 1220 -- (PS) Chemical Structure, Bonding & Reactivity	4
CHM 1230 -- Chemical Principles in the Laboratory	1
CHM 1240 -- General/Organic Chemistry	4
CHM 1250 -- General/Organic Chemistry Lab	1
GEL 1010 -- (PS) Geology: The Science of the Earth	4
PHY 1020 -- (PS) Conceptual Physics: The Basic Science	3-4
PHY 1040 -- (PS) Einstein, Relativity & Quanta: Cpt. Intro.	3-4
PHY 2130 -- (PS) General Physics	3
PHY 2170 -- (PS) General Physics	4
PHY 3100 -- (PS) The Sounds of Music	4

**LIFE SCIENCES (elect two):**

PSY 1010 -- (LS) Introductory Psychology (Required Course)	4
BIO 1510 or BIO 1030 or BIO 1050	
-- (LS) Basic Life Mechanisms	4
-- (LS) Biology Today	3-4
-- (LS) An Introduction to Life	3-4

**SOCIAL STUDIES (Two Courses)**

**AMERICAN SOCIETY and INSTITUTIONS:**

P S 1010 or P S 1030	
-- (AI) American Government	4
-- (AI) The American Governmental System	3

**BASIC SOCIAL SCIENCES (SS) COURSE (elect one):**

ANT 2100-- (SS) Introduction to Anthropology	4
ECO 1000 -- (SS) Survey of Economics	4
ECO 2020 -- (SS) Principles of Macroeconomics	4
GPH 1100 -- (SS) World Regional Patterns	4
SOC 2000 -- (SS) Understanding Human Society	3
SOC 2020 -- (SS) Social Problems	3

**PROFESSIONAL EDUCATION REQUIREMENTS:** The following courses may be taken only after admission to the College of Education and are required of all students seeking secondary (grades 7-12) certification. The selection of courses to fulfill the methods requirements I and II is predicated on the student's choice of major. The configuration of the courses in Semesters I-IV represents the sequence in which students may elect these courses. Semesters I and III must be completed before taking TED 5780.

**SEMESTER I**

TED 5160 -- (WI) Analysis of Middle and Secondary School Teaching (Coreq: TED 5650)	3
TED 5650 -- Pre-Student Teaching Field Experience for Secondary Majors (Coreq: TED 5160)	5
Methods I --(Teaching methods in the major)	3
EDP 5480 -- Adolescent Psychology	3

**SEMESTER II (must have 24 credits completed in the major)**

RDG 4430 -- Teaching Reading in Subject Matter Areas	3
Methods II -- (Teaching methods in the major)	3
Methods III -- (Teaching methods in the minor, if applicable)	3
BBE 5000 -- Multicultural Ed. in Urban America	2

**SEMESTER III**

EHP 3600 -- Intro. to Philosophy of Education	3
SED 5010 -- Exceptional Child in the Regular Classroom	2
TED 6020 -- Computer Applications in Teaching I	3
Methods III -- (Teaching methods in the major)	3

**SEMESTER IV (major and minor must be completed)**

TED 5780 -- Directed Teaching and Conference	10
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**TEACHING METHODS (Two Courses)**

**CAREER AND TECHNICAL EDUCATION**

CTE 5410 -- Career and Technical Education	3
CTE 6993 -- Special Problems in Career and Technical Education	3

**COMPUTER SCIENCE EDUCATION**

IT 5110 -- Technology Applications in Education & Training	3
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**ENGLISH EDUCATION**

EED 5200 -- Methods of Teaching English: Grades 7-12	3
EED 6120 or EED 6330	
-- English Composition in Secondary Schools	3
-- Teaching Literature in Secondary Schools	3

**FOREIGN LANGUAGE EDUCATION**

LED 6520 -- Tch. English as Second /Foreign Lang.: Methods I	3
LED 6530 -- Tch English as Second /Foreign Lang.: Methods II	3

**MATHEMATICS EDUCATION**

*Consult a Mathematics Education adviser for possible substitutions and additional courses.*

MAE 5150-- Methods & Materials of Instr. -- Secondary Sch. Math.	3
MAE 6050 -- Teaching Mathematics in Middle Grades	3

**SCIENCE EDUCATION**

SCE 5060-- Methods & Materials of Instr.: Secondary Sch. Sci. I	3
SCE 5070 or SCE 6030	
-- Methods & Materials of Instr.: Secondary Science II	3
-- Adv. Studies in Teaching Science: Jr. High & Middle School <sup>1</sup>	3

**SOCIAL STUDIES EDUCATION**

SSE 6710 -- Methods & Materials of Instr.: Sec. Social Studies	3
SSE 6730 -- New Perspectives in Social Studies Education	3

**SPEECH EDUCATION**

S E 6060 -- Teaching Communication at the Secondary Level	3
EED 5200 -- Methods of Teaching English: Grades 7-12	3

**MAJOR AREAS OF STUDY:** Students seeking secondary certification for grades 7-12 must complete one of the following majors:

**ENGLISH MAJOR (Thirty Credits)**

ENG 3010 or ENG 5010	
-- (IC) Intermediate Writing	3
-- Advanced Expository Writing	3
ENG 3110 -- (PL) English Literature to 1700	3
ENG 3120 -- (PL) English Literature after 1700	3
ENG 2200-- (PL) Shakespeare	
ENG 3140 -- (PL) Survey of American Literature	3
ENG 5450 or ENG 5420	
-- Modern American Literature	3
-- American Literature: 1865-1914	3
ENG 5700 or ENG 5730	
-- Introduction to Linguistic Theory	3
-- Traditional Grammar	3
ENG 2800 -- Techniques of Imaginative Writing	4

1. Replaces SCE 5070 for Unified Science Group majors only.

ENG 2390 or ENG 5480	
-- (IC) Intro. to African-American Lit. (AFS 2390)	4
-- Topics in African-American Literature	3
English Elective	2-3

**FOREIGN LANGUAGE MAJORS (Thirty Credits)**

Secondary certification is offered with majors in the following languages: French, German, Italian, Latin, Russian, and Spanish. Requirements for these majors are determined by the appropriate department in the College of Liberal Arts. Students who major in a foreign language are advised to minor in English or in a second foreign language.

**MATHEMATICS MAJOR (Forty Credits)**

MAT 2010 -- Calculus I	4
MAT 2020 -- Calculus II	4
MAT 2030 -- Calculus III	4
MAT 2250 -- Elementary Linear Algebra	3
MAT 4010 -- Intro. to Abstract Math. & Proof Writing	3
Plus courses selected from the following to total 40 credits:	
MAT 2210 or MAT 5700 or MAT 6150	
-- Elementary Probability and Statistics	4
-- Introduction to Probability Theory	4
-- Topics in Math. for High School Teachers III	4
MAT 2350 -- Elementary Differential Equations	3
MAT 5070 -- Advanced Calculus	4
MAT 5400 or MAT 5520	
-- Elementary Theory of Numbers	3
-- Introduction to Topology	3
MAT 5420 -- Algebra I	4
MAT 5610 -- Intro.: Analysis II	4
MAT 6130 -- Topics in Mathematics for High School Teachers I	4
MAT 6140 -- Topics in Mathematics for High School Teachers II	3

**SECONDARY MATHEMATICS MINOR (Minimum 22-23 credits)**

MAT 2010 -- Calculus I	4
MAT 2020 -- Calculus II	4
MAT 2030 -- Calculus III	4
MAT 2250 -- Elementary Linear Algebra	3
Plus two from the following:	
MAT 6130 -- Topics in Math. for High School Teachers I	4
MAT 6140 -- Topics in Math. for High School Teachers II	3
MAT 6150 -- Topics in Math. for High School Teachers III	4

**SECONDARY SCIENCE MAJOR -- SINGLE DISCIPLINE**

Students who major in biology (thirty-six credits), chemistry (thirty-four credits), geology (thirty-four credits), or physics (thirty-two credits) must follow the minimum requirements in the major that are designated for a Bachelor of Arts degree by the appropriate department in the College of Science. Students who major in chemistry must complete CHM 5600. Students who major in geology must complete AST 2010 and GEL 1370. Students who major or minor in biology must complete BIO 2870.

The following courses outside the major are also required and may be used to fulfill a Group Science Minor:

BIO 1050 -- (LS) An Introduction to Life	4
CHM 1220 -- (PS) Chemical Structure, Bonding, & Reactivity	4
CHM 1230 -- Chemical Principles in the Laboratory	1
CHM 6740 -- Laboratory Safety	2
GEL 1010 -- (PS) Geology: The Science of the Earth	4
PHY 2130 -- (PS) General Physics	3
PHY 2131 -- General Physics Laboratory	1
MAT 2010 -- Calculus I	4
MAT 2210 or STA 1020	
-- Elementary Probability & Statistics	4
-- Elementary Statistics	3

All science majors must complete a total of fifty semester credits in science.

**UNIFIED SCIENCE GROUP SECONDARY MAJOR**  
*primarily for grades 7 - 9 (Fifty Credits)*

NOTE: North Central Association accreditation requires that new or reassigned science teachers have *at least twelve semester credits* in any science subject that they teach.

BIOLOGY (12 credits):	
BIO 1500 -- Basic Life Diversity	4
BIO 1510 -- (LS) Basic Life Mechanisms	4
BIO elective	3-4

EARTH SCIENCE (12 credits):	
AST 2010 -- (PS) Descriptive Astronomy	5
GEL 1010 -- (PS) Geology: The Science of the Earth	4
GEL 1370 -- Meteorology: The Study of Weather	3

CHEMISTRY (12 credits):	
CHM 1220 -- (PS) Chemical Structure, Bonding & Reactivity	4
CHM 1230 -- Chemical Principles in the Laboratory	4
CHM 1240 -- General/Organic Chemistry	1
CHM 1250 -- General/Organic Chemistry Lab	1
CHM 6740 -- Laboratory Safety	2

PHYSICS (3 courses plus labs):	
PHY 2130 -- (PS) General Physics	3
PHY 2131 -- General Physics Lab	1
PHY 2140 -- General Physics	3
PHY 2141 -- General Physics Lab	1
PHY elective	2-4

Additional Science Electives to Total: 50

In addition to the above major courses, the following courses are required:

MAT 1800 -- Elementary Functions	4
MAT and/or CSC electives	2

**SECONDARY SOCIAL STUDIES -- Individual Disciplines:**

**ECONOMICS MAJOR (Thirty-two Credits)**

Complete the degree requirements for the Bachelor of Arts in Economics.

**GEOGRAPHY MAJOR (Thirty-two Credits):**

Complete the degree requirements for the Bachelor of Arts with a Major in Geography, as indicated on page 262.

**HISTORY MAJOR (Thirty-three Credits):**

Complete the degree requirements for the Bachelor of Arts with a Major in History, as indicated on page 271.

**POLITICAL SCIENCE MAJOR (Thirty-two Credits):**

Complete the degree requirements for the Bachelor of Arts with a Major in Political Science.

**SECONDARY SOCIAL STUDIES GROUP MAJOR**  
*Thirty-six Credits)*

This major includes four disciplines: economics, geography, history, and political science. The major must include at least two courses from each of these areas. (*Note that opportunities for teaching social studies at the secondary level are very limited.*) The recommended distribution of courses is as follows:

HIS 1100 -- (HS) The Ancient World	3
HIS 2050 -- United States since 1877	3
HIS 2240 -- History of Michigan	3
HIS 3150 -- Black Experience in America: 1865-Present	3
HIS elective (non-Western history)	3
HIS elective (HIS 3310, 3320, 3330, 3996, 5200, or 5210)	3-4
GPH 1100 -- (SS) World Regional Patterns	4-5
GPH 2000 -- (U S 2000) (SS) Introduction to Urban Studies	4
P S 1010 -- (AI) Principles of American Government	4
P S elective	3-4
ECO 2010 -- (SS) Principles of Microeconomics	3

ECO 2020 -- (SS) Principles of Macroeconomics . . . . . 3

**SPEECH MAJOR (Thirty Credits)**

This major must be combined with an English Minor (see below).

SPC 2100 -- Persuasive Speaking . . . . . 3  
SPC 2110 -- (CT) Argumentation and Debate. . . . . 3  
SPC 2040 -- Voice and Articulation. . . . . 3  
SPC 2500 -- Oral Interpretation of Literature . . . . . 3  
SPC 3210 -- Theories of Communication . . . . . 4  
SPB 1500 -- Survey of Mass Communications. . . . . 3

Suggested Speech electives (twelve credits total):

SPC 2160 -- (PL) Contemporary Persuasive Campaigns. . . . . 4  
SPC 2190 -- Rhetoric in Western Thought . . . . . 3  
SPC 2200 -- Interpersonal Communications. . . . . 3  
SPC 5040 -- The Rhetoric of Racism . . . . . 3  
SPC 3270 -- Group Communication & Human Interaction . . . . . 3

**SPEECH -- RADIO/TELEVISION MAJOR (Thirty-six Credits)**

This major must be combined with an English Minor (see below).

SPC 2100 -- Persuasive Speaking . . . . . 3  
SPC 3210 -- Theories of Communication . . . . . 4  
SPC 2040 -- Voice and Articulation. . . . . 3  
SPB 1500 -- Survey of Mass Communications. . . . . 3  
SPR 2110 -- Radio and Television Reporting & Announcing. . . . . 3  
SPR 2210 -- Writing for Radio, Television and Film . . . . . 3  
SPR 4310 -- Audio Production . . . . . 4  
SPR 4410 -- Television Production . . . . . 4  
SPR 5400 -- Techniques of Film-Video Production. . . . . 4  
SPR elective . . . . . 4

**MINOR AREAS OF STUDY:** Students seeking secondary certification for grades 7-12 must complete one of the following minors:

**BILINGUAL/BICULTURAL MINOR**  
(Eighteen to Twenty-four Credits)

Eighteen credits are required for candidates holding Michigan Teaching Certificates; twenty-four credits are required for candidates without certification. Courses marked with an asterisk (\*) are required for either credit option. The student must take the Language Proficiency examinations by the time he/she has completed twelve credits; the student must satisfactorily pass the proficiency tests before completion of the program.

BBE 5000 -- Multicultural Education in Urban America. . . . . 2  
BBE 5500 -- Introduction to Bilingual/Bicultural Education . . . . . 3  
BBE 6560 -- Teaching Methods in Bilingual/Bicultural Education . . . 3  
BBE 6600 -- Internship in Bilingual/Bicultural Teaching . . . . . 2-12  
BBE 6700 -- Seminar in Cultural Awareness \* . . . . . 3  
BBE 6850 -- Applied Linguistics: Issues in Bilingual Education \* . . . 3  
BBE 6590 -- Culture and Language in BBE . . . . . 1-3  
LED 6520 -- Teaching English as Second/Foreign Language: Methods I . . . . . 3

**COMPUTER SCIENCE MINOR (Twenty-three Credits)**

CSC 1100 -- (CL) Problem Solving and Programming . . . . . 4  
CSC 1500 -- (CL) Fundamental Structures in Computer Science. . . . . 3  
CSC 2110 -- (CL) Intro. to Data Structures and Abstraction . . . . . 4  
CSC 2200 -- Data Structures and Algorithm Analysis. . . . . 4  
TED 6020 -- Computer Applications in Teaching I . . . . . 3  
TED 6030 -- Computer Applications in Teaching II. . . . . 3

*Electives (three credits):*

CSC 3750 -- Intro. to the Internet (recommended) . . . . . 3

**DANCE MINOR (Twenty-seven Credits)**

DNC 2000 -- (VP) Introduction to Dance . . . . . 4  
DNC 2010 -- Technique Laboratory I: Part I . . . . . 2  
DNC 2020 -- Technique Laboratory I: Part II . . . . . 2  
DNC 2210 -- Ballet III. . . . . 2  
DNC 2310 -- (VP) Historical Perspectives of Dance . . . . . 3  
DNC 3010 -- Technique Laboratory II . . . . . 4  
DNC 2500 -- Choreography I. . . . . 2  
DNC 5610 -- Dance Company I. . . . . 2  
DNE 4810 -- Methods in Modern Dance & Ballet . . . . . 3  
DNE 5810 -- Creative Dance for Children . . . . . 3

**ENGLISH MINOR (Twenty Credits)**

ENG 2200 -- (PL) Shakespeare. . . . . 3  
ENG 3010-- (IC) Intermediate Writing . . . . . 3  
ENG 2800-- Techniques of Imaginative Writing. . . . . 4  
ENG 3140 or ENG 5450  
-- (PL) Survey of American Literature . . . . . 3  
-- Modern American Literature. . . . . 3  
ENG 5700 or ENG 5730  
-- Introduction to Linguistic Theory . . . . . 3  
-- Traditional Grammar. . . . . 3  
ENG 3110 or ENG 3120  
-- (PL) English Literature to 1700. . . . . 3  
-- (PL) English Literature after 1700 . . . . . 3  
ENG 2390 or ENG 5480  
-- (IC) Intro. to African American Lit. (AFS 2390). . . . . 4  
-- Topics in African American Literature. . . . . 3

**FOREIGN LANGUAGE MINORS (Twenty Credits)**

Secondary certification is offered with minors in the following languages: French, German, Italian, Latin, Russian, and Spanish. Requirements for these minors are determined by the appropriate department in the College of Liberal Arts. Computation of the twenty credits begins at the intermediate level.

**HEALTH EDUCATION MINOR (Twenty-four Credits)**

BIO 1510 -- (LS) Basic Life Mechanisms. . . . . 4  
HEA 2310 -- Dynamics of Personal Health . . . . . 3  
HEA 2330 -- First Aid and CPR. . . . . 3  
H E 3300 -- Health of the School Child . . . . . 3  
H E 3330 -- School Health Education . . . . . 3  
H E 4340 -- Family and Reproductive Health . . . . . 3  
H E 5440 -- Mental Health and Substance Abuse . . . . . 3  
H E 3440 -- Nutrition & Health Education . . . . . 3

**MATHEMATICS MINOR (Twenty-two to Twenty-three Credits)**

MAT 2010 -- Calculus I . . . . . 4  
MAT 2020 -- Calculus II . . . . . 4  
MAT 2030 -- Calculus III . . . . . 4  
MAT 2250 -- Elementary Linear Algebra . . . . . 3  
MAT 6150 -- Topics in Mathematics for High School Teachers III . . 4

*One from the following:*

MAT 6130 -- Topics in Mathematics for High School Teachers I . . . 4  
MAT 6140 -- Topics in Mathematics for High School Teachers II . . 3

**MIDDLE SCHOOL LEVEL**

**EDUCATION MINOR (Minimum Twenty-four Credits)**

EDP 5480 -- Adolescent Psychology. . . . . 2-3  
CED 6700 -- Role of the Teacher in Guidance . . . . . 2  
TED 5250 -- Teaching the Emerging Adolescent. . . . . 3  
RLL 7600 -- Current Developments in Literacy Ed. . . . . 3  
RDG 6400 -- Practicum in Developmental Reading . . . . . 3  
Two from: RLL 7740, MAE 6050, SSE 6730, SCE 6030, EED 6310 6  
Middle School Level electives (selected with consent of Faculty Adviser) . . . . . 3-6  
TED 5790 -- Student Teaching & Conference for Special Groups . . 5

**PHYSICAL EDUCATION MINOR (Twenty Credits)**

Required Courses:

- P E 2010 -- Psycho-Physiological Foundations of Physical Activity . . . 3
- P E 2580 -- Phys. Ed. in Secondary Schools I: Racquet . . . . . 3
- P E 2580 -- Phys. Ed. in Secondary Schools I: Gymnasium. . . . . 3
- P E 2590 -- Phys. Ed. in Secondary Schools II: Soccer . . . . . 3
- P E 2590 -- Phys. Ed. in Secondary Schools II: Softball. . . . . 3

Two Elective courses from the following:

- P E 3400 -- Lifespan Growth and Development . . . . . 3
- P E 3550 -- (WI) Motor Learning and Control . . . . . 3
- P E 5570 -- Physiology of Exercise I (Prereq: BIO 2870 or equiv.) . . 3
- P E 3580 -- Biomechanics (Prereq: BIO 2870 or equiv.) . . . . . 3

SCIENCE MINOR (Twenty Credits)

For the science minor, students must complete twenty credits in one of the following disciplines in which the student has NOT accrued major credit: biology, chemistry, geology, and physics. Additionally, students must complete MAT 1800 or its equivalent.

UNIFIED SCIENCE GROUP MINOR (Twenty-four Credits)

Basic course work in science areas other than the major:

- BIO 1050 -- (LS) Introduction to Life . . . . . 4
- CHM 1220 -- (PS) Chemical Structure, Bonding & Reactivity. . . . . 4
- CHM 1230 -- Chemical Principles in the Laboratory. . . . . 1
- GEL 1010 -- (PS) Geology: The Science of the Earth . . . . . 4
- PHY 2130 -- (PS) General Physics . . . . . 3
- PHY 2131 -- General Physics Laboratory . . . . . 1
- Science electives . . . . . 6

In addition to the above courses, the following course is required:

- MAT 1800 -- Elementary Functions. . . . . 4

Electives may be taken from among the courses listed under the Group Major, above.

SOCIAL STUDIES SINGLE SUBJECT MINOR (Twenty Credits)

For a social studies minor in a single subject, twenty credits must be completed in history, geography or political science, and twenty-two credits in economics. The minor in history must include at least two courses each in United States history and world history.

SOCIAL STUDIES GROUP MINOR (Twenty-four Credits)

This minor includes four social studies disciplines: economics, geography, history, and political science. The minor must include at least two courses from each area in which the student has not accrued major credits.

- P S 1010 or P S 1030
  - (AI) American Government . . . . . 4
  - (AI) The American Governmental System . . . . . 3
- P S elective . . . . . 3-4
- HIS 1100 -- (HS) The Ancient World . . . . . 3
- HIS 2050 -- History of the United States since 1877. . . . . 3-4
- HIS 2240 -- History Of Michigan . . . . . 3-4
- HIS Elective (non-Western history). . . . . 3-4
- HIS elective from: HIS 3310, 3320, 3330, 3996, 5200, or 5210 . . 3-4
- ECO 1000 -- (SS) Survey of Economics . . . . . 4
- ECO elective (ECO 2010 or 2020) (SS) . . . . . 3-4
- GPH 1100 -- (SS) World Regional Patterns . . . . . 4
- GPH elective . . . . . 3-4

SPEECH MINOR (Twenty Credits)

- SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . . 3
- SPC 2040 -- Voice and Articulation. . . . . 3
- SPC 2100 -- Persuasive Speaking . . . . . 3
- SPC 2110 -- (CT) Argumentation and Debate. . . . . 3
- SPC 2200 -- Interpersonal Communications. . . . . 3
- SPC 2500 -- Oral Interpretation of Literature . . . . . 3
- SPB 1500 -- Survey of Mass Communications. . . . . 3

## Bachelor's Degree Programs in Special Education Leading to Elementary or Secondary Endorsement

The special education curriculum leads to a bachelor's degree in education and certification in the areas of mentally impaired or speech impaired. The mentally impaired concentration prepares teachers to work with children who have a mental impairment. The speech impaired concentration (master's degree required for certification) prepares teachers to work with children who have speech and language disorders.

**Admission Requirements:** see page 101.

**DEGREE REQUIREMENTS:** The following requirements in various curricular areas supplement the degree requirements outlined above (see page 101). The entire program in Special Education requires a minimum of 140 credits.

**PRE-PROFESSIONAL REQUIREMENTS:** The following courses are required of all students seeking special education certification. Some of these courses may also satisfy the University General Education Requirements (see page 29), but the dual application of any course to both College and University General Education categories cannot be used to reduce the total degree requirement below 124 credits. College and special education planned minor requirements must be completed prior to entering this program.

- BIO 1510 -- (LS) Basic Life Mechanisms. . . . . 4
- BIO 2870 -- Anatomy and Physiology . . . . . 5
- ENG 1020 -- (BC) Introductory College Writing. . . . . 4
- HEA 2330 -- First Aid and CPR. . . . . 3
- MAE 5050 -- Mathematics for Elementary School Teachers I. . . . 3
- PSY 1010 -- (LS) Introductory Psychology . . . . . 4
- PSY 2300 -- Psychology of Everyday Living . . . . . 4
- SPB 1010 -- (OC) Oral Communication: Basic Speech. . . . . 3
- ELE 3200 -- Literature for Children . . . . . 3-4
- Computer Literacy (CL) course . . . . . 3-4
- Critical Thinking (CT) course:
  - PHI 1050 or SPC 2110
  - (CT) Critical Thinking . . . . . 3
  - (CT) Argumentation and Debate . . . . . 3
- Foreign Culture (FC) course
- Historical Studies (HS) course
- Humanities (VP,PL) -- two courses
- Intermediate Composition (IC) course
- Physical Sciences (PS) course
- Social Science (AI,SS) -- two courses
- P S 1010 or P S 1030
  - (AI) American Government. . . . . 4
  - (AI) The American Governmental System . . . . . 3
- GPH 1100 or SOC 2000
  - (SS) World Regional Patterns . . . . . 4
  - (SS) Understanding Human Society . . . . . 3

**INFORMATION POWER:** Required of all newly-matriculated undergraduate students who transfer twelve or fewer credits to Wayne State, prior to completion of thirty credits at Wayne State, preferably during the first semester in residence:

- UGE 1000 -- (GE) Information Power . . . . . 1

**PROFESSIONAL EDUCATION REQUIREMENTS:** The following courses are required of all students seeking special education endorsements and may be taken only after admission to the College of Education. The configuration of courses in Phases I -- IV represents the recommended sequence for taking these courses, but substitutions between phases is possible with the exception that SED 6010 is a corequisite with TED 5790.

*PHASE I (Seventeen Credits)*

TED 3550 -- (WI) Teaching: Research, Theory and Practice . . . . . 5  
 ELE 3300 -- Teaching Language Arts: Preprimary-9 . . . . . 3  
 ELE 3400 -- Teaching Mathematics: Preprimary-9 . . . . . 3  
 EDP 3310 -- Educational Psychology . . . . . 3  
 RDG 4430-- Teaching Reading in Subject Matter Areas. . . . . 3

*PHASE II (Fifteen Credits)*

TED 3560 -- Pre-Student Teaching Field Experiences . . . . . 3  
 ELE 3320 -- Teaching Reading: Preprimary-9 . . . . . 3  
 ELE 3500 -- Teaching Science: Preprimary-9 . . . . . 3  
 ELE 3600 -- Teaching Social Studies: Preprimary-9 . . . . . 3

*PHASE III (Seven Credits)*

TED 5780 -- Directed Teaching and Conference . . . . . 5  
 BBE 5000 -- Multicultural Education in Urban America. . . . . 2

*PHASE IV (Ten to Eleven Credits)*

TED 5790 -- Student Teaching & Conference for Special Groups . . 8  
 SED 6010 -- Seminar in Special Education Teaching . . . . . 3

**MAJOR AREAS OF STUDY:** Students pursuing a bachelor's degree in education leading to an endorsement in special education must complete one of the following majors. The courses cited in the mentally impaired program with the exception of SED 5060, 5030, 5040, and 5600 can be taken only after admission to the Special Education Program.

*MENTALLY IMPAIRED (Thirty-six Credits)*

SED 5060 -- Developing Observation & Assessment Skills -- Lab/  
Seminar . . . . . 3  
 SED 5090 -- Special Education & Transitional Services . . . . . 3  
 SED 5030 -- Education of Exceptional Children . . . . . 3  
 SED 5040 -- Speech Improvement in the Classroom . . . . . 2  
 SED 5110 -- Mental Impairment and the Cognitive Process . . . . . 3  
 SED 5130 -- Curriculum Development: Mental Impairments . . . . . 3  
 SED 5140 -- Behavior Management: Mental Impairments . . . . . 3  
 SED 5260 -- Instructional Strategies for Exceptional Learners. . . . . 4  
 SED 5600 -- Support for Students with Special Needs . . . . . 3  
 SED 6010 -- Seminar in Special Education Teaching . . . . . 3  
 ELE 6070 -- Family, Community & School Partnerships. . . . . 3  
 ECE 6100 -- Enabling Technology (College of Engineering) . . . . . 4

**SPEECH IMPAIRED:** Course requirements for this major are prescribed by the Department of Communication Disorders and Sciences in the College of Science and are the same as the major requirements for the Bachelor of Arts with a Major in Communication Disorders and Sciences; see page 407.

**PLANNED MINOR:** Students pursuing a bachelor's degree in education leading to an endorsement in Special Education must complete the following minor requirement.

*PLANNED MINOR (Nineteen to Twenty-one Credits)*

BIO 2870 or PSY 2400  
 -- Anatomy and Physiology . . . . . 5  
 -- Developmental Psychology . . . . . 4  
 PSY 3060 or PSY 3080 or PSY 3120  
 -- Psych. of Learning & Memory: Fundamentals . . . . . 3  
 -- Cognitive Psychology: Fundamentals. . . . . 3  
 -- Brain and Behavior . . . . . 3  
 PSY 2300 -- Psychology of Everyday Living. . . . . 4  
 SOC 2000 -- (SS) Understanding Human Society . . . . . 3  
 P S 1010 -- (AI) American Government . . . . . 4  
 ELE 3200 -- Literature for Children . . . . . 3  
 SED 6000 -- Problems in Special Education. . . . . 3

Students who plan to pursue additional minors, such as early childhood education, must consult advisers in the program areas.

## Bachelor's Degree Programs in Art Education Leading to Grades K-12 Endorsement

The program in art education is designed to provide undergraduates and post-degree students with learning experiences that will enable them to become successful artist-teachers. This curriculum leads to a bachelor's degree and a Michigan Provisional Teaching Certificate which enables the holder to teach art in all grades, kindergarten through grade twelve, and subjects for which the holder has minor certification, in grades seven through twelve.

The art education program admits both undergraduate and post-bachelor students. Undergraduate students are encouraged to begin art coursework as freshmen and to apply to the College of Education after the completion of fifty-three semester credits. Those who have received a bachelor's degree with an art major can enter the program as post-degree students and generally complete the professional education and art education requirements for certification in two years (see below, page 110 ). The sequence begins in the fall semester.

**Admission:** see page 101. Applicants for admission to the Art Education program are required to submit a portfolio of art work. Students should inquire for details at the Art Education Office, Room 163, Art Building. Art Education faculty members will advise students concerning portfolio requirements.

The following requirements in various curricular areas supplement the degree requirements outlined above (see page 101).

**GENERAL EDUCATION REQUIREMENTS:** see page 29.

**PRE-PROFESSIONAL REQUIREMENTS:** Students pursuing a bachelor's degree leading to grades K-12 certification in art education must complete the following courses:

ENG 1020 -- (BC) Introductory College Writing . . . . . 4  
 CSC 1000 -- (CL) Introduction to Computer Science . . . . . 3  
 SPB 1010 -- (OC) Oral Communication: Basic Speech. . . . . 3  
 P S 1010 -- (AI) American Government. . . . . 4  
 PSY 1010 -- (LS) Introductory Psychology . . . . . 4  
 A H 1110 -- (VP) Paleolithic through Gothic Art Survey . . . . . 3  
 HEA 2330 -- First Aid and CPR (College of Education req.) . . . . . 3  
 Intermediate Composition (IC) course  
 English Proficiency (EP) course  
 Mathematics Competency (MC) course  
 Writing Intensive (WI) course  
 Critical Thinking (CT) course  
 Social Science (SS) course  
 Physical Science (PS) course (plus additional lab)  
 Foreign Culture (FC) course  
 Historical Studies (HS) course  
 Philosophy and Letters (PL) course

**PROFESSIONAL EDUCATION REQUIREMENTS:** Students pursuing a bachelor's degree leading to grade K-12 certification in art education must complete the following courses:

AED 5000 -- Art Process, Perception and Expression . . . . . 3  
 AED 5100 -- Art for Special Groups. . . . . 3  
 AED 5150 or AED 6150  
 -- Computer Graphics in the School Art Room . . . . . 3  
 -- Instructional Applications of Computer Graphics . . . . . 3  
 AED 5650 -- Art Teaching Laboratory (Coreq: AED 5160) . . . . . 2  
 EDP 3310 or EDP 5450 or EDP 5480  
 -- Educational Psychology . . . . . 3  
 -- Child Psychology . . . . . 3  
 -- Adolescent Psychology . . . . . 3  
 AED 5160-- Theory and Practice in Art Ed. (Coreq: AED 5650) . . . 3  
 RDG 4430 -- Teaching Reading in Subject Matter Areas . . . . . 3  
 TED 5780 -- Directed Teaching and Conference. . . . . 5  
 TED 5790 -- Student Teaching and Conference for Special Groups 8

EHP 3600 -- Introduction to the Philosophy of Education . . . . .	3
ELE 3200 or EED 6310	
-- Literature for Children . . . . .	3
-- Literature for Adolescents . . . . .	3
ELE 3300 -- Tch. Language Arts: Preprimary - 9 (Coreq: TED 3550)	3
TED 3550 -- Teaching Theory & Practice (Coreq: ELE 3300) . . . . .	5
SED 5010 -- Exceptional Child in the Regular Classroom . . . . .	2
BBE 5000 -- Multicultural Education in Urban America . . . . .	2
AED electives . . . . .	6

**MAJOR REQUIREMENTS:** Students pursuing a bachelor's degree in art education must complete thirty-six credits in art/art education major courses distributed as follows:

*Required Courses:* (1) Choose *one* course from a 3-D area:  
AED 5070, 5170, 5230, 5360.

(2) Choose *one* course from a Painting area: AED 5020, 6220.

(3) Choose *one* course from a Film/Printmaking area:  
AED 5190, 5280.

The following courses should be elected as early as possible:

ADE 1200, ADE 1210, ADR 1050, ADR 1060, ADR 2070, A H 1110, A H 1120, APA 2100, ASL 2150.

ADE 1200 -- Design I . . . . .	3
ADE 1210 -- Design II . . . . .	3
AED 5070 -- Methods and Materials of Sculptural Expression . . . . .	3
AED 5020 -- Painting: Methods and Materials . . . . .	3
AED 5190 -- Light, Sound, Space, and Motion . . . . .	3
AED 5230 -- Ceramics Education I . . . . .	3
AED 5360 -- Wood, Metal, and Plastic: Methods and Materials . . . . .	3
AED 5280 -- Printmaking: Methods and Materials . . . . .	3
AED 6220 -- Drawing & Watercolor: Field Studies . . . . .	3
ADR 1050 -- Drawing I . . . . .	3
ADR 1060 -- Drawing II . . . . .	3
ADR 2070 -- Beginning Life Drawing . . . . .	3
A H 1110 -- (VP) Art Survey: Ancient through Medieval . . . . .	3
A H 1120 -- (VP) Renaissance through Modern Art Survey . . . . .	3
APA 2100 -- Basic Painting . . . . .	3
ASL 2150 -- Beginning Sculpture . . . . .	3

**MINOR REQUIREMENTS:** Students pursuing a bachelor's degree in art education may complete a sufficient number of credits to constitute a minor. Minor concentrations are of two kinds: a single subject minor consisting of twenty credits in one subject area; and a group minor consisting of twenty-four credits distributed among various, but related, subject areas. *Students anticipating teaching at the secondary level are strongly advised to complete an academic minor rather than a fine arts minor for certification.* For the selection of minor areas of study and their requirements, see pages 107-108 .

## Post-Baccalaureate Program in Art Education

**Admission:** Applicants to the post-degree certification program in art education must have earned a Bachelor's Degree in Studio Art and must submit an acceptable portfolio prior to admission to the art education program. Students must consult with an adviser for verification that the Art Education Major (thirty-six credits) has been completed, for certification purposes. This program can usually be completed within two years if the applicant begins in the Fall semester. Art Teaching Laboratory and Student Teaching in Elementary and Secondary levels follow in sequence. Art Teaching Laboratory is offered only in the fall semester. Student Teaching can only be arranged during the regular school year. Applications for student teaching may be obtained in Room 223 Education.

**PROGRAM REQUIREMENTS** consist of an art education major (thirty-six credits), a professional education sequence (thirty-six credits), a methods and materials sequence (twenty-four credits), and either a single subject minor (twenty credits) or a group minor (twenty-four credits). *Students anticipating teaching at the secondary level are strongly advised to complete an academic minor rather than a fine arts minor for certification.* For the selection of minor areas of

study and their requirements, see pages 107-108.

### PROFESSIONAL EDUCATION (Thirty-six Credits) credits

AED 5650 -- Art Teaching Laboratory (Coreq: AED 5160) . . . . .	2
AED 5160 -- Theory & Practice in Art Ed. (Coreq: AED 5650) . . . . .	3
AED 5000 -- Introduction to Art Education . . . . .	3
AED 5100 -- Art for Special Groups . . . . .	3
SED 5010 -- The Exceptional Child in the Regular Classroom . . . . .	2
ELE 3200 or EED 6310	
-- Literature for Children . . . . .	3
-- Young Adult Literature . . . . .	3
ELE 3300 -- Tch. Lang. Arts: Preprimary - 9 (Coreq: TED 3550) . . . . .	3
TED 3550 -- Tch. Research, Theory & Practice (Coreq: ELE 3300) . . . . .	5
BBE 5000 -- Multicultural Education in Urban America . . . . .	2
AED electives . . . . .	6
EDP 3310 or EDP 5450 or EDP 5480	
-- Educational Psychology . . . . .	3
-- Child Psychology . . . . .	3
-- Adolescent Psychology . . . . .	3
EHP 3600 -- Introduction to the Philosophy of Education . . . . .	3
RDG 4430 -- Teaching Reading in Subject Matter Areas . . . . .	3
TED 5780 -- Directed Teaching and Conference . . . . .	5
TED 5790 -- Student Teaching and Conference for Special Groups . . . . .	8

AED 5150 or AED 6150

-- Computer Graphics in the School Art Room . . . . .	3
-- Instructional Applications of Computer Graphics . . . . .	3

## Bachelor's Degree Programs in Career and Technical Education

Career and Technical education programs are offered in four curricular areas: business education, health occupations, home economics related occupations, and trade and industry. All of the programs offered under these generic headings lead to two kinds of certification: secondary school certification, and vocational certification with required work experience.

All students in career and technical education must complete a vocationally-certifiable major, a teaching minor, and the baccalaureate degree, and have acquired two years or 4,000 clock hours of recent relevant work experience in the area of the major.

**Admission Requirements:** In addition to the regular admission procedures (see page 101), each applicant must have a personal interview with a career and technical education adviser and complete a Plan of Work.

**DEGREE REQUIREMENTS:** Career and technical education programs follow the degree requirements outlined on page 101.

**PRE-PROFESSIONAL REQUIREMENTS:** Students seeking a bachelor's degree in career and technical education must complete the pre-professional requirements outlined on page 104.

**PROFESSIONAL EDUCATION REQUIREMENTS:** Students in career and technical education programs must complete the professional education requirements outlined on page 105.

**SPECIALIZATIONS:** Programs in career and technical education are grouped under four curricular areas:

### BUSINESS EDUCATION:

- Accounting and Computing
- Business Information Systems
- Marketing Education

### HEALTH OCCUPATIONS:

- Dental Occupations
- Medical Laboratory Occupations
- Medical Assisting Occupations
- Nursing Occupations

#### HOME ECONOMICS RELATED OCCUPATIONS:

Child Care  
Culinary Arts  
Food Management

#### TRADE AND INDUSTRY:

Auto Mechanics  
Electricity/Electronics  
Graphics and Printing  
Heating and Air Conditioning  
Small Engine Repair  
Welding  
(For additional concentrations in this area, consult a career and technical education adviser.)

These specializations are offered as majors in community colleges. The major in the area of specialization should be completed at a community college, prior to admission to the College of Education. For further information, consult a career and technical education adviser in the College of Education.

**MINOR AREAS OF STUDY:** Students seeking certification in career and technical education must complete an academic minor; see minor areas of study on pages 107 - 108.

**CREDIT BY EXAMINATION:** Credit in some occupational areas may be earned through competency examinations. Consult a career and technical education adviser for further information.

## TEACHING CERTIFICATES

The Michigan Department of Education issues two basic teaching certificates: elementary and secondary. The elementary certificate authorizes an individual to teach all subjects in grades kindergarten through five, and major and minor subject areas in grades six through eight. The secondary certificate authorizes an individual to teach his/her major and minor subject areas in grades seven through twelve. Some majors such as art, physical education, and music cover all grades, kindergarten through twelve.

**Teaching endorsements** may be added to any certificate. An individual may add up to six endorsements by completing requirements for academic majors and/or minors in accordance with State regulations. An individual holding an elementary certificate may also earn an endorsement to teach at the secondary level, and vice versa. When adding an additional endorsement, the individual must also pass the Michigan Test for Teacher Certification in that subject area.

Elementary and secondary certificates are issued in two stages. The provisional certificate is issued first and is valid for five and a half to six years after the date of issuance. After three years of successful teaching and the completion of a master's degree or accumulation of eighteen semester hours in a planned program of study, a teacher may apply for a professional certificate which must be renewed every five years. The teacher must complete six semester hours of approved college credit or eighteen State-approved Continuing Education Units (CEUs) during each five-year period in order to retain professional certification.

## Certification Requirements

All secondary certificates require an academic major and an academic minor in subject areas such as English, mathematics, or science, approved for teaching in grades seven through twelve by the State Board of Education. Elementary certificates require one academic major and one minor.

Students are recommended for certification after earning a bachelor's degree from a regionally-accredited institution and completing a specified sequence of professional courses in the College of Education. Holders of a bachelor's degree may also earn a teaching certificate in a post-bachelor certification program or Master of Arts in Teaching program. Additional information about these programs can

be obtained from the Office of Academic Services in rooms 469 or 489 Education.

## Provisional Certificates

Teaching certificates as listed below are granted with the bachelor's degree upon the completion of the four-year program. Application for the provisional certificate must be submitted within five years after certification requirements have been met. (In exceptional circumstances, the degree may be granted without the teachers certificate if the student meets all degree requirements but is unable to meet all requirements for the certificate.) They are also granted to students who hold a bachelor's or master's degree upon completion of a specified professional sequence, and to holders of either of the provisional certificates listed below who wish to qualify for the other.

### *Elementary Provisional Certificate for Kindergarten through Grade Eight*

1. The candidate must have graduated with a bachelor's degree from an approved or accredited teacher education institution.
2. The academic background must include a single subject major; or a group major, and one minor; or three minors. A single subject major is defined as a minimum of thirty credits and a group major as a minimum of thirty-six credits. A single subject minor is a minimum of twenty credits, and a group minor is a minimum of twenty-four credits. Majors and minors must correspond to disciplines listed on the State of Michigan Approved List of Majors and Minors.
3. Completion of a professional education sequence is required.

### *Secondary Provisional Certificate for Grades Seven through Twelve*

1. The candidate must have graduated with a bachelor's degree from an approved or accredited teacher education institution.
2. The academic background must include a single subject major or a group major, and one minor (may be a group minor) in subjects or subject fields in which the applicant expects to teach. A single subject major is defined as a minimum of thirty credits and a group major as a minimum of thirty-six credits. A single subject minor is a minimum of twenty credits and a group minor is a minimum of twenty-four credits.
3. Completion of a professional education sequence is required.

## Additional Endorsements

Holders of certificates who wish to add an additional teaching endorsement must consult a counselor in the Division of Academic Services, 469 or 489 Education Building.

Application for an endorsement must be made within five years after endorsement requirements have been met. State examinations must be passed for all new endorsements.

## Certification for Post-Baccalaureate Students

A college graduate holding the bachelor's or master's degree may qualify for a teaching certificate by completing a Master of Arts in Teaching degree program, or by completing a recognized post-degree program. See the Wayne State University Graduate Bulletin for general requirements for the Master of Arts in Teaching degree. The student may need to supplement previous degree work in order to satisfy major and minor provisions of the Michigan certification code.

## Five-Year Professional Certificate

This certificate is for holders of provisional certificates who have taught successfully for three years after the issue date of their provisional certificate and have completed eighteen credits in a planned course of study after the issue date of their provisional certificate or have a master's degree. (For a student who is admitted to a program

leading to a master's degree, the first eighteen credits are considered a planned program. Students not seeking a master's degree should consult with a counselor in 469 Education Building regarding an appropriate planned course of study.)

Teachers of K-12 subjects: art, dance, music and physical education may present experience at any grade level from kindergarten through grade 12.

Five year professional certification with vocational endorsement requires a planned program. Students should consult the appropriate area adviser regarding certification for an approved program leading to five year professional certification with a vocational endorsement.

All candidates for an elementary five year professional certificate must have completed in their undergraduate or post-graduate preparation six credits in reading instruction, three of which must be reading in the content areas, in order to qualify for a five year professional certificate. Consult a counselor in Room 469 Education Building for specific 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, in order to qualify for this certification.

## Bilingual/Bicultural Endorsement

The Bilingual/Bicultural Endorsement certifies a teacher who is qualified to teach classes of bilingual children. Students holding existing certificates may add a bilingual endorsement by completing an eighteen credit planned program. Information and referral to the appropriate adviser on requirements for this endorsement may be obtained in Room 469, Education Building.

## Early Childhood Endorsement

The Early Childhood Endorsement certifies a teacher who is qualified to teach children ages birth to eight years. Students holding existing certificates may add an early childhood endorsement by completing an twenty-credit planned program. The endorsement is limited to those individuals holding an elementary certification. Information on requirements for this endorsement and referral to the appropriate adviser may be obtained in Room 469 or 489 Education Building.

## Middle Level Endorsement

The Middle Level Endorsement is a nineteen 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 and referral to an adviser may be obtained in Room 469 Education Building.

## 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 an eighteen-credit planned program. Information and referral to the appropriate adviser may be obtained in Room 489, Education Building.

## Student Teaching

**Prerequisite** requirements for student teaching eligibility are:

1. Admission to the College of Education.
2. Completion of course work in teaching major and minor(s) with grades of 'C' or better.
3. Passing of appropriate tests on the Michigan Test for Teacher Certification (MTTC).

4. Satisfactory completion of required courses in the professional education sequence with grades of 'C' or better.

5. Current negative tuberculosis test result.

NOTE: In addition to the above prerequisites, students completing certification requirements directly through the Michigan Department of Education of another university must complete a minimum of six semester credits in the Wayne State University College of Education prior to placement in a student teaching assignment.

### Application Procedures:

1. Submit completed application forms in person to the Student Teaching Office, 223 Education Building, during appropriate application period (approximately six months prior to the expected date of assignment).

### Application Periods:

Fall semester . . . November 1 to January 31 prior to student teaching  
Winter semester. . . . . April 1 to July 31 prior to student teaching

2. Submit a completed eligibility form, signed by a faculty adviser, to the Student Teaching Office.

## Advising Offices

Information, written descriptions of programs, and referrals to advisers may be obtained from the following advising offices: Art Education, Room 163, Art Building; Physical Education, Room 260, Matthaehi Building; Recreation and Park Services, Room 259, Matthaehi Building; Speech Impaired, 563 Manoogian; Music Education, 208 Schaver Music Building; all other programs, Room 469, Education Building. Pre-Education students are advised by University Advising, 2 East, Joy Student Services Building.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

## TEACHER EDUCATION DIVISION (TED)

### 2250 Introduction to Education. Cr. 3

Exploration of teaching and schools in today's and tomorrow's society. Open to all students interested in discipline of professional education as a tool to understanding our multicultural society. (T)

### 3550 (WI) Teaching: Research, Theory and Practice. Cr. 5

Prereq: admission to teacher certification program; coreq: ELE 3300. Offered for S and U grades only. Structure, function and purposes of schools in society and how they are affected by various philosophies of education, organization and management of classrooms, development of instructional goals, use of tests and other measures, and utilization of professional resources in the community. Coursework includes laboratory experiences in schools. (T)

### 3560 Pre-Student Teaching Field Experiences. Cr. 3 (Max. 6)

Prereq: admission to teacher certification program; coreq: ELE 3320. Offered for S and U grades only. Second phase of pre-student teaching field experience. Work in classrooms is assigned and evaluated by both an experienced public school teacher and a university faculty member. (T)

### 4300 (H E 3300) Health of the School Child. Cr. 3

Prereq: HEA 2310. Health status and problems of youth at various stages of growth and development; teacher's role in health protection and promotion. (F,W)



**5150 Analysis of Elementary School Teaching. Cr. 3-6**

Prereq: admission to M.A.T program. Organization and management of classrooms. Lesson planning, teaching strategies and testing procedures. Work in classroom assigned by both an experienced public school teacher and a University faculty member. (F,W)

**5160 (WI) Analysis of Middle and Secondary School Teaching. Cr. 3**

Prereq: admission to teacher certification program; coreq: TED 5650. Overview of structure, function and purposes of middle and secondary school education. Development and analysis of instructional objectives. Organization and management of classrooms. Teaching strategies and assessment of learning. Exploration and utilization of resources in the community. (F)

**5250 Teaching the Emerging Adolescent in Middle Level Education. Cr. 3**

Open only to middle school endorsement candidates. Opportunities to examine best practices, curriculum and strategies of middle level education. (I)

**5650 Pre-Student Teaching Field Experience for Secondary Majors. Cr. 3-5**

Prereq: admission to secondary certification program; coreq: TED 5160. Offered for S and U grades only. Field experience in secondary school settings prior to full-time student teaching. (F,W)

**5740 (D E 5740) Problems in Driver Education and Traffic Safety. Cr. 3**

Prereq: TED 5994. Issues and concerns in professional preparation to meet traffic safety needs of schools and communities. (F,S)

**5750 (D E 5750) Seminar in Driver Education and Traffic Safety. Cr. 3**

Prereq: TED 5740. Behavioral, administrative, and professional aspects of the teaching role in driver and traffic safety education. (W,S)

**5780 Directed Teaching and Conference. Cr. 1-10**

Offered for S and U grades only. 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 Student Teaching and Conference for Special Groups. Cr. 1-10**

Prereq: admission to student teaching. Offered for S and U grades only. 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. (F,W)

**5810 (DNC 5810) Creative Dance for Children. (DNE 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)

**5820 (DNC 5820) Creative Movement for the Pre-School Child I. Cr. 3**

Creative dance activities; manipulative, musical, imaginative and kinesthetic approaches to movement. (F,W)

**5830 (DNC 5830) Field Work in Creative Dance. Cr. 2-8**

Prereq: DNC 5830 or consent of instructor. Supervised professional study in field settings. (T)

**5994 (D E 5730) Teaching Driver Education and Traffic Safety. Cr. 3**

Prereq: valid Michigan driver's license. Teacher preparation to organize and teach driver education and traffic safety. (F,W)

**6020 Computer Applications in Teaching I. Cr. 3**

Variety of experiences with computer applications for K-12 instruction using Macintosh and Dos/Windows platforms. Development of skills using telecommunication, videodiscs, CD-ROMs, and other multimedia resources. (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)

**6130 Developing Curriculum in the Affective Domain. Cr. 3**

Philosophy and theory underlying the affective domain; the impetus and means of evaluative and analytical thinking used as a vehicle that provides teachers with instructional strategies in building K-12 curriculum. (Y)

**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)

**ART EDUCATION (AED)**

**5000 Art Process, Perception and Expression. Cr. 3**

Study and analysis of the two-dimensional art process related to individual development and response. Examination of observation and image formation, including the collection of visual information for two-dimensional production. Investigation of geometric perspective and visual illusion. Children's developmental use of symbols and related research in creativity, visual thinking and brain organization and function. Selected examples of drawings and paintings from various cultures examined in relation to learning and teaching. Material fee as indicated in the Schedule of Classes. (Y)

**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. (Y)

**5100 Art for Special Groups. Cr. 1-3 (Max. 9)**

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 School Art Room. Cr. 3**

Instruction and laboratory experiences in the production of computer graphics, primarily using the Apple IIE and Apple GS. Explorations in HIRES, LORES, drawing, color-filling, painting, lettering, and animation. Students use basic programming, software systems, digitizers, printers, and video generation equipment. (Y)

**5160 Theory and Practice in Art Education. Cr. 3 (Max. 9)**

Prereq: AED 5650; 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. (W)

**5170 Fibers: Methods and Materials. Cr. 3 (Max. 9)**

Comprehensive exploration of fiber-fabric art forms: applique, trapunto, stitchery, dyeing, soft sculpture, weaving, wrapping, hooking, and others. Student learns basic techniques and selects several areas for in-depth study. Safety, special tools, materials, techniques

and resources for teaching. For both beginning and advanced students; individual creative self-direction is essential for advanced study. Material fee as indicated in the Schedule of Classes. (F)

**5190 Light, Sound, Space and Motion. (I T 5190) Cr. 3 (Max. 9)**  
Laboratory experiences in planning and producing animated films, instructional video, and slide/sound presentations. Students prepare storyboards, write scripts, prepare titles and credits, mark on film and slides, produce Super-8 animation, use 35mm camera on a copy stand, edit, splice film, record and synchronize sound tracks, and produce single-camera instructional video. Methods and materials for teaching film and video in schools, producing video aids, or producing film/slides/video for artistic expression. Material fee as indicated in the Schedule of Classes. (W)

**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. (Y)

**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, collagraphy, woodcut, linocut, and photo screen processes. Material fee as indicated in the Schedule of Classes. (W)

**5360 Wood, Metal and Plastic: Methods and Materials. Cr. 2-3 (Max. 9)**  
Planning and production in wood, metal and plastic using power and hand tools. Processes suitable for production of adaptive devices or therapeutic activity. Materials and methods appropriate for schools. Work in a shop setting using power saws, torches, kiln, wood lathe, and a variety of hand tools. Material fee as indicated in the Schedule of Classes. (W,S)

**5650 Art Teaching Laboratory. Cr. 2**  
Prereq: AED 5000. Laboratory experience in teaching art to elementary, middle, and high school students. (F)

**6120 Art for Special Groups: Animation. Cr. 1-3 (Max. 9)**  
Prereq: AED 5190. Planning and production of video and 16mm animation films. Various techniques: cel, pixillation, cutout, claymation, etch, drawing, video, kinestasis, light box, stop motion, computer. History and trends. Material fee as indicated in the Schedule of Classes.

**6150 Instructional Applications of Computer Graphics. (I T 6150) Cr. 3**  
Instruction and laboratory experiences in the design, production, and application of computer graphics in the classroom and other educational settings. Programming experiences in animation, charts and graphs, and simple drawing techniques. Material fee as indicated in the Schedule of Classes. (T)

**6220 Drawing and Watercolor - Field Studies. Cr. 3 (Max. 9)**  
For beginning and advanced students' growth and development in watercolor techniques and the painting process. Field trip/work sessions at rural and urban sites to develop visual awareness and ability to select visual information for image formation. Slide lectures, demonstrations, critiques, discussions, individual assistance, analysis of the two-dimensional art process and study of unique approaches to teaching watercolor. Material fee as indicated in the Schedule of Classes. (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. (Y)

**6250 Aspects of Ceramics. Cr. 3-9 (Max. 9)**  
Various aspects of ceramics chosen to develop the students' understanding of the potential for ceramic education. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (I)

**6300 Explorations in Art Therapy. Cr. 3**  
Provides non-majors with introduction to art therapy, its history and development, and major approaches. Basic theory and practice; emphasis on drawing, lesson plans, history of art education in the United States, state and national standards and research agenda of National Art Education Association. Material fee as indicated in the Schedule of Classes. (Y)

**6320 Introduction to Art Therapy. Cr. 3**  
Slides, lectures, studio experiences and field observations on definition, theory, goals, research and ethics of art therapy; the role and duties of the art therapist in various settings; crosscultural mores. (Y)

**6340 History and Literature 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**  
Aspects of the use of art therapy chosen to develop students' breadth or depth in art therapy practice with various groups and settings. (Y)

## BILINGUAL/BICULTURAL EDUCATION (BBE)

**5000 Multicultural Education in Urban America. Cr. 2**  
Cultural, social, political, and economic realities of our complex, pluralistic society in relation to our educational 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. (T)

**5020 Effective Involvement of Parents in School and Community. Cr. 3**  
Concepts of parenting and parent intervention. Determination of methods to maximize parent participation in the educational process of bilingual/bicultural students. (W)

**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. (F)

**5530 The Socio-Psychological Needs of Ethnocultural Communities. Cr. 3**  
Assessments of issues of concern to ethnocultural communities as a background for social services delivery and intervention. (F)

**5550 Urban Education. Cr. 3**  
Language program implementation within the urban culture of the school, community, and state. (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. (F)

**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

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. (T)

### 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. (W)

### 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. (W)

## BUSINESS and DISTRIBUTIVE EDUCATION (BDE)

### 5300 Business/Distributive Education Word Processing I: Typewriting. Cr. 3

Principles and procedures for learning and teaching a basic and advanced process for using the typewriter to compose and copy business and personal materials. (F,S)

## CAREER and TECHNICAL EDUCATION (CTE)

### 5410 Career and Technical Education. 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. (W)

### 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)

### 6993 Special Problems in Career and Technical Education. Cr. 1-4 (Max. 6, M.Ed.; max. 8, Ed. Spec.; max. 12, Ed.D. and Ph.D.)

Special workshops and short term seminars in career and technical education subjects. (F,S)

### 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)

## EDUCATION (ED )

### 3990 Directed Study. Cr. 1-6 (Max. 6)

Prereq: written consent of adviser. Offered for S and U grades only. (T)

### 5998 Field Studies. Cr. 1-8 (Max. 8)

Prereq: consent of adviser or instructor. Supervised professional study in field settings. (T)

## ELEMENTARY EDUCATION (ELE)

### 2300 Literature for Children. Cr. 3

Literature appropriate for use with children from preprimary through middle school age. (T)

### 3300 Teaching Language Arts: Preprimary-9. Cr. 3

Prereq: admission to teacher certification program; coreq: TED 3550. Developing communication skills in the elementary and middle school classrooms: thinking, listening, speaking, and writing. Implications of multiculturalism and bilingualism. Teaching children with special needs. Reporting to and collaborating with parents. (F,W)

### 3320 Teaching Reading: Preprimary-9. Cr. 3

Prereq: RDG 4430; coreq: TED 3560. Curriculum goals and content, teaching strategies and instructional materials. Evaluating reading skills and reporting to coworkers and parents. Organization and management of classroom reading programs. Collaborating with parents. Using professional resources in the community. Teaching children with special needs. (F,W)

### 3400 Teaching Mathematics: Preprimary-9. Cr. 3

Prereq: admission to teacher certification program. Objectives, curriculum content, teaching strategies, evaluation of instruction materials. Teaching children with special needs. Reporting to and collaborating with coworkers and parents. (F,W)

### 3500 Teaching Science: Preprimary-9. Cr. 3

Prereq: TED 3550; admission to teacher certification program. Goals and significant areas of study in the elementary school science curriculum. Introduction to teaching resources including science activities, field trips, print and non-print materials. Material fee as indicated in the Schedule of Classes. (F,W)

### 3600 Teaching Social Studies: Preprimary-9. Cr. 3

Prereq: TED 3550; admission to teacher certification program. Objectives, curriculum content and organization, teaching strategies, instructional materials. Evaluation of learning. Utilization of community resources. (F,W)

### 6010 Family Centered Collaboration in Early Childhood Intervention. (O T 6150) (PSY 6010) (S W 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 Seminar in Early Childhood. Cr. 3

Educational programs for young children in child care centers, kindergartens, and the primary grades. Improved human relationships, choices for children, play as a way of learning. (Y)

### 6030 Assessment of Young Children in Educational Settings. Cr. 3

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

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)

### 6060 Community Contacts: Working with Families in Urban Settings. Cr. 3

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

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**

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. 1**

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 Nursery School Curriculum. Cr. 3**

Planning, implementing, and evaluating all aspects of preschool curriculum: activities, routines, and working with staff and parents. (I)

**6290 Language Arts Instruction: Preprimary-9. Cr. 3**

Prereq: admission to MAT degree program. Developing thinking, listening, speaking and writing skills in elementary and middle schools. Students plan, implement and evaluate learning experience with children under professional guidance. (F,W)

**6300 Language Arts Curriculum: Preprimary-9. Cr. 3**

Prereq: admission to teacher certification program. Content of language arts programs. Objectives, procedures, materials, and organizational patterns. (T)

**6310 Reading Instruction: Preprimary-9. Cr. 3**

Developing reading skills in elementary and middle schools. Students plan, implement and evaluate learning experience with children under professional guidance. (F,W)

**6320 Reading Curriculum: Preprimary-9. Cr. 3**

The reading process; procedure, materials and organizational patterns used when teaching reading. (T)

**6340 Teaching Reading in Early Childhood Education. Cr. 3**

Rationale for teaching reading and various reading skills to young children. Materials and methods for initial reading instruction. (Y)

**6390 Mathematics Instruction: Preprimary-9. Cr. 3**

Prereq: admission 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)

**6400 Mathematics Curriculum: Preprimary-9. Cr. 3**

Prereq: admission to teacher certification program. Developing competence in school mathematics programs: objectives, procedures, materials, organizational patterns, evaluation. (T)

**6500 Science Curriculum: Preprimary-9. Cr. 3**

Prereq: admission to teacher certification 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. (T)

**6600 Social Studies Curriculum: Preprimary-9. Cr. 3**

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)

## ENGLISH EDUCATION (EED)

**5200 Methods of Teaching English: Grades 7-12. Cr. 3**

Introduction to the purposes and methods of teaching English composition and literature in grades seven through twelve. (Y)

**6120 English Composition in Secondary Schools. Cr. 3**

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. (I)

**6210 Linguistics and Learning. Cr. 3**

Intensive review of current linguistic theory; introduction to psycholinguistics application for teaching grammar, usage, and composition; development of teaching materials. (S)

**6310 Young Adult Literature. (LIS 6530) Cr. 3**

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. (W)

**6330 Teaching Literature in Secondary Schools. Cr. 3**

Structure of poetry, fiction and drama in relation to aesthetic, social, and psychological needs of secondary school pupils. Relationship of teaching methods to curriculum patterns. (T)

## LANGUAGE EDUCATION (LED)

**5810 (FRE 5810) Teaching Foreign Languages: Receptive Skills. (CLA 5810) (CLA 7810) (FRE 7810) (GER 5810) (GER 7810) Cr. 3**

Prereq: LED 5850 or 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)

**5820 (FRE 5820) Teaching Foreign Languages: Productive Skills. (CLA 5820) (CLA 7820) (FRE 7820) (GER 5820) (GER 7820) Cr. 3**

Prereq: LED 5850 or 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 (GER 5830) Technology in the Foreign Language Classroom. (CLA 5830) (CLA 7830) (FRE 5830) (FRE 7830) (GER 7830) Cr. 3**

Prereq: LED 5830 or 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 (GER 5850) Second Language Instruction: Theory and Methods. (CLA 5850) (CLA 7850) (FRE 5850) (FRE 7850) (GER 7850) 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 testing. (B)

**5860 (GER 5860) Foreign Language Testing. (CLA 5860) (CLA 7860) (FRE 5860) (FRE 7860) (GER 7860) Cr. 3**

Prereq: 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)

**6520 Teaching English as a Second Language/Foreign Language: Methods I. Cr. 3**

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**

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)

**6580 Culture as the Basis for Language Teaching. Cr. 2-4**

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)

## MATHEMATICS EDUCATION (MAE)

**5050 (MAT 1110) Mathematics for Elementary School Teachers I. Cr. 3**

Undergrad. prereq: one of following within previous two semesters: satisfactory score on placement exam; or at least C-minus in MAT 1050 or grade of S in MAT 0995; post-baccalaureate students: satisfy the undergraduate placement or completion of college math course at level of pre-Calculus or above. Undergrads. and post-baccalaureate students must register for MAT 1110, not MAE 5050; grad. students must register for MAE 5050, not MAT 1110, with consent of instructor. No degree credit in Colleges of Science or Liberal Arts. Offered for graduate credit only. Sets and Venn diagrams; mathematical systems, including group, ring, and field properties; set of real numbers and its common subsets: their properties, algorithms, and applications; number theory, including fundamental theorem of arithmetic; ratio, proportion, and percents; introduction to the complex number system. (F,W)

**5060 (MAT 1120) Mathematics for Elementary School Teachers II. Cr. 3**

Prereq: MAT 1110. Undergrad. and post-baccalaureate students must register for MAT 1120, not MAE 5060; grad. students must register for MAE 5060, not MAT 1120. No degree credit in Colleges of Science or Liberal Arts. Open only to students in teacher preparation curricula. Geometry, with emphasis on inductive investigations and conjecturing; measurements of two- and three-dimensional figures; introduction to probability and descriptive statistics; relations and functions; elements of algebra; analytic geometry of the line. (F,W)

**5100 (MAT 5180) Mathematics for Middle/Junior High School Teachers I. Cr. 3**

Prereq: MAE 5050 and 5060 or consent of instructor. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 5100 only; undergraduate credit for MAT 5180 only. Development of Euclidean geometry as a mathematical system; related historical topics; introduction to other geometries; selected topics such as transformations and tessellations. (F)

**5110 (MAT 5190) Mathematics for Middle/Junior High School Teachers II. Cr. 3**

No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 5110 only; undergraduate credit for MAT 5190 only. Elementary functions and their applications; analytical geometry; intuitive concepts of differential and integral calculus; computer applications in middle and junior high school mathematics. (W)

**5120 (MAT 5120) Number Theory and Abstract Algebra for Middle School Teachers. Cr. 3**

No credit towards major in mathematics or secondary mathematics. No graduate credit for MAT 5120. Prereq: MAT 1120 or MAE 5060,

and MAT 1800. Topics from elementary theory of numbers and abstract algebra underpinning middle school mathematics curriculum. (F,W)

**5130 (MAT 5130) Problem Solving for Middle School Teachers. Cr. 3**

Prereq: satisfactory score on placement exam or MAT 1800, within previous two semesters. No credit towards a mathematics major or secondary mathematics education major; no graduate credit for MAT 5130. 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. (S)

**5150 Methods and Materials of Instruction — Secondary School Mathematics. Cr. 3**

Prereq: admission to teacher 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**

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)

## READING EDUCATION (RDG)

**4430 Teaching Reading in Subject Matter Areas. Cr. 3**

Consideration of reading in relation to subject matter instruction. Strategies for teaching comprehension, study and application skills in the content areas. Informal diagnostic procedures. Techniques for meeting individual needs. (T)

**6400 Practicum in Developmental Reading. Cr. 1-4**

Identifying and solving field problems in developmental reading, management of reading instruction, the importance of reading in the content areas. (T)

**6410 Practicum in Reading Diagnosis and Remediation. Cr. 1-4**

Prereq: consent of instructor. Identifying and solving field problems in testing reading skills, placement of students in appropriate reading instruction, materials, strategies for remediation of skill deficiencies. (T)

## READING LANGUAGE AND LITERATURE EDUCATION (RLL)

**6120 Reading in the Content Areas. Cr. 3**

Practical approach to the problems of reading disability as they affect the subject matter teacher in social studies, science, mathematics and other areas. (T)

## SCIENCE EDUCATION (SCE)

**5010 Biological Sciences for Elementary and Middle School Teachers. Cr. 3-4**

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. (F,W)

**5020 Physical Sciences for Elementary and Middle School Teachers. Cr. 3-4**

Significant principles, generalizations and understandings in the physical and earth 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. (F,W)

**5040 Field Course Exploring the Natural Environment. Cr. 1-6**

Field and laboratory study of local plants, animals, and the physical environment, including climate, geology and astronomy. Interrelationships emphasized; techniques for using the out-of-doors as a learning laboratory. (W)

**5060 Methods and Materials of Instruction in Secondary School Science I. Cr. 3**

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: 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)

**6030 Advanced Studies in Teaching Science in the Junior High and Middle School. Cr. 3**

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. (W)

**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. (S)

**6080 Teaching Environmental Studies. Cr. 3-6**

For teachers of all academic disciplines and from all school levels, as well as persons of other occupational interests. Environmental problems, possible solutions, and their implications for classroom teaching and curriculum. Material fee as indicated in the Schedule of Classes. (S)

## SOCIAL STUDIES EDUCATION (SSE)

**6710 Methods and Materials of Instruction in Secondary Social Studies. Cr. 3**

Prereq: admission to teacher certification program. Foundations of social studies instruction and curriculum; methods of teaching in middle, junior, and senior high school. (F,W)

**6730 New Perspectives in Social Studies Education. Cr. 3**

Specialized aspects of social education: gaming and simulation, global education, law-related education, community projects, interdisciplinary approaches. Topics to be announced in Schedule of Classes. (F,W)

## SPECIAL EDUCATION (SED)

**5010 The Exceptional Child in the Regular Classroom. Cr. 2**

Open only to undergraduate nonmajors. Overview of characteristics of and interventions with exceptional children, youth and young adults in regular classrooms. (Y)

**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 Speech Improvement in the Classroom. Cr. 2**

Identification of the speech characteristics and needs of teachers and pupils; deviations from normal speech; integration of speech improvement in classroom activities. (S)

**5060 Developing Observation and Assessment Skills: Laboratory/Seminar. Cr. 3**

Prereq: SED 5030. Investigation and application of appropriate evaluative techniques for use with learners with mental impairments in an educational setting. (Y)

**5070 (SLP 7010) Acoustics of Speech. (LIN 7010) Cr. 3**

Prereq: SLP 5080, SLP 5090. Acoustic consequences of phonetically-relevant articulatory movements. (F)

**5090 Special Education and Transition Services for Students with Disabilities. Cr. 3**

Prereq: SED 4060; admission to teacher certification program. Characteristics of special education and transition services for students with disabilities in secondary programs leading to the development of skills necessary for functioning as an adult within communities. (Y)

**5110 Mental Impairments and the Cognitive Process. Cr. 3**

Prereq: SED 5030; admission to teacher certification program. Characteristics, classifications, etiologies, evaluation and learning strategies for the improvement of the cognitive processes in learners with a mental impairment. (F,W)

**5120 (SLP 5120) Speech Science. Cr. 3**

Prereq: SLP 5300, SLP 5080, SLP 5090. Speech production, acoustics of sound, perception of the speech signal. (Y)

**5130 Curriculum Development: Mental Impairments. Cr. 3**

Prereq: SED 5030 and 5110; admission to certification program. Specialized instructional approaches, evaluation, techniques, curriculum and instructional aids for educating children, youth, and young adults with mental impairments within the school and community. (Y)

**5140 Behavior Management: Mental Impairments. Cr. 3**

Prereq: SED 5030 and 5110 recommended. Specialized instructional and training approaches for management of behavior problems of mildly to profoundly mentally impaired and multiply impaired learners. (Y)

**5260 Effective Instructional Strategies for Exceptional Learners with Low-Incidence Disabilities. Cr. 4**

Specific instructional strategies effective in education of children, adolescents and young adults with hearing, visual, and/or physical impairment. Generalization to other exceptional learners and non-impaired population. (F)

**5300 (SLP 5300) Introduction to Speech-Language Pathology. Cr. 3-4**

Speech-language pathology in clinical and educational settings; classification of communication disorders and related management strategies. (F,S)

**5310 (SLP 5310) Clinical Methods in Speech-Language Pathology. Cr. 3**

Prereq: SLP 5080, SLP 5090, SLP 5300, SLP 5320. Procedures and materials for clinical diagnosis of articulatory, language, rhythm, and voice deficits of organic and non-organic causation. (W)

**5320 (SLP 5080) Phonetics. (LIN 5080) Cr. 3**

Multisensory study of sounds of the English language, emphasizing acoustic, physiologic, kinesiologic approaches. (F)

**5330 (SLP 5090) Anatomy and Physiology of the Speech Mechanism. Cr. 3**

General science of normal speech; anatomy, physiology and mechanics of respiration, phonation, resonance, articulation. (W)

**5340 (SLP 5360) Clinical Practice in Speech-Language Pathology. Cr. 3 (Max. 6)**

Prereq: SLP 6460, SLP 6480, and SLP 5310, each with grade of B or better. Supervised experience in application of methods of diagnosis and treatment of clinical cases. Material fee as indicated in the Schedule of Classes. (T)

**5360 (SLP 5320) Normal 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. (F)

**5600 Support for Students with Special Needs. Cr. 3**

Models, history, current issues and strategies in providing collaborative supports, accommodations, and differentiated curriculum to assist students with disabilities and other special needs to learn effectively in general education classes. (I)

**6000 Problems in Special Education: Critical Epochs in Exceptionality. Cr. 1-6 (Max. 8)**

Prereq: successful completion of at least five credits in anatomy and physiology, including laboratory. For teachers, supervisors, and administrators. Seminars and workshops dealing with problems in educating handicapped children in pre-school, elementary, and secondary programs. Topics to be announced in Schedule of Classes. (I)

**6010 Seminar in Special Education Teaching and Disabilities. Cr. 2-3**

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)

**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)

**6360 (SLP 6360) Advanced Clinical Practice in Speech-Language Pathology. Cr. 3 (Max. 6)**

Prereq: SLP 5360 or equiv. with grade of B or better. Open only to graduate students. Supervised experience in application of diagnosis and treatment of clinical cases. Material fee as indicated in the Schedule of Classes. (T)

**6460 (SLP 6460) Language and Phonological Disorders. Cr. 4**

Prereq: SLP 5080, SLP 5090, SLP 5300, SLP 5320. Introduction to the clinical management of articulation and language disorders. (F)

**6480 (SLP 6480) Organic and Fluency Disorders. Cr. 4**

Prereq: SLP 5080, SLP 5090, SLP 5300, SLP 5320. Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (F)

**6640 (SLP 6640) Language Pathology: Etiology and Diagnosis Cr. 3**

Prereq: SED 5300 and 5320; graduate standing or consent of instructor. Descriptions, etiology, methods of diagnosis of language disorders in children, including remediation. (F)

## SPEECH EDUCATION (S E)

**6060 (SPC 6060) Teaching Communication at the Secondary Level. Cr. 3**

Prereq: fifteen credits in speech. Philosophy, pedagogical issues, and methods for teaching speech in secondary schools. (I)

## Administrative & Organizational Studies Division

## INSTRUCTIONAL TECHNOLOGY (I T)

**5110 Technology Applications in Education and Training. (LIS 6360) Cr. 3**

Technological applications to education, training, and instruction within educational, industrial, and human services settings. Students examine, develop, and/or evaluate unique instructional programs. For educators and non-educators interested in exploring technological applications in education. (W,S)

**5120 Producing Technology-Based Instructional Materials. (LIS 6370) Cr. 2-3**

Design and development of instructional media and materials for use in educational, industrial, and/or human services programs; development of computer-generated instructional materials. (S)

**5190 (AED 5190) Light, Sound, Space, and Motion. Cr. 3**

Required for certification in Art Education. Laboratory experiences in planning and producing animated films, instructional video, and slide/sound presentations. Students prepare storyboards, write scripts, prepare titles and credits, mark on film and slides, produce Super-8 animation, use 35mm camera with copy stand, edit, splice film, record and synchronize sound tracks, and produce single camera instructional video. Methods and materials for teaching film and video in schools, producing visual aids, or producing film/slides/video for artistic expression. Material fee as indicated in the Schedule of Classes. (F)

**6060 Scriptwriting for Instructional Video. Cr. 3**

Techniques of writing scripts for instructional video productions for use in educational training or human services programs, from program concept to production-ready script. (F)

**6110 Foundations of Instructional Systems Design. (LIS 6350) Cr. 4**

Alternative systems models of instructional design; basic design principles, methods and techniques of pre-design analysis; instructional strategy selection and sequencing. (T)

**6150 (AED 6150) Instructional Applications of Computer Graphics. Cr. 3**

Instruction and laboratory experiences in the design, production, and application of computer graphics in the classroom and other educational settings. Programming experiences in animation, charts and graphs, and simple drawing techniques. Material fee as indicated in the Schedule of Classes. (T)

## Theoretical & Behavioral Foundations Division

### COUNSELOR EDUCATION (CED)

#### **5030 Role of the Counselor in Substance Abuse. Cr. 2**

Prereq: graduate standing. 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**

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**

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. (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)

#### **6730 Counseling of Special Populations. Cr. 3-9**

A study of the uniqueness of several special populations such as adults, women and minorities to provide an awareness of their special influences on the counseling process. (T)

## EDUCATIONAL HISTORY and PHILOSOPHY (EHP)

#### **3600 Introduction to the Philosophy of Education. Cr. 3**

Prereq: admission to teacher certification program. Leading philosophies of education as they bear upon education as a profession and as a discipline. (T)

### EDUCATIONAL PSYCHOLOGY (EDP)

#### **3310 Educational Psychology. Cr. 3**

Introductory course in educational psychology. Topics include, but are not limited to: child and adolescent development, cognitive and behavioral learning theories, information processing, motivation and evaluation. Includes study of exceptional children and those with cultural differences. (Y)

#### **5450 Child Psychology. Cr. 2-3**

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**

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)

#### **6220 Psychology of Exceptional Children. Cr. 3-4**

Psychological aspects of cognitive and physical deficits in children; laboratory experience in differential diagnosis. Material fee as indicated in the Schedule of Classes. (F)



# COLLEGE OF ENGINEERING

DEAN: Chin Y. Kuo

# Foreword

## College Mission Statement

The College of Engineering has three important missions: teaching, research and outreach -- serving the region, state and nation as part of an urban comprehensive research university. Students are prepared for professional practice, graduate study, and lifelong learning, and to lead society. Faculty members develop the scientific and technological base for the engineering profession, and disseminate advanced technical knowledge to engineers, other professionals, and the public. A balance among the three missions is sought through a partnership built among students, faculty, staff, alumni, government, and private industry. This can be achieved by maintaining an academic environment that is both intellectually stimulating and supportive of all of its constituents regardless of race, gender, or ethnic background.

## College Organization

The academic programs of the College of Engineering are organized in two Divisions: Engineering and Engineering Technology. The Division of Engineering includes five academic Departments: Chemical Engineering and Materials Science, Civil and Environmental Engineering, Electrical and Computer Engineering, Industrial and Manufacturing Engineering, and Mechanical Engineering. Programs leading to the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in engineering are offered by the five departments in the Division of engineering. Five programs leading to a Bachelor of Science in Engineering Technology degree are offered in the Division of Engineering Technology. A Master of Science in Engineering Technology degree is also offered in this Division.

## The Profession of Engineering

Engineering requires men and women of imagination who can plan and create. Their creations include the laser, the transistor, communication networks, automotive safety devices, systems of spacecraft telemetry and aids for the handicapped. Engineers design and simplify, refine and economize. They are pragmatists serving the needs of society through continual reconstruction and improvement of human surroundings. Engineers are responsible for the design and construction of energy generating and distribution systems, air and water pollution control projects, as well as transportation systems and the vehicles required by our mobile society. From the engineers must come anti-skid devices for hard-braked automobiles, synthetic materials, biochemicals, fire-resistant homes and 'eyes' for the blind. The engineer's resources include an intimate knowledge of scientific laws and their applications to engineering problems. An ability to use mathematics and computers and, above all, an imaginative and an inquiring mind are primary tools.

Engineers do not devote their attention solely to innovations in technology. They look beyond their inventions and conceptions to consider the societal effect of their work, including its economic, aesthetic, safety, and environmental aspects.

Engineers can start their careers in many functional roles -- designer, test engineer, manufacturing engineer, sales engineer, researcher, or a combination of these and other roles. Engineering has become a profession which often leads to executive management positions. As more and more of the decisions of management in government and business are based on technical considerations, engineers with the necessary background are called upon to make these decisions.

At present, the minimum education required for general competence in the practice of engineering is a four year collegiate program leading to a bachelor's degree in one of the fields of engineering. However, many engineering positions require an additional year of education at the graduate level leading to the master's degree. Whenever possible, students are urged to continue their education to

this point. For engineering research or teaching, and in some areas of practice, the doctoral degree is recommended. For further information about graduate programs in engineering, consult the Wayne State University Graduate Bulletin.

For all engineers, continuing professional competence in the midst of our constantly changing technology requires educational renewal and a life-long dedication to continuing education. The College offers seminars, institutes and off-campus programs designed to meet this need. In addition, regular College courses are available on an elective post-degree basis.

## The Engineering Technologist

The evolution of our civilization has always been closely associated with technology and science. Now, and in the future, this association will become even more important. New knowledge has inspired advances in technology, resulting in new career opportunities: far-reaching developments have been made in communications and instrumentation technology; highly sophisticated machine tools and manufacturing processes have come into being; new energy sources and new man-made materials have been developed; and computer applications have revolutionized the techniques of industrial manufacturing and management.

This on-going expansion of scientific and engineering knowledge has changed the make-up of the engineering team with the inclusion of the engineering technologist. The engineering technologist, in cooperation with the engineer, organizes people, materials and equipment to design, construct, operate, maintain and manage technical engineering projects. He/she should have a commitment to that technological progress which will create a better life for everyone. Because of the increasing challenges in this information age, it is no longer possible for one person to master all the knowledge and skills necessary to execute technical projects. Quite often a team effort is required, with each member of the team highly trained in a specific area. Today's engineering teams involve engineers and engineering technologists and may also include technicians, scientists, craftsmen, and other specialists.

Engineering technology supports engineering activities through a combination of scientific and professional knowledge with technological skills, and concentrates on the industrial applications of engineering. Because of the extensive variety of functional opportunities, and the wide variety of the industrial enterprises available to the engineering technologist, there has been a great deal of specialization. An engineering technologist can specialize in three related ways: discipline, function and industry. For example, the discipline could be mechanical, the function could be design and the industry could be automotive; or the discipline could be electrical, the function field installation and the industry electric power generation.

## College Facilities

With the completion of the Manufacturing Engineering Building, College facilities now include four separate buildings with over 214,000 square feet of classroom, office, and laboratory space. Among those 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 Wayne State, at other colleges and universities, and at industrial sites. The computer facilities include dedicated computer graphics, design, and personal computing hardware and software.

The Division of Engineering Technology is housed in a separate building of approximately 24,000 square feet, located at 4855 Fourth Street.

The undergraduate laboratories provide facilities in such areas as computer graphics, fluid mechanics, thermal sciences, system dynamics, statistical computation and materials science. Some spe-

cific laboratories associated with departmental engineering specializations include: chemical measurements; chemical unit operations; materials testing and processing; electron microscopy; optical metallography; soil mechanics; environmental and hydraulic engineering; roadway and building materials; structural modeling; analog and digital communications systems; computer systems; control systems; analog circuits; digital systems; microcomputers and microprocessor applications; power systems; electronics; optics; computer vision; artificial neural networks; integrated circuits fabrication; automotive engineering; human factors engineering; computer aided manufacturing; robotics; sand casting and testing; and stress analysis. These laboratories are used for instructional and research purposes along with such research facilities as a molecular beam laboratory; a clean room facility for device materials research; a biomechanics accelerator and impact laboratory; an acoustics and noise control laboratory; and a structural behavior laboratory. All of these are available for experimentation and research in connection with the undergraduate curricula on a college-wide basis.

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 are encouraged to use these facilities under the supervision of trained professionals.

Many undergraduate and graduate students pursue their studies in the College while working in local industry, either full-time or part-time, where unique research facilities unavailable on campus may be found. In such situations, students are encouraged to pursue their college-credit research at the employment site, where they work under the joint supervision of their faculty adviser and a company representative. Such research can take the form of undergraduate directed study courses, Master of Science theses, or Ph.D. dissertations.

## Accreditation

In addition to accreditation of Wayne State University by the North Central Association of Colleges and Secondary Schools, all of the undergraduate curricula of the Division of Engineering leading to a Bachelor of Science degree are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). The Electrical/Electronic Engineering Technology program, and the Mechanical Engineering Technology program, offered by the Division of Engineering Technology, are accredited by the Technology Accreditation Commission (TAC) of ABET. 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.

## Location of the College

The College is located in the heart of Detroit, Michigan, renowned as a center of automotive engineering and production. This industrial center provides a wealth of examples of modern engineering practice and opportunities to explore the latest in vehicle design and production, automation design, steel production, transportation planning, hydraulic and pneumatic controls, electric power generation, and computer design and production. The many industries of southeastern Michigan provide engineering students with rich and varied work experiences through full or part-time employment or through the Cooperative Education Program described on page 130.

The College is affiliated with thirteen other schools and colleges of Wayne State University. The University setting, with its 30,000 students, provides a broad selection of educational opportunities on an interdisciplinary basis.

## DEGREE PROGRAMS

### Division of Engineering

#### *BACHELOR OF SCIENCE in*

Chemical Engineering  
Civil Engineering  
Electrical Engineering  
Industrial Engineering  
Mechanical Engineering

#### *\*MASTER OF SCIENCE in*

Biomedical Engineering  
Chemical Engineering  
Civil Engineering  
Computer Engineering  
Electrical Engineering  
Electronics and Computer Control Systems  
Hazardous Waste Management  
Industrial Engineering  
Manufacturing Engineering  
Materials Science and Engineering  
Mechanical Engineering  
Operations Research

#### *\*DOCTOR OF PHILOSOPHY in*

Biomedical Engineering  
Chemical Engineering  
Civil Engineering  
Computer Engineering  
Electrical Engineering  
Industrial Engineering  
Materials Science and Engineering  
Mechanical Engineering

#### *\*GRADUATE CERTIFICATE Programs in*

Environmental Auditing  
Hazardous Materials Management on Public Lands  
Hazardous Waste Control  
Polymer Engineering

### Division of Engineering Technology

#### *BACHELOR OF SCIENCE in Computer Technology*

#### *BACHELOR OF SCIENCE in Engineering*

*Technology --with a major in*

Electrical/Electronic Engineering Technology  
Electromechanical Engineering Technology  
Manufacturing/Industrial Engineering Technology  
Mechanical Engineering Technology  
Product Design Engineering Technology

#### *BACHELOR OF SCIENCE in Manufacturing Engineering*

*Technology*

#### *\*MASTER OF SCIENCE in Engineering Technology*

## COLLEGE OF ENGINEERING DIRECTORY

Dean Room 1100, Engineering Building; 577-3775  
Assistant Dean--Student Affairs and Minority Programs  
Room 1100, Engineering Building; 577-3780  
Associate Dean--Research  
Room 1100, Engineering Building; 577-3861  
Associate Dean--Academic Affairs  
Room 1100, Engineering Building; 577-3040  
Director of Alumni and Corporate Relations  
Room 1100, Engineering Building; 577-4707  
Business Manager  
Room 3100, Engineering Building; 577-3817  
Engineering Technology 4855 Fourth Street; 577-0800  
Coordinator, Cooperative Education  
University Placement Office, 1001 Faculty/Administration Bldg.  
Chemical Engineering and Materials Science  
Room 1100, Engineering Building; 577-3800  
Civil and Environmental Engineering  
Room 2100, Engineering Building; 577-3789  
Electrical and Computer Engineering  
Room 3100, Engineering Building; 577-3920  
Graduate Certificate Program in Polymer Engineering  
Room 1100, Engineering Building; 577-3800  
Hazardous Waste Management  
Room 1100, Engineering Building; 577-3800  
Industrial and Manufacturing Engineering  
Room 2146, Manufacturing Engineering Building; 577-3821  
Mechanical Engineering  
Room 2100, Engineering Building; 577-3845  
Bio-Engineering Center 818 West Hancock; 577-1344  
Center for Automotive Research  
Room 2121, Engineering Building; 577-3887

*Website:* <http://www.eng.wayne.edu/>

**The Engineering Building** is located at 5050 Anthony Wayne Drive.

**The Engineering Technology Building** is located at 4855 Fourth Street.

Mailing address for all offices:

College of Engineering  
Wayne State University  
5050 Anthony Wayne Drive  
Detroit, MI 48202

\* For requirements, consult the Wayne State University Graduate Bulletin.

# STUDENT ORGANIZATIONS and FINANCIAL AID

## Organizations

**The Engineering Student-Faculty Board** coordinates and is responsible for all organized student activities in the College. In addition, it sponsors certain college-wide programs including the College of Engineering Open House.

**Chi Epsilon**, a national civil engineering honor fraternity, was founded at the University of Illinois in 1922. The forty-eighth chapter of the fraternity was installed at Wayne State University on May 11, 1956. Election to membership is based on scholarship, character, practicality, and sociability for undergraduate and graduate students, and professional eminence for members of the profession.

**The Engineering Technology Student Organization** is an umbrella organization representing all the students in the Division of Engineering Technology. It was founded in Fall 1987.

**Eta Kappa Nu**, a national electrical engineering honorary society, was founded at the University of Illinois in 1904. Election to this society is based on demonstrated outstanding ability, as evidenced by scholarship and individual achievement. Delta Alpha Chapter was installed at Wayne State University on January 18, 1960.

**Pi Tau Sigma** is a national mechanical engineering honorary society founded in 1915 at the University of Illinois and at the University of Wisconsin to 'foster the high ideals of the engineering profession'. Students who have given promise of becoming outstanding leaders in the mechanical engineering field are elected to membership. The Tau Phi Chapter was installed at Wayne State University on May 20, 1960.

**Tau Alpha Pi** is a national honor society for engineering technology, extending recognition and honor to the highest four per cent of an institution's total engineering technology students. The Beta Michigan Chapter of Tau Alpha Pi was founded in Winter 1989.

**The Tau Beta Pi Association** is a national honorary engineering society which was founded at Lehigh University in 1885. By election to membership the society recognizes that the member has conferred honor on his/her Alma Mater by distinguished scholarship and exemplary character as an undergraduate or by attainments in the field of engineering after graduation. The Michigan Epsilon Chapter of Tau Beta Pi was installed at Wayne State University on March 10, 1951.

**The Society of the Sigma Xi** is a national society devoted to the encouragement of research in science, pure and applied, and to the recognition of achievement in those fields. Undergraduates of high scholastic standing in two or more departments of pure or applied science who have shown promise of ability to conduct original investigations in those fields may be nominated by the faculty for election to associate membership in the Wayne State University Chapter. Graduate students may be nominated to membership on the basis of demonstrated research ability and high scholarship.

**Theta Tau**, a national professional engineering fraternity, was established at the University of Minnesota in 1904. Epsilon Beta, the twenty-seventh student chapter, was founded on May 19, 1951, at Wayne State University.

**The Association of Black Engineers and Applied Scientists (ABEAS)**, founded in 1969, was established to encourage the choice of engineering and science as career fields for black students. ABEAS is a chartered chapter of the National Society of Black Engineers (NSBE).

**The Society of Hispanic Professional Engineers (SHPE), Inc.**, is a non-profit organization dedicated to increasing the participation of Hispanic professionals and college students in the fields of engineering and science.

**The Society of Women Engineers** student chapter is an educational service organization dedicated to making known the need for women engineers and encouraging young women to consider an engineering profession. The Wayne State University student chapter was founded in 1973.

**Student Branches of Professional Societies** add much to the education of their members. Many outstanding engineers from the community come to the campus each year to address meetings of the branches. Other activities include social meetings and trips to important engineering projects. Student branches of the following professional societies have been active on the campus for many years:

American Institute of Chemical Engineers  
American Institute of Mining, Metallurgical, and Petroleum Engineers  
American Society of Civil Engineers  
American Society of Mechanical Engineers  
American Society of Metallurgists  
Engineering Society of Detroit, Student Chapter  
Institute of Electrical and Electronics Engineers  
Michigan Society of Professional Engineers  
Society of Automotive Engineers  
Society of Manufacturing Engineers

## Scholarships and Financial Aid

An increasing number of scholarships are granted each year to undergraduate students in the College of Engineering. The scholarships differ greatly in their specifications: some stress high scholarship, others place emphasis on financial need or campus citizenship. Engineering students are also eligible for some of the general University scholarships granted each year.

Numerous loans and grants as well as work study programs are available through the Office of Scholarships and Financial Aid. Grants in Aid as well as National Direct Student Loans are available through the Office of Scholarships and Financial Aid.

From time to time, scholarships and other opportunities are opened to undergraduate students on other than a continuing basis. Inquiries about the College scholarships below, as well as about other opportunities, should be directed to the Assistant Dean of the College of Engineering.

*Timothy Alexander Scholarship:* Award to engineering students in the co-op program with a minimum 2.7 g.p.a. and demonstrated financial need and outstanding leadership qualities.

*Murray and Helen Altman Scholarship:* Award to full-time undergraduate majoring in engineering, with demonstrated financial need and outstanding scholastic and leadership qualities.

*The American Metal Climax Foundation Scholarship--Climax Molybdenum:* Award open to materials science and engineering students.

*Anderson Consulting Scholarship:* Awarded to full-time engineering undergraduate juniors and seniors who have a 3.5 g.p.a. or above and who have demonstrated leadership in student organizations and interest in information systems and technology.

*Dr. Robert Banasik, P.E., Endowed Scholarship for Mechanical Engineering:* Awarded to full-time mechanical engineering juniors and seniors who have desirable qualities of character and leadership, demonstrated academic merit and financial need.

*Arthur R. Carr Memorial Scholarship:* Awarded to any full-time undergraduate of at least sophomore ranking, with demonstrated financial need, and outstanding scholarship and leadership qualities.

*Dow Engineering Scholarship and Minority Recruitment:* Awarded to full-time undergraduate students of at least junior standing with a minimum 3.0 g.p.a.

*Professor Ernest B. Drake Scholarship:* Awarded to full-time student with junior or senior standing, majoring in chemical engineering, who has demonstrated financial need, outstanding leadership qualities, and a minimum 2.5 g.p.a.

*Engineering Undergraduate Scholarship:* Awarded to any undergraduate engineering student of at least junior standing and minimum 3.0 g.p.a.

*Fiftieth Anniversary Engineering Alumni Scholarship Fund:* Awarded to full-time junior undergraduate engineering students who are U.S. citizens or permanent residents with a minimum 3.0 g.p.a. and demonstrated financial need. Preference given to those demonstrating exceptional research work on an engineering project.

*Wayne State University College of Engineering / Ford Motor Company / Detroit Urban League Minority Engineering Scholarship:* Awards \$15,000 to incoming freshmen to engineering students who graduated from a public high schools in the cities of Detroit, Hamtramck, Highland Park, Inkster, or Pontiac. Candidates must have a minimum g.p.a. of 3.0 and be enrolled full-time in an engineering program at Wayne State University

*General Motors Minority Engineering and Science Scholarship:* Awarded to a full-time undergraduate minority engineering student with a minimum 3.2 g.p.a.

*Jason Guzik Memorial Scholarship:* Awarded to a senior level chemical engineering student with demonstrated academic leadership, and desirable qualities of leadership, with a minimum 3.0 g.p.a.

*The Howard M. Hess Scholarship for Engineering Technology Students:* Award of \$500 open to engineering technology students with outstanding scholarship and leadership qualities.

*William R. Kales Memorial Scholarship:* Awarded to any full-time undergraduate engineering student with outstanding scholarship and demonstrable financial need.

*Gregory Kosmowski Memorial Scholarship:* Awarded to any full or part-time undergraduate engineering student who is resident of Michigan, natural born U. S. citizen or of Polish-American descent.

*Charles Lewitt Memorial Scholarship:* Awarded to any full-time graduating senior in civil engineering with outstanding scholarship and leadership qualities.

*The Lubrizol Scholarship Program:* Award of \$1,000 open to junior or senior chemical engineering majors with outstanding scholarship and leadership qualities.

*Mercier Corporation Scholarship in Materials Science and Engineering:* Awarded to any full-time junior with demonstrable financial need, outstanding scholarship, and majoring in materials science and engineering.

*James E. and Christina L. Orr Scholarship:* Awarded to a full-time engineering undergraduates with demonstrated financial need, outstanding scholastic achievement and leadership qualities.

*Joseph N. Prentis Scholarship in Engineering:* Awarded to a full-time undergraduate engineering students of junior or senior standing, with a minimum 3.0 g.p.a.

*Jay T. Strausbaugh Memorial Scholarship:* Full one-year tuition awarded to a full-time mechanical engineering undergraduate with demonstrated financial need, high qualities of character and leadership, and a minimum 3.5 g.p.a.

*Frank G. Viscomi Memorial Scholarship:* Awarded to a full-time materials science and engineering student in good standing with the University and College, who submits the best senior research paper.

*Werner F. Vogel Endowed Scholarship in Mechanical Engineering:* Awarded to mechanical engineering undergraduates with preference

given to part-time students who have financial need, at least a 3.0 g.p.a., and desirable qualities of character and leadership.

*Wilso and Blaurock Scholarship for Mechanical Engineering:* Awarded to full-time mechanical engineering juniors, with preference given to qualified African-American or female students who have financial need, qualities of leadership, professional activities and demonstrated academic promise.

*Robert G. Wingerter Awards:* Award of \$500 open to a graduating senior demonstrating outstanding scholarship and leadership qualities.

*John G. Wright Memorial Scholarship:* Awarded to a full-time mechanical engineering student who demonstrates financial need and outstanding scholarship and leadership qualities.

# DIVISION OF ENGINEERING Bachelor of Science

## Undergraduate Program Goals

The overall goal of the undergraduate engineering degree programs at Wayne State University is to prepare students for success in their immediate and long-term professional careers as engineering practitioners as well as for pursuing graduate and professional studies and lifelong learning. Therefore the programs seek to ensure that all Wayne State engineering students:

- 1) Possess a fundamental understanding of mathematics, basic sciences, discipline-specific engineering sciences, and engineering design, and that they will have the ability to apply this knowledge to identify, formulate, and solve complex engineering problems.
- 2) Have practical engineering laboratory experiences in which they will design and conduct experiments.
- 3) Are able to use computers as communications, computational, and design tools.
- 4) Have an understanding of the uncertainties involved in engineering systems and the role of the probabilistic and statistical techniques in dealing with uncertainty.
- 5) Possess strong skills in written and oral communication.
- 6) Have a strong design experience throughout the curriculum that includes identification, formulation and solution of open-ended problems. This design experience will enable them to work in a multidisciplinary team environment.
- 7) Have an understanding of ethics and professionalism as well as of the professional issues germane to engineering practice.
- 8) Be educated in a variety of social sciences, arts, and humanities in order to broaden their horizons, to sensitize them to contemporary issues, to enable them to better understand the global and societal context of technical issues, and to prepare them for effective interaction with others.

## Recommended High School Preparation

In order to place sufficient emphasis on the English, mathematics, physics, and chemistry required for normal progress in engineering, restrictions are placed on the fifteen acceptable units of high school credit. The recommended high school preparation for admission to the College of Engineering is:

	<i>number of units</i>
English .....	4
Algebra .....	2
Plane and Solid Geometry .....	1.5
Trigonometry .....	0.5
Physics .....	1
Chemistry .....	1
Social Science or Foreign Language .....	2
Elective .....	3

An incoming freshman with this background enters the regular scheduled program if he/she earns satisfactory scores on the qualifying examinations in mathematics, chemistry and English (see below). Students having only two of the above units in mathematics and one unit of physics, chemistry, or biology may also be admitted to the College of Engineering. Proficiency in the areas of the missing units can be obtained by supplementary course work before entering the courses normally scheduled for freshman engineering students. Fur-

ther, admission may be granted with fewer than four units of English provided evidence of competency in English can be shown.

## Admission

Admission to the undergraduate professional programs in the Division of Engineering, College of Engineering, is dependent upon high school grade point average (g.p.a.) and ACT or SAT scores for those students entering directly from high school, and upon grade point average and level of curriculum completion for transfer students from community colleges or other universities. The following admission criteria are used to place students in the professional or pre-professional programs. Students who do not meet the minimum requirements for admission to a professional program may be admitted to the pre-professional program. The purpose of the pre-professional program is to permit students who are not qualified for entry into a professional program the opportunity to enroll in a restricted set of courses which are included in professional programs. Permission to transfer to a professional program will be granted to students who successfully complete this set of courses in accordance with the rules governing such matriculation as described below.

**Freshman Criteria:** All freshmen with a 3.5 or above high school g.p.a., and either an ACT score of 26 or above or an SAT score of 1200 or above, are admitted to a professional engineering program.

Freshmen with a high school g.p.a. of 2.75 or above but less than 3.5 are admitted to the pre-professional program.

Freshmen with a g.p.a. of 2.0 or above but less than 2.75, and with an ACT score of 21 or above or an SAT score of 850 or above, are admitted to the pre-professional program.

**Transfer Student Criteria:** Transfer students who have completed fifty semester credit hours or more of college-level studies, with a cumulative g.p.a. of 3.0 or above, and who have completed the calculus (MAT 2010, 2020, 2030 and 2150), chemistry (CHM 1225 and 1230), and physics (PHY 2170 and 2180) sequences with a g.p.a. of 3.0 or better and no grade lower than a 'C,' will be admitted to a professional engineering program.

Transfer students who do not meet the above requirements but who have completed a minimum of twelve semester credit hours of college-level studies with a g.p.a. of 2.0 or better, and have completed the equivalent of MAT 2010 with a grade of 'C' or better will be admitted to the pre-professional program.

## Matriculation

**Entering Freshmen:** Upon the receipt of notification of admission by the University Admissions Office, entering freshmen should contact the Office of the Assistant Dean for Student Affairs should questions arise regarding their obligations and activities prior to the beginning of classes for the semester in which they propose to enter the program.

An inspection of the various engineering curricula will reveal that the first two years in all of the programs are quite similar, thus affording students some opportunity to postpone commitment to a specific degree program without subsequent loss of credit, although variations do begin to appear in the sophomore year. In general, entering freshmen are encouraged to register in one of the degree granting departments. However, if undecided as to a particular curriculum, the student may register as an 'undecided student'. If the undecided status is elected, the student is monitored by the Assistant Dean and encouraged to pursue career counseling during the freshman year. When a decision is reached, the student is assigned to the appropriate department. Students are strongly encouraged to reach a decision prior to the completion of the freshman year. The planning of a program of studies is carried out in conference with a departmental adviser. Students are encouraged to meet with their adviser whenever there may be a need to do so. This contact must be sought at least once each term for registration purposes.

During the freshman and sophomore years, the student acquires a firm foundation in the basic sciences, mathematics, and the engineering sciences. Throughout the entire program, a continuing general education in the social science and humanities areas is included. Students must qualify in mathematics, chemistry and English to begin their programs of study as specified in the various curricula (see Qualifying examinations above).

On occasion, students may find it convenient or necessary to strengthen their background in English, chemistry, and mathematics through the election of courses which do not count toward the engineering degree. Students should consult their departmental adviser for guidance in this matter.

**Transfer Students:** For the student who has attended another institution and who has been found admissible to the Division of Engineering, the amount of advanced standing will be determined by the College and will depend upon the quantity and quality of the degree work completed prior to enrollment in this institution. Whether all, or only part, of such transferred credit may be applied toward a degree at Wayne State will depend on the requirements of the curriculum chosen. The student should consult the department chairperson or the Associate Dean on this matter.

An engineering transfer program to be taken at a community college acceptable to each of the engineering colleges in Michigan has been prepared by the Engineering College -- Community College Liaison Committee. A brochure describing this transfer program is available from any community college or from the Office of the Dean of any of the engineering colleges. Further, course equivalency tables are available at most southeastern Michigan community colleges.

Any request for reconsideration of the evaluation of transfer credits accepted by the College of Engineering should be made in writing within one year of the date of the student's first enrollment in the College of Engineering, or within one year of the date of the evaluation if the latter is made subsequent to the student's enrollment in the College of Engineering.

**Transfer of College within the University:** A student in another college of Wayne State University who wishes to transfer to the College of Engineering makes application directly to the Division of Engineering. The transfer form is available in the Dean's office. This application for transfer should be made as soon as the student decides to work toward an engineering degree and as soon as all admission requirements are met, since delay may cause serious prerequisite problems and loss of credit.

**Pre-Professional Program:** Students admitted to the *pre-professional* program must complete the following set of courses before applying for transfer to a *professional* program: MAT 2010, 2020, 2030 and 2150, CHM 1225 and 1230, PHY 2170 and 2180, ENG 1020, B E 1010, B E 1300, B E 3040, B E 3220, and a minimum of six credits in other 2000- or 3000-level engineering courses. Students who earn a grade of 'C-minus' or better in each course in the above set, earn a g.p.a. of at least 2.3 in this set of courses, earn an overall g.p.a. of at least 2.3, earn a g.p.a. of at least 2.3 in all courses in the intended major and who pass the English Proficiency Examination will be permitted to transfer to a *professional* program. Each g.p.a. listed above is calculated using Division of Engineering rules as described in the section on 'Academic Regulations,' below. Students admitted to the pre-professional program prior to the Winter 1994 semester must earn a g.p.a. (as calculated by Division of Engineering rules) of at least 2.0 in the above-listed areas before transfer to a professional program.

Students who earn transfer credit for some of the above courses must complete a minimum of sixteen credits before applying for transfer to a professional program.

Students enrolled in the pre-professional program who fail to meet the 2.3 g.p.a. requirement after completion of the pre-professional requirements will be required to meet with the Assistant Dean or Associate Dean to develop a Plan of Work. Such students may be

required to repeat certain courses and/or may be required to complete additional courses which may NOT count for credit toward an engineering degree. These additional requirements are designed to improve the student's mathematics, science, engineering science, and English abilities. If, after completion of the agreed-upon Plan of Work, the student's cumulative grade point average has not increased to at least 2.3, his/her record will be subject to review by the Academic Standards Committee for continuance in the College of Engineering.

Students enrolled in the pre-professional program are not permitted to enroll in any engineering courses except those included on a list specifically identified for pre-professional students. No course above the 3000-level is included on this list.

## Qualifying Examinations

All entering freshmen must take the qualifying examinations in mathematics, chemistry and English. Transfer students must take the English qualifying examination and if they do not have transfer credit to the College of Engineering in mathematics and chemistry, they are required to take qualifying examinations in mathematics and chemistry. Consult the Schedule of Classes for information regarding the schedule for the examinations or contact the Counseling Services Office, 583 Student Center; 577-3400.

### -- Chemistry

The sequence of chemistry courses for the engineering student normally begins with Chemistry 1225 and 1230. Qualification for Chemistry 1225 and 1230 requires a satisfactory score on the Chemistry Qualification Examination. If a student is not properly prepared to consider placement in Chemistry 1225 and 1230, direct entry into Chemistry 1040 is permissible.

### -- English

All entering freshmen and transfer students shall determine their aptitude in English composition by taking the English Placement Examination. Students whose score on the English Placement Examination indicates need for additional instruction and practice in writing must elect and pass English 1010 before they can enroll in English 1020. This examination is not a replacement for the English Composition Proficiency Examination (see page 130).

### -- Mathematics

The sequence of mathematics courses for the engineering student normally begins with Mathematics 2010. For admission to Mathematics 2010, a qualifying examination must be passed. Failure to qualify for Mathematics 2010 may result in the student being placed in a lower level course such as Mathematics 0993, 0995/1050 or 1800, depending upon the student's performance. Engineering students who qualify at the 0995/1050 level are encouraged to take MAT 1050 instead of MAT 0995. Students may apply to take the Qualifying examination in either Mathematics 1800 or 2010 depending upon their preparation in mathematics. The Mathematics 1800 Qualifying Examination is based upon one and one-half units of high school algebra and one unit of high school geometry. The Mathematics 2010 Qualifying Examination is based upon a total of three and one-half to four units of college preparatory mathematics covering algebra, plane and solid geometry and trigonometry. Engineering students who do not take the Mathematics Qualifying Examination prior to registration for the first semester of the freshman year must enroll in MAT 0993.

## Degree Requirements

The normal program of study for each of the degrees awarded in the Division of Engineering requires from 130 to 136 credits. Of the total credits for the degree, at least the last thirty-four credits must be completed as resident credits in the College.



Although the curricular plans shown in the departmental sections indicate a four-year program, many students will require additional time to complete all degree requirements. The national average time required for students to complete an engineering degree is approximately 4.5 years. Since Wayne State University students frequently pursue degrees on a part-time basis, many require much more than 4.5 years to complete all degree requirements. The actual amount of time required will depend upon the student's ability and the amount of time available for academic activities. Students who do not follow the sequence as outlined by their department must take care that all course prerequisites are satisfied.

Completion of the degree requirements in four years requires the election of an average of seventeen credits each term during the academic year. A student who elects the Cooperative Education Program will require five years. Students may attend the University on either a full-time or part-time basis (twelve credits are considered by the University as a minimum full-time load). The maximum load that a student carries should be consistent with the student's ability and available time. However, since a credit hour (credit) is defined as one class hour requiring about two hours of preparation per week carried through a semester, the fifteen to twenty-one credit programs shown in the curricular plans represent a full forty-hour academic work week. A three-hour laboratory period is generally regarded as the equivalent of one credit. Students who wish to graduate in four calendar years but who wish to schedule sixteen or fewer credits per semester may accomplish this by deferring certain courses until the spring or summer term. Recommendations on which courses to defer are designated by a footnote in the curricular plans shown in the departmental sections. Specific requirements for these degrees may be found in the departmental sections for this College. These requirements are in effect as of the publication date of this Bulletin; however, students should consult an academic adviser for verification of current requirements. The following general discussion concerns generic aspects common to all Bachelor of Science engineering programs.

## -- General Education Requirements

All students must satisfy the General Education Requirements of the University, as described on page 29. In many cases the College prescribes a more limited set of alternatives than permitted by the University. Students are cautioned to observe College restrictions when selecting courses to satisfy General Education Requirements.

### *Type*      *College Requirement*

AI . . . . . Any AI course (Only 3 credits count towards degree requirement)  
 BC . . . . . ENG 1020 or 1050  
 CL . . . . . B E 1010; *or* competency exam (See program requirements)  
 CT . . . . . Competency exam (Or pass PHI 1050)  
 EP . . . . . Competency Exam (Or pass ENG 1080)  
 FC . . . . . ANT 3150; *or* intermediate foreign language (FC) course  
 HS . . . . . Any HS course (HIS 1995 strongly recommended)  
 IC . . . . . ENG 3050  
 LS . . . . . BIO 1510 for all programs except CHE; BIO 2200 for CHE  
 MC . . . . . Competency exam (Or transfer MAT 1800 or 2010 credits)  
 OC . . . . . ENG 3060  
 PL . . . . . PHI 1100  
 PS . . . . . CHM 1225/1230 (and lab) (also meets lab sci. and ABET sci. reqts.)  
 SS . . . . . ECO 2010; *or* ECO 2020  
 VP . . . . . Any VP course  
 WI . . . . . Program-specific capstone course (See program requirements)

## -- Critical Thinking Requirement

All undergraduates must satisfy the General Education Critical Thinking requirement. Engineering students are encouraged to satisfy this requirement by taking the Critical Thinking Examination. Students who fail this examination are required to pass PHI 1050; however, credit earned by successful completion of this course will not count toward the total credits required for an engineering degree.

## -- Mathematics Requirement

Engineering students use mathematics as a tool in all engineering and science courses in their college curricula, as well as later upon entry into the engineering profession. All prospective engineering students are encouraged to complete the number of units of mathematics stipulated in the section entitled Recommended High School Preparation, page 127. Ideally, engineering students elect the first course in calculus in their first freshman term; however, many incoming students are not prepared to begin the mathematics program with calculus and additional remedial coursework is necessary to strengthen the student's background. All students entering the Division of Engineering with no transfer credit in calculus must take the Mathematics Qualifying Examination. For further details, see above.

## -- Basic Science Requirement

All undergraduate engineering students are required to complete at least sixteen credits (four courses) of basic science courses, including Chemistry 1225 and 1230, Physics 2170 and 2180. These courses are required in all of the engineering curricula, and it should be noted that certain curricula require the completion of prescribed science laboratories and/or additional chemistry and physics courses.

In addition, each student must elect a basic or advanced science course. Students should consult with their adviser for the current list of acceptable courses. Certain courses will satisfy this requirement as well as the Life Science requirement described below.

## -- Life Science Requirement

All undergraduate students are required to satisfy the General Education Life Science Requirement. Students who wish to satisfy this requirement simultaneously with the basic or advanced science requirement described above must take either BIO 1510 or BIO 2200. Students may satisfy the Life Science requirement with any 'LS'-designated course, if they elect an additional basic or advanced science course as described above.

## -- Humanities and Social Science Requirement

Engineering today extends far beyond technical decisions. Far-reaching effects of man-made technology require the engineer to be aware of and sensitive to his/her social responsibilities. Studies involving the engineer in sociological, economic and aesthetic judgment are incorporated in the engineering program in order to insure an understanding beyond technical problems which will enable the complete engineer to make value judgments concerning the impact of this technology upon society.

The College has, therefore, included a program in the social sciences and the humanities as a part of all engineering curricula. This program is integrated with the non-science portion of the University's General Education Program, which requires a student to elect one course from each of six categories. See page 29 for a complete description of the General Education Requirements. The Engineering Division imposes requirements in addition to the University-wide restrictions on courses which satisfy General Education Requirements. These restrictions are shown in the degree requirements for each engineering program.

## -- English and Mathematics Proficiency

See the *General Education Requirements* (pages 29 - 38) regarding these University proficiency and competency requirements.

**English Proficiency Requirement:** Students who have had their entire college experience at Wayne State University must take the English Proficiency Examination after they have completed forty-five credits and before they have completed sixty credits. Transfer students who have transferred sixty or more credits must complete the examination during their first semester at this university. In the event that the student does not pass this examination, immediately following failure in the examination, English 1080 must be elected and completed with a satisfactory grade. Students planning to take the English Proficiency Examination in Composition will find the examination schedule in the Schedule of Classes under the section for the English Language and Literature Department of the College of Liberal Arts. Students taking the English Proficiency Examination must apply to Testing and Evaluation, University Counseling Services.

**Communication Skills:** In addition to the basic composition course ENG 1020, six credits in communication skills are required of all students. The courses, English 3050 and 3060, entitled Technical Communications I and II, respectively, are to be elected.

**Mathematics Proficiency:** Prior to completion of thirty credits, all students must demonstrate competence in mathematics by: (a) passing the Mathematics Proficiency Examination; or (b) achieving an acceptable test score on the quantitative section of the AP-CEEP or CLEP test; or (c) transferring credit for MAT 1800 or MAT 2010.

Entering freshmen must immediately take the Mathematics Proficiency Examination if they have not received advanced credit via the AP-CEEP or CLEP test.

## Technical Electives

Technical electives may be chosen from the course offerings of the College of Engineering and the advanced science and mathematics courses of the College of Science. Other courses, such as advanced courses in the School of Business Administration, may be elected with the prior approval of the academic adviser. The purpose of the technical elective is to increase the depth or breadth of one's professional knowledge. Courses should be selected so as to meet this objective. Engineering courses elected as technical electives are normally selected at the 5000 level. These courses are open to both undergraduate and graduate students.

## Cooperative Education Program

Students who wish to enrich their education with on-the-job engineering experience may enroll in the Cooperative Education Program. In this program, full-time study terms are alternated with full-time work assignments in cooperating industries. The program may be entered at the beginning of the junior year.

Each Co-op student may enroll for one academic course while on work assignment. This must be done with the approval of the student's adviser. Following each work assignment, the student may elect to enroll in Basic Engineering 3510 or Chemical Engineering 3510 for one credit. Election of the course requires the completion of a report on the work experience to the department adviser and to the Co-op Coordinator. This credit for work will not be counted toward graduation unless permission is specifically recommended by the department chairperson. Students are automatically enrolled for a zero credit course each term that they are on a co-op assignment to insure that the experience appears on their transcript.

A brief evaluation report covering each work assignment is to be submitted to the Co-op Coordinator, whether there has been enrollment in the above one credit courses or not. The student's performance on the job is rated by his/her industrial supervisor. Salaries and other benefits are paid for the time spent on each work assignment.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information section of this Bulletin, beginning on page 5. The following additions and amendments pertain to the Division of Engineering within the College of Engineering.*

## Registration

All Division of Engineering undergraduate students must secure an Engineering adviser's signature approving the program request before pursuing registration for courses. (See page 42 for information relating to registration.) Special attention should be paid to course pre- and corequisites, and departmental grade requirements in pre-requisites. Students may be removed from courses entered without satisfying these requirements. Students may also be required to repeat courses for which they have not completed the necessary pre-requisites, following fulfillment of those prerequisites (even though a grade of 'C' or above has been earned in the course).

Some courses may be offered only once a year; others may have multiple sections running every semester. The University Schedule of Classes, published prior to each semester, shows when and where the classes will meet and outlines registration procedures and times.

## Attendance

Regularity in attendance is necessary for success in college work. Excessive unexcused absences may result in withdrawing a student from a class. The student should arrange with the course instructor in advance for all predictable absences. Absences due to illness or conditions beyond the student's control should be reported upon the student's return to class.

## Dean's List of Honor Students

A student who achieves a term grade point average of 3.5 or more, based on a program of twelve credits or more, is cited by the Dean for distinguished scholarship and is included on the Dean's List of Honor Students.

## Conduct

Each student is subject to official regulations governing student activities and student behavior. Furthermore, it is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Thus, 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.

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.

## Professional Program Eligibility

Students enrolled in a *professional* engineering program must maintain a g.p.a. of 2.3 or above, and must earn a grade of 'C-minus' or better in all course work included in the freshman and sophomore years of their program. Students who do not meet this requirement will be transferred to the *pre-professional* program. Such students are eligible to return to a *professional* program under the conditions described above under 'Pre-Professional Program.' Students admit-

ted to a *professional* program prior to the Winter 1994 semester must maintain an overall as well as departmental g.p.a. (as calculated by Division of Engineering rules) of at least 2.0 to retain their professional program status.

## Probation

A student is considered to be on probation whenever his/her cumulative grade point average, or his/her grade point average in the department of specialization, falls below 2.0. A student may also be placed on probation whenever his/her academic performance is deemed unsatisfactory. When placed on probation, the student is required to meet with the Assistant Dean or Associate Dean to remove the academic hold on his/her registration. While on probation, a student may not represent the College of Engineering in student activities.

A student on probation is expected to remove the grade point deficiency promptly. (grade point deficiency is obtained by subtracting the total number of grade points from twice the total number of credits in the grade point base. It is the number of grade points by which the student fails to achieve a 2.0 grade point average.) If, at the end of the first semester on probation, the student's cumulative grade point average has not increased to at least 2.0, he/she will be excluded from the College. For part-time students, a semester will be considered to consist of twelve consecutive credit hours. If the student's cumulative g.p.a. reaches at least 2.0 by the end of the first semester after being placed on probation, he/she will be returned to regular status. Multiple occurrences of probation will result in the student's exclusion from the College.

A student may be refused the privilege of registering in the Division of Engineering if, at any time, his/her grade point deficiency exceeds sixteen points. A student may also be refused the privilege of registering in the Division for irresponsible attendance and performance in class, regardless of any probationary status.

Following exclusion from the Division the privilege of registering in the Division will ordinarily be withheld for at least one calendar year. Class work taken at any institution during the period of exclusion may not be considered for transfer toward an engineering degree of this Division.

A student who has been refused the privilege of registering in the Division may request a re-consideration of his/her status by the Academic Standards Committee (ASC). He/she should not make the request, however, unless he/she can provide evidence of extenuating circumstances. A formal written request for reconsideration must be presented to the Assistant Dean for Student Affairs.

## Division of Engineering Rules for Calculating Grade Point Average

The Division of Engineering computes Departmental and Program grade point averages using rules which differ from those used to compute the cumulative grade point average on the official University transcript. When a course is repeated, the new grade will replace the previous grade unless the student exceeds the maximum number of repeats; the maximum number is one repeat for each thirty-four credits completed at Wayne State University. After the maximum number of repeats is exceeded, both grades are used in computing the student's grade point average.

## Substandard Performance

Any grade below 'C' is considered by the Division of Engineering to represent substandard performance. If a grade below 'C-minus' is received in any course which is prerequisite to another engineering course or in a required course in mathematics, biology, physics or chemistry, the student will be required to repeat that course before the next course in the sequence is taken. Students may be required to repeat courses or may be administratively withdrawn from courses when they have not satisfied course prerequisites. Students may be

required to repeat courses or may be administratively withdrawn from courses if they have not satisfied the prerequisites.

Any course which has been completed for audit may not be subsequently enrolled in for credit nor may credit be obtained by special examination.

No course taken to satisfy an engineering program requirement may be elected on a Passed-Not Passed (P-N) basis.

A course in which a grade below 'C-minus' has been earned may not be subsequently passed by Special Examination.

**Repeating Courses:** Courses in which a grade lower than a 'C-minus' is earned must be repeated no later than the next regular (i.e., fall or winter) semester in which the course is offered. Exceptions to this rule must be approved by the Department and the Dean's Office.

When repeating a course, failure for the third time to pass it with at least a 'C-minus' grade constitutes grounds for refusing a student further registration in the Division of Engineering.

An engineering student who repeats a required course in which he/she received a grade lower than a 'C-minus' must repeat that course at Wayne State University unless prior written approval is secured from his/her department chairperson and the Associate Dean to take the course at a designated institution.

Students are directed to pages 41-42 for University policies related to repeating courses and credit by special examination. See also 'Division Rules for Calculating grade point Average,' above.

## Withdrawal From Courses

General rules governing withdrawal from courses and changes of program can be found on page 42. Special note should be taken of the fact that the College of Engineering policy on withdrawal from a course or courses is not to grant permission to withdraw after Friday of the fifth week of classes, nor add a course after the fourth week. Exceptions must have the approval of the Associate Dean.

## Graduation

At graduation the University requires a minimum 2.0 grade point average in the total residence credit. Additionally, the Division of Engineering requires a minimum 2.0 grade point average in the total work taken in the department of specialization. The student's total as well as departmental grade point average is calculated using the Division of Engineering rules described above.

Graduates with a minimum of sixty credits in residence at Wayne State University and a grade point average of at least 3.0 may qualify for a special diploma under the following conditions:

*Summa Cum Laude:* Student must have a grade point average in the top five per cent of the College of Engineering graduating class.

*Magna Cum Laude:* Student must have a grade point average in the five per cent of the graduating class subsequent to summa cum laude students.

*Cum Laude:* Student must have a grade point average in the ten per cent of the graduating class subsequent to magna cum laude students.

**Commencement:** Each year, commencement exercises are held in December for summer and fall semester graduates and in May for winter semester graduates.

## Guests

A student attending another engineering college who wishes to take course work at Wayne State for the purpose of credit transfer to the home institution may be admitted as a guest student for one term. This is done by applying through the University Office of Admissions using either the Application for Undergraduate Admission or the Graduate Guest Application. These applications require certification by an official of the home institution. For information on graduate

guest admission and visiting doctoral guests, see the Wayne State University Graduate Bulletin.

The Michigan Conference of Engineering Deans has entered into an agreement endorsing the exchange of guest privileges between ABET-accredited engineering curricula in Michigan. For further information call the Engineering Dean's Office; 577-3780.

## Second Degree

An engineering student, who after receiving one Bachelor of Science degree at Wayne State University, wishes to obtain a second bachelor's degree must complete at least thirty credits beyond those applied toward the first degree and must also satisfy all departmental and College course requirements.

## Professional Registration

An additional mark of engineering competence is the successful completion of examinations for professional registration. These examinations are given by each state. Upon being registered in a state, the engineer may legally provide engineering services to the public of that state. Many of the states have reciprocity agreements for transfer of registration. In Michigan, the State Board of Registration for Professional Engineers offers the registration examination in April and November of each year. Graduates at the bachelor's degree level are qualified and urged to take Part I, Fundamentals of Engineering, of the examination immediately upon graduation or at the examination just preceding graduation. Application forms are available in the Dean's office.

## COURSES OF INSTRUCTION (B E)

*The following courses in basic engineering are of a general nature and are used by students in all of the Division of Engineering disciplines. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **1010 (CL) Introduction to Computers in Engineering. Cr. 3**

Prereq. or coreq: MAT 1800. Engineering computer systems hardware and software. Programming engineering computations using the language C, interfacing with FORTRAN and BASIC programs. Word processing, spreadsheet, statistical and graphics software. Introduction to the profession of engineering and the design process, professional ethics and social responsibility. (Y)

### **1050 Freshman Engineering Orientation. Cr. 2**

Open only to freshman or transfer students. This course is designed to make students feel supported in their new environment, bolster their expectations and self-confidence, and develop the skills necessary for them to succeed in engineering. It familiarizes them with the history of engineering and engineering disciplines, and demonstrates the importance of team-building as an essential part of the engineering profession. (T)

### **1100 Introduction to Engineering. Cr. 3**

Coreq: MAT 1800 or higher; ENG 1020. Introduction to the profession of engineering; engineering analysis tools, engineering design concepts, teamwork skills. Material fee as indicated in the Schedule of Classes. (B)

### **1300 Science of Engineering Materials I. Cr. 4**

Prereq: CHM 1225 and 1230; PHY 2170 or 2175; B E 1010 or 1100. Introduction to the behavior and properties of metallic, ceramic, polymeric and composite materials. The relationship between the internal arrangement of atoms in materials and their observed mechanical, thermal, electrical and chemical behavior. Discussion sections include laboratory experiments, demonstrations, problem solving and review. Material fee as indicated in the Schedule of Classes. (T)

### **1310 Science of Engineering Materials I Lab. Cr. 0**

Coreq: B E 1300. Offered for S and U grades only. Laboratory component of B E 1300. (T)

### **2060 Introduction to Engineering Design and Problem Solving. Cr. 2**

No credit after B E 1100. Prereq: B E 1010, PHY 2175; coreq: M E 2050. Introduction to engineering design team activities and approaches for problem solving in engineering. Development of skills to work as part of a team. Material fee as indicated in the Schedule of Classes. (F,W)

### **3040 Computational Methods in Engineering. Cr. 3**

Prereq: B E 1010 or 1100; coreq: MAT 2150. An introductory course in the application of digital computers and numerical techniques to the solution of engineering problems. Methods for solving linear and non-linear algebraic equations, estimating the accuracy of results, and numerical integration in more than one variable. Finite difference techniques for the solution of ordinary differential equations and extended to the mesh methods for solution of partial differential equations. Material fee as indicated in the Schedule of Classes. (T)

### **3220 Probability and Statistics in Engineering. Cr. 3**

Prereq: MAT 2020. An introduction to probability theory and statistics with emphasis on engineering data analysis and design methods which recognize the concept of variability. Applications to product reliability, process control and queueing systems. (T)

### **3500 Co-Op Record. Cr. 0 (IND: 0)**

Prereq: sophomore standing and consent of coordinator. Offered for S and U grades only. Engineering practice under supervision in cooperative education program. (T)

### **3510 Co-Op Experience. Cr. 1 (Max. 4) (IND: 1)**

Prereq: sophomore standing and consent of adviser. Offered for S and U grades only. Engineering practice under supervision in cooperative education program. Written report required. (T)

# CHEMICAL ENGINEERING and MATERIALS SCIENCE

Office: 1100 W. Engineering Building; 577-3800  
Interim Chairperson: C.W. Manke

## Professors

E. Gulari, R.H. Kummler, C.W. Manke, S. Ng, E. W. Rothe

## Associate Professors

Y. Huang, H.W.T. Matthew, J.H. McMicking (Emeritus), S.K. Putatunda, S.O. Salley, G. Shreve

## Assistant Professors

R. Kannan, G. Z. Mao, J. Potoff, P. Van Tassel

## Degree Programs

*BACHELOR OF SCIENCE in Chemical Engineering*

*\*CERTIFICATE in Environmental Auditing*

*\*CERTIFICATE in Hazardous Materials Management on Public Lands*

*\*CERTIFICATE in Hazardous Waste Control*

*\*CERTIFICATE in Polymer Engineering*

*\*MASTER OF SCIENCE in Chemical Engineering*

*\*MASTER OF SCIENCE in Materials Science and Engineering*

*\*MASTER OF SCIENCE in Hazardous Waste Management*

*\*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 the chemical engineer embraces those industries in which matter is treated to effect a change of state, energy content, or composition; and in these industries the chemical engineer may be concerned with either the processes or the process equipment used for them.

The chemical engineer may enter the fields of petroleum processing, pharmaceuticals, food processing, natural and synthetic rubbers and plastics, electronic materials, surface coatings, atomic energy processing, environmental control and biotechnology.

The undergraduate program in chemical engineering includes a thorough study of chemistry, mathematics, and physics, as well as an understanding of physical, biological and chemical operations and processes. Engineering courses cover material and energy balances, transport phenomena, reaction kinetics, and process and equipment design. In addition, electives may be chosen from topics such as polymers, biochemical engineering, pollution control, material science, and other special topics.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

The breadth of this program permits graduates to enter the chemical industries with confidence, and their abilities will find almost immediate use. Chemical engineers may enter the division of production and advance toward plant or production management positions, or they may find their training useful in design, development, or research departments. In the latter cases additional formal education at the graduate level may be desirable. Chemical engineers with master's or doctor's degrees constitute a large percentage of those employed in research and development work.

In addition to the Undergraduate Program Goals listed on page 127, the specific objectives of the chemical engineering B.S. program are:

1) To offer a sound chemical engineering curriculum of required courses in material and energy balances applied to chemical processes; thermodynamics of physical and chemical equilibria; heat, mass and momentum transfer; chemical reaction engineering; separation operations; process dynamics and control; process integration and design; and appropriate modern experimental and computing techniques.

2) To incorporate a strong design experience throughout the curriculum that includes identification, formulation and solution of open-ended problems, scale-up concepts, use of iterative approaches, consideration of safety and environmental issues, and understanding of economic factors.

3) To provide laboratory experiences relevant to chemical engineering principles, covering design of experiments, the analysis and interpretation of data, and the presentation of results.

4) To offer electives that extend the basic chemical engineering principles into advanced and multidisciplinary applications related to current chemical engineering practice.

5) To develop awareness in staying current with the changing chemical engineering profession through lifelong learning and continuing professional development, and to provide guidance in career planning and interviewing through two required seminar series.

6) To assist in the preparation of students for engineering practice through co-op and internship programs.

7) To encourage involvement of undergraduates in research so that they can experience advanced and independent study environments.

## Bachelor of Science in Chemical Engineering

**Admission Requirements:** see pages 127-128.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science degree must complete 131 credits in course work, including satisfaction of the University General Education Requirements (see page 29), as outlined in the following curriculum. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 127 - 132 respectively. Non-engineering entries, cited below by subject rather than individual course number, indicate courses to be selected in fulfillment of the University General Education Requirements. Degree requirements shown in the curricula below are in effect as of the publication date of this Bulletin. Students should consult their advisers for verification of current requirements.

**Substitutions:** In the curriculum below: ECO 2020 may be substituted for ECO 2010; any (HS) designated course for HIS 1995; any (AI) designated course for P S 1030; and any foreign language (FC) through 2010 for ANT 3150.

### Freshman Year

<i>First Semester</i>	<i>credits</i>
UGE 1000 -- (GE) Information Power . . . . .	1
MAT 2010 -- Calculus I . . . . .	4
CHM 1225 -- (PS) Chemical Structure, Bonding & Reactivity . . . . .	3
CHM 1230 -- Chemical Principles in the Laboratory . . . . .	1

ENG 1020 -- (BC) Introductory College Writing	4
B E 1100 -- Introduction to Engineering	3
	Total: 16

*Second Semester*

MAT 2020 -- Calculus II	4
CHM 1240 -- Principles of General/Organic Chemistry	4
CHM 1250 -- General/Organic Chemistry Lab	1
PHY 2175 --(PS) General Physics	4
B E 1300 -- Science of Engineering Materials I <sup>1</sup>	4
B E 1310 -- Science of Engg. Materials I Lab	0
Mathematics Proficiency Exam	0
	Total: 17

**Sophomore Year**

*First Semester*

MAT 2030 -- Calculus III	4
PHY 2185 -- General Physics	4
B E 3220 -- Probability and Statistics in Engineering	3
CHM 2220 -- Organic Chemistry	3
PHI 1100 -- (PL) Contemporary Moral Issues	3
	Total: 17

*Second Semester*

MAT 2150 -- Differential Equations and Matrix Algebra	4
CHE 2800 -- Material and Energy Balances	4
B E 3040 -- Computational Methods in Engineering <sup>1</sup>	3
CHM 2280 -- Chemical/Analytical Principles	3
ECO 2010 -- (SS) Principles of Microeconomics	3
English Proficiency Exam	0
Critical Thinking (CT) Exam	0
Computer Literacy (CL) Exam	0
	Total: 17

**Junior Year**

*First Semester*

credits

CHE 3200 -- Chemical Process Engineering I: Fluid Flow & Heat Transfer	4
CHE 3300 -- Thermodynamics: Chemical Equilibria	4
CHM 5440 -- Physical Chemistry II	4
ENG 3050 -- (IC) Technical Communication I: Report Writing	3
HIS 1995 -- (HS) Society and the Economic Transition	3
	Total: 18

*Second Semester*

CHE 3220 -- Measurements Laboratory	2
CHE 3400 -- Kinetics and Reactor Design	3
CHE 3800 -- Chemical Process Engineering II: Mass Transfer	4
P S 1030 -- (AI) The American Governmental System	3
ENG 3060 -- (OC) Technical Communication II: Writing & Speaking	3
	Total: 15

**Senior Year**

*First Semester*

CHE 3820 -- Chemical Engineering Laboratory	2
CHE 4200 -- Chemical Process Engineering III: Economics & Design	3
CHE 4260 -- Chemical Engineering Seminar I	0
CHE 4600 -- Process Dynamics and Simulation	3
BIO 2200 -- (LS) Introductory Microbiology	4
Chemical Engineering Technical Elective	3
	Total: 15

*Second Semester*

CHE 4860 -- Chemical Engineering Seminar II	1
Chemical Engineering Technical Electives	6
CHE 4800 -- (WI) Chemical Process Integration	3

ANT 3150 -- (FC) Anthropology of Business	3
Visual & Performing Arts (VP) elective	3
	Total: 16
TOTAL CREDITS	131

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### CHEMICAL ENGINEERING (CHE)

**2800 Material and Energy Balances. Cr. 4**

Prereq: PHY 2170 or 2175; MAT 2020, CHM 1240. Material balances, stoichiometry and simultaneous mass energy balances. Material fee as indicated in the Schedule of Classes. (F,W)

**3200 Chemical Process Engineering I: Fluid Flow and Heat Transfer. Cr. 4**

Prereq: MAT 2020; PHY 2170 or PHY 2175; CHE 2800. Transient and steady state transport of momentum and heat in engineering systems. Analytical and empirical methods. Practical aspects of transport of materials and heat. Piping and pumping systems, metering, heat exchange theory, equipment costs. Material fee as indicated in the Schedule of Classes. (F,W)

**3220 Measurements Laboratory. Cr. 2**

Prereq: ENG 3050; B E 3040; CHE 3200; B E 3220. Laboratory course in the principles and practice of measuring chemical, physical and thermodynamic properties of importance to chemical engineering problems. Technical reports. Material fee as indicated in the Schedule of Classes. (F,W)

**3300 Thermodynamics: Chemical Equilibria. Cr. 4**

Prereq: CHE 2800, MAT 2020. Qualitative and quantitative treatment of homogeneous and heterogeneous phase and chemical equilibria. Use of chemical activities and activity coefficients relating ideal to actual systems. Use of reference states and excess properties of the prediction of equilibrium diagrams and the determination of feasibility of chemical reactions. Material fee as indicated in the Schedule of Classes. (F,W)

**3400 Kinetics and Reactor Design. Cr. 3**

Prereq: B E 3040, CHE 3300, MAT 2150. Quantitative treatment of complex homogeneous and heterogeneous chemical reactions and the design of batch, stirred and flow reactor systems. Material fee as indicated in the Schedule of Classes. (W,S)

**3510 Co-op Experience. Cr. 1 (Max. 4)**

Offered for S and U grades only. Presentation of oral and written report to peer group describing Co-op experience. Attendance required at CHE and MSE seminar series for the semester. (T)

**3800 Chemical Process Engineering II: Mass Transfer. Cr. 4**

Prereq: B E 3040; CHE 3200, 3300. Quantitative treatment of separation processes in which there is simultaneous heat and mass transfer. Material fee as indicated in the Schedule of Classes. (W,S)

**3820 Chemical Engineering Laboratory. Cr. 2**

Prereq: CHE 3220, 3400, 3800; ENG 3060. Experimental study of chemical equilibria, reaction kinetics and rate processes. Laboratory case studies. Material fee as indicated in the Schedule of Classes. (F,W)

1. Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

**4200 Chemical Process Engineering III: Economics and Design. Cr. 3**

Prereq: CHE 3800 and 3400. The overall chemical process. Economic analysis of the process and the optimum-economic design of process. (F)

**4260 Chemical Engineering Seminar I. Cr. 0**

Prereq: CHE 3400, 3800. Required for graduation. Offered for S and U grades only. (F,W)

**4560 Chemical Engineering Senior Research. Cr. 3-6**

Prereq: consent of adviser. Research project. (T)

**4600 Process Dynamics and Simulation. Cr. 3**

Prereq: CHE 3400, 3800. Application of system dynamics and mathematical modeling to design and analysis of chemical processing systems. Material fee as indicated in the Schedule of Classes. (F)

**4800 (WI) Chemical Process Integration. Cr. 3**

Prereq: CHE 4200. Application of engineering and science background to the design of chemical processes. Comprehensive problems deal with sources of data, design principles and optimization techniques. (W)

**4860 Chemical Engineering Seminar II. Cr. 1**

Prereq: CHE 4260. Required for graduation. Offered for S and U grades only. (F,W)

**4990 Directed Study. Cr. 1-9 (Max. 9)**

Prereq: consent of adviser. Students select a field of chemical engineering for advanced study and instruction. (T)

**5040 (ECE 5040) Numerical Methods for Engineers. Cr. 4**

Prereq: MAT 2150, B E 3040. Solution of ordinary and partial differential equations of engineering by modern numerical methods, including digital computer programming. (B)

**5050 Statistics and Design of Experiments. Cr. 3**

Prereq: B E 3220, B E 3040; CHE 3800, 3400. Application of modern statistical experimental design methods to improve effectiveness and success in experimental projects, in chemical industry manufacturing, and research and design. (F)

**5090 (MSE 5090) Physical Ceramics. Cr. 3**

Prereq: B E 1300, 1310; PHY 2180 or 2185. Physical nature and behavior of vitreous and crystalline non-metals. Crystallography and atomic bonding relationships relative to mechanical, thermal, optical, magnetic and electrical properties. Phase equilibria and transformations, interactions in liquid-solid systems, surface properties and diffusional phenomena. (W)

**5100 (BME 5010) Engineering Physiology. (ECE 5100) (I E 5100) (M E 5100) Cr. 4**

Prereq: senior standing. Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by simple mathematical models where feasible. (F)

**5200 Transport Phenomena. Cr. 3**

Prereq: CHE 3800, 3400. Unified principles of heat mass and momentum transport with application to applied science and engineering problem areas. (F)

**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)

**5530 Thermal Processing of Hazardous Waste. (HWM 5530) Cr. 2**

Prereq: HWM 5510. Thermal processing technologies, such as combustion fundamentals, thermal incineration equipment and hardware, chemical reaction and recovery systems for hazardous waste control. (B:W)

**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)

**5630 Waste Treatment Technologies. (HWM 5630) Cr. 3**

Prereq: CHE 3300, 3400, 3800. Characterization and analysis of waste components in gas emissions, liquid and solid streams, and suitability for treatment technologies vs. management and remediation of hazardous waste sites. (B:W)

**5995 Special Topics in Chemical Engineering I. Cr. 1-4**

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)

**6040 Computational Methods in Engineering for Graduate Students. Cr. 4**

Prereq: B E 1010, MAT 2150, graduate standing, consent of adviser. No credit after CHE 3040. Introduction to methods for solving linear and nonlinear algebraic equations; estimating accuracy of results and numerical integration of ordinary differential equations; mesh methods for solution of partial differential equations. Course project required. (T)

**6130 (NFS 6130) Food Preservation. Cr. 4**

Prereq: senior standing. Basic food preservation methods and the underlying physical, chemical, bacteriological and organoleptic properties of foods to be preserved. Material fee as indicated in the Schedule of Classes. (W)

**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)

**6520 Chemodynamics: Environmental Transport. (HWM 6520) Cr. 3**

Prereq: CHE 3300, 3400, 3800. Application of chemical engineering fundamentals and transport phenomena to study the movement and fate of chemicals within the environment (air, water, soil). (S)

**6570 Safety in the Chemical Process Industry. (HWM 6570) 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)

**6590 Bioremediation of Hazardous Waste. (HWM 6590) Cr. 3**

Prereq: CHE 2800, B E 3040. The movement of pollutants through underground matrices by means of transport models. Analysis, identification, assessment and selection of remedial programs. Types of microorganisms, the food chain, oxygen supply and operating conditions will be described. (W)

**6610 (HWM 6610) Risk Assessment. Cr. 3**

Prereq: MAT 2030, B E 3220, and CHM 1240. 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 Process Integration. Cr. 4**

Prereq: CHE 4200 and enrollment in AGRADE program; written consent of adviser. Application of engineering and science background to the design of chemical processes. Comprehensive problems deal with sources of data, design principles and optimization techniques. (B)

**6850 (MSE 6850) Corrosion. (CHE 6850) Cr. 3**

Prereq: senior standing in engineering. Advanced study of the theories of corrosion of materials and applications of these theories in the engineering field. Analysis of industrial problems. Comprehensive engineering reports. (B)

**6997 Optimization of Chemical Processes. Cr. 3**

Prereq: CHE 4200. The application of optimization techniques in the design and operation of chemical processes. (W)

## MATERIALS SCIENCE (MSE)

**4090 Physical Ceramics. Cr. 3**

Prereq: MSE 1300; senior standing. Relationships between the structure and properties of ceramic materials including ceramic for electronic, optical or photonic, biological and structural applications. (W)

**4250 Materials Seminar. Cr. 0**

Prereq: MSE 3420, 3700. Offered for S and U grades only. Required for graduation. Current issues. (F,W)

**4260 Senior Project. Cr. 3**

Organization and execution of a research project: literature survey, presentation of written proposal, data analysis, preparation of a comprehensive written research report. Final oral report to departmental staff. (T)

**5010 Materials for Engineering. Cr. 4**

Prereq: CHM 1225 and 1230, PHY 2180 or PHY 2185, B E 1300. Properties and applications of materials in design and manufacturing; emphasis on metals, ceramics, and polymers. Atomic arrangement, bonding, cell structure and microstructure. Mixing, blending, and alloying to meet needs of advanced technology. (F)

**5090 Physical Ceramics. (CHE 5090) Cr. 3**

Prereq: B E 1300, 1310; PHY 2180 or 2185. Physical nature and behavior of vitreous and crystalline non-metals. Crystallography and atomic bonding relationships relative to mechanical, thermal, optical, magnetic and electrical properties. Phase equilibria and transformations, interactions in liquid-solid systems, surface properties and diffusional phenomena. (W)

**5180 (BME 5370) Introduction to Biomaterials. (M E 5180) Cr. 4**

Prereq: B E 1300, BME 5010 or PSL 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 PSL 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. 4**

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)

**5400 Physical Metallurgy. Cr. 3**

Prereq: MAT 2150. Microstructure property relationship, phase diagram, solidification of metals and alloys, iron carbon system, heat treatment of steel and iron, carbon alloys. (F)

**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)

**5620 Electron Microscopy. Cr. 4**

Theory and practice of electron image formation, sample preparation, diffraction principles and interpretation of effects. (B)

**5650 Surface Science. Cr. 3**

Prereq: B E 1300. 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)

**5800 Processing of Powder Materials. Cr. 3**

Basic analysis of the various processing steps involved in the manufacture of products from metal powders including powder manufacture, compaction and sintering of metal powders and the forming of powder metallurgy (P/M) preforms. Ceramics and metal powders, metal matrix composites, processed by techniques such as sol-gel, SHS. (B)

**6500 Fatigue and Fracture of Metals. Cr. 3**

A detailed examination of the ways in which engineering materials fail under both static and cyclic loading conditions. Emphasis is on the metallurgical aspects of failure and the underlying mechanisms of fracture and fatigue. (B)

**6850 Corrosion. (CHE 6850) Cr. 3**

Prereq: senior standing in engineering. Advanced study of the theories of corrosion of materials; application of these theories in the engineering field. Analysis of industrial problems. Comprehensive engineering reports. (B)



# CIVIL and ENVIRONMENTAL ENGINEERING

Office: 2100 E. Engineering Building; 577-3789

Chairperson: M.A. Usmen

## Professors

H. M. Aktan, L.T. Cheney (Emeritus), T.K. Datta, S. Khasnabis, C.Y. Kuo, C.J. Miller, J. M. Paulson (Emeritus), M.A. Usmen

## Associate Professors

G. Fu, T. M. Heidtke, T. Kagawa

## Assistant Professors

N. Yesiller, H.C. Wu

## Adjunct Faculty

Z. Akbar, M. Bhatti, B. Deming, J. Hartig, B. Kim, P. Mansour, J. Raad

## Degree Programs

*BACHELOR OF SCIENCE in Civil Engineering*

*\*MASTER OF SCIENCE in Civil Engineering*

*\*DOCTOR OF PHILOSOPHY with a major in civil engineering*

Civil engineers apply the principles and techniques of engineering to the design and integration of complex systems. They have traditionally been leaders in many aspects of urban development and the urban crisis in America has brought into 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 and control of structural systems, including tall buildings, bridges and transportation systems necessary for urban development, commerce and industry; water resources planning and management; containment and treatment of hazardous wastes; design of collection and treatment systems for sanitary and storm sewage; water treatment and distribution systems; construction management; and the integration and management of public works projects designed to improve the urban infrastructure. Obviously, the responsibilities of the civil engineer directly involve the health, safety and welfare of the public.

The Civil and Environmental Engineering Department maintains laboratories for teaching and research in the areas of: structures/materials, transportation, hydraulics, geotechnical, geoenvironmental, infrastructure systems, and environmental engineering. Laboratories include facilities for testing structural components under static and dynamic loads; strain measurement; traffic simulation; and fluid flow. The Department and the University maintain excellent computer facilities for data acquisition and analysis, including several advanced software packages specific to civil engineering.

## Bachelor of Science in Civil Engineering

**Mission Statement:** The mission of the Civil and Environmental Engineering Department is to provide high-quality, state-of-the-art educational and research programs in relevant professional disciplines with an appropriate balance between undergraduate and graduate programs. The Department strives for excellence in its academic programs, its research endeavors, and its university, community and professional service activities. The program is designed to prepare our students for success in their immediate as well as long-term professional careers as practitioners, for obtaining a professional engineering license, and for pursuing advanced studies and lifelong learning.

### Program Educational Objectives:

1. To produce civil engineering graduates who have:

a. a strong grounding in mathematics, basic sciences, engineering sciences, and design principles and methodologies, and the ability to apply this knowledge to identify, formulate, and solve complex engineering problems.

b. the knowledge of designing and conducting experiments in a variety of disciplines relevant to the profession, and the knowledge of analyzing, interpreting, and presenting experimental data.

c. the ability to effectively communicate technical and professional information in written, oral, and graphic form.

d. proficiency in use of computers as communications, computational and design tools in engineering practice.

e. an understanding of the uncertainties involved in engineering systems and the role of probabilistic and statistical techniques in dealing with uncertainty.

f. participated in a strong design experience throughout the curriculum that includes identification, formulation, and solution of open-ended problems, as well as working in multi-disciplinary terms.

g. a cognizance of the ethical and professional responsibilities of an engineer.

h. had exposure to a variety of professional issues, including professional licensure, project delivery systems, leadership, career management, and other relevant topics.

i. a broad education in social sciences, arts, and humanities to broaden their horizons; to be sensitized to contemporary issues; to be able to better understand the global and societal context of technical issues; and to be prepared for effective interactions with individuals and groups from other disciplines.

j. the ability to adapt to the rapidly changing and expanding civil engineering fields through lifelong learning and continuing professional development.

2) To offer a diverse civil engineering curriculum encompassing appropriate required courses in structural, geotechnical, transportation, and water resources and environmental engineering, with elective courses in the same fields, as well as electives covering CAD, surveying, construction management, and other relevant topics.

3) To assist the preparation of the students for engineering practice by providing opportunities for them to gain practical experience and exposure to real-life problems and solutions through co-op and internship programs.

4) To stimulate interactions between undergraduate and graduate students, and involve undergraduates in research projects to expose them to the advanced study environment.

**The civil engineering curriculum** has been designed to provide a broad education in the basic sciences, mathematics, and engineering sciences, civil engineering analysis and design, and their application to civil engineering practice. The courses in civil engineering may be considered as an array of groups, each representing an area of concern to contemporary society and industry. Technical electives

\* For specific requirements, see the Wayne State University Graduate Bulletin.

may be selected from one of these major areas according to the student's particular interest or may be chosen from several areas in order to broaden one's knowledge. A student who contemplates continuing study at the graduate level should seek the advice of his/her faculty counselor in the selection of elective courses. Realizing the social implications of the practice of civil engineering, the program provides for the development of a background in economics, the social sciences, humanities, communication skills, ethics, and related non-technical areas.

**Admission Requirements:** see pages 127-128 .

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science degree must complete 133 credits in course work, including satisfaction of the University General Education Requirements (see page 29), as outlined in the following curriculum. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 127-132 , respectively. Non-engineering entries, cited below by subject rather than individual course number, indicate courses to be selected in fulfillment of the University General Education Requirements. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin. Students should consult an academic adviser for verification of current requirements.

**Substitutions:** In the curriculum below: ECO 2020 may be substituted for ECO 2010; any (HS) designated course for HIS 1995; any (AI) designated course for P S 1030; and any foreign language (FC) through 2010 for ANT 3150.

### Freshman Year

<i>First Semester</i>	<i>credits</i>
MAT 2010 -- Calculus I . . . . .	4
CHM 1225 -- (PS) Chemical Structure, Bonding & Reactivity . . . . .	3
CHM 1230 -- Chemical Principles in the Laboratory . . . . .	1
B E 1100 -- Introduction to Engineering . . . . .	3
UGE 1000 -- (GE) Information Power . . . . .	1
ENG 1020 -- (BC) Introductory College Writing . . . . .	4
<b>Total:</b>	<b>16</b>

<i>Second Semester</i>	
MAT 2020 -- Calculus II . . . . .	4
PHY 2175 --(PS) General Physics . . . . .	4
B E 1300 -- Science of Engineering Materials I <sup>1</sup> . . . . .	4
B E 1310 -- Science of Engg. Materials I Lab . . . . .	0
P S 1030 -- (AI) The American Governmental System . . . . .	3
BIO 1510 -- (LS) Basic Life Mechanisms . . . . .	3
Mathematics Proficiency Exam . . . . .	0
<b>Total:</b>	<b>18</b>

### Sophomore Year

<i>First Semester</i>	
MAT 2030 -- Calculus III . . . . .	4
PHY 2185 -- General Physics . . . . .	4
C E 2400 -- (M E 2400) Statics & Mechanics of Materials . . . . .	4
B E 3220 -- Probability and Statistics in Engineering . . . . .	3
Visual and Performing Arts (VP) elective <sup>1</sup> . . . . .	3
<b>Total:</b>	<b>18</b>

<i>Second Semester</i>	
MAT 2150 -- Differential Equations and Matrix Algebra . . . . .	4
M E 3400 -- Dynamics . . . . .	4
ECO 2010 -- (SS) Principles of Microeconomics . . . . .	3
ENG 3050 -- (IC) Technical Communication I: Report Writing . . . . .	3
Civil Engg. Technical Elective . . . . .	3

1. Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

English Proficiency Exam . . . . .	0
Critical Thinking Exam . . . . .	0
<b>Total:</b>	<b>17</b>

### Junior Year

<i>First Semester</i>	
C E 3250 -- Applied Fluid Mechanics . . . . .	4
C E 4300 -- Structures I . . . . .	4
C E 4450 -- Civil Engg. Materials . . . . .	3
C E 4850 -- Engineering Economy . . . . .	3
PHI 1100 -- (PL) Contemporary Moral Issues . . . . .	3
<b>Total:</b>	<b>17</b>

<i>Second Semester</i>	
C E 4210 -- Intro. to Environmental Engineering . . . . .	4
C E 4310 -- Structures II . . . . .	4
C E 4510 -- Introduction to Geotechnical Engineering . . . . .	4
C E 4600 -- Transportation Engineering . . . . .	4
<b>Total:</b>	<b>16</b>

### Senior Year

<i>First Semester</i>	
C E 4350 -- Design of Steel & Concrete Structures . . . . .	4
C E 4640 -- Transportation Design . . . . .	4
Design Elective . . . . .	4
HIS 1995 -- (HS) Society & the Economic Transition . . . . .	3
<b>Total:</b>	<b>15</b>

<i>Second Semester</i>	
C E 4995 -- (WI) Senior Design Project . . . . .	3
C E Technical Elective . . . . .	3
Design Elective . . . . .	4
ENG 3060 -- (OC) Technical Communication II: Writing & Speaking 3	3
ANT 3150 -- (FC) Anthropology of Business . . . . .	3
<b>Total:</b>	<b>16</b>

TOTAL CREDITS . . . . . 133

**Humanities and Social Science Electives:** See page 129 for socio-humanistic requirements.

**Technical Electives:** Civil Engineering students are required to complete at least six credits in technical electives.

**Design Electives:** Students are required to complete two courses from: C E 4220, C E 5510, C E 5520, C E 5610, C E 6340, C E 6370, C E 6580.

## UNDERGRADUATE COURSES (C E)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### 2400 (M E 2400) Statics and Mechanics of Materials. Cr. 4

Prereq: MAT 2020, PHY 2175; coreq: MSE 1300. Application of equations of static equilibrium, geometric compatibility and force-deformation in estimation of load-carrying capability of simple structural or machine elements, and in design of those elements against failure. Forces, moments, couples, equilibrium, free body diagrams, centroids, elastic relationships between external forces acting on deformable bodies and associated stresses and deformations. Behavior of structural and machine elements under axial, torsional, and flexural loading; combined stresses; column buckling. (T)

### 3010 Introduction to CAD in Civil Engineering. Cr. 3

Prereq: MAT 2020, B E 1010 or equiv. Principles of computer graphics and utilization of computers in the design process. Civil engineering applications of AutoCAD. (B)

**3070 Surveying. Cr. 3 (LCT: 2;LAB: 3)**

Prereq: PHY 2180 or consent of instructor. Principles of plane surveying; measurement of horizontal and vertical distance, directions and angles, traverses, areas. Material fee as indicated in the Schedule of Classes. (I)

**3250 Applied Fluid Mechanics. Cr. 4**

Prereq: MAT 2030. Application of theoretical fluid mechanics to problems of special interest to civil engineers including pipe flow, open channel flow, forces on submerged bodies, and flow measurement. Laboratory component of course provides experimental verification of theories and computer visualization. Material fee as indicated in the Schedule of Classes. (F)

**4210 Introduction to Environmental Engineering. Cr. 4**

Prereq: C E 3250. Introduction to environmental laws; reaction kinetics; principles of mass balances; plug-flow and completely stirred tank reactors; Stoke's Law; Streeter-Phelps oxygen sag curves; water chemistry; hydrologic cycle; population growth models; elements of soil waste management and air pollution. Material fee as indicated in the Schedule of Classes. (Y)

**4220 Water Supply and Wastewater Engineering. Cr. 4**

Prereq: C E 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 and disposal. Material fee as indicated in the Schedule of Classes. (Y)

**4300 Structures I. Cr. 4**

Prereq: M E 2400 or C E 2400. Basic concepts of structural analysis; reactions; forces and stresses in trusses and beams; influence lines; elastic deflections; introduction to indeterminate structural analysis. (F)

**4310 Structures II. Cr. 4**

Prereq: C E 4300 and 3600 or M E 3600. Analysis of structural systems. Force and displacement methods, deflections, reciprocal relations and influence lines. Introduction to plastic analysis. Computer applications. (W)

**4350 Design of Steel and Concrete Structures. Cr. 4**

Prereq: C E 4310. Behavior and design of structural steel members using LRFD. Behavior and design of reinforced concrete members using ultimate strength design. (F)

**4450 Civil Engineering Materials. Cr. 3 (LCT: 2;LAB: 3)**

Prereq: B E 1300, C E 2400, ENG 3050. Structure, composition and engineering properties of aggregates, cement concrete, asphalt, and asphalt concrete. Mix design, testing, and quality control. Non-destructive testing. Material fee as indicated in the Schedule of Classes. (F)

**4510 Introduction to Geotechnical Engineering. Cr. 4 (LCT: 3;LAB: 3)**

Prereq. or coreq: C E 4450 and 3250. Composition, engineering properties and behavior of soils. Principles of soil mechanics. Experimental determination of engineering classification, strength and deformation characteristics of natural and artificially placed soils. Material fee as indicated in the Schedule of Classes. (W)

**4600 Transportation Engineering. Cr. 4**

Prereq: B E 3220. Transportation functions; transportation systems including highways, railways and airways. Techniques of transportation systems analysis including optimization, network flows and queueing theory. Material fee as indicated in the Schedule of Classes. (W)

**4640 Transportation Design. Cr. 4**

Prereq: C E 4600. A description of design elements of various system components of transportation; including the driver, vehicle and roadway. Traffic flow design elements including volume, density and

speed; intersection design elements including delay, capacity and accident countermeasures and terminal design elements including inflow, outflow and circulation. (F)

**4850 (I E 4850) Engineering Economy. Cr. 3**

Economic analysis of engineering projects. Selection of appropriate interest rates and methods of analysis, analysis and evaluation of alternatives, depreciation and tax considerations, and use of accounting data in comparison of investment alternatives. Material fee as indicated in the Schedule of Classes. (Y)

**4990 Directed Study. Cr. 1-4 (Max. 6)**

Prereq: consent of chairperson. Supervised study and instruction in civil engineering. Written report required. (T)

**4995 (WI) Senior Design Project. Cr. 3**

Prereq: senior standing in civil engineering. Capstone design experience through civil engineering projects. Satisfies General Education Writing Intensive requirement. (W)

**5220 Sanitary Chemistry. Cr. 3**

Prereq: C E 4210. Fundamentals of chemical principles and their application to unit operations and processes encountered in the treatment of water and waste water. Material fee as indicated in the Schedule of Classes. (B)

**5350 Introduction to Structural Dynamics. Cr. 4**

Prereq: M E 3400, C E 4310. 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: C E 4310 or M E 5600. Matrix structural analysis, discretization of continuous structural systems, stress analysis. Commercial finite element software preprocessing for developing finite element models; postprocessing for evaluating analysis results. (F)

**5510 Geotechnical Engineering I. Cr. 4**

Prereq: C E 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: C E 4510. Lateral earthpressure 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)

**5580 (HWM 5580) Land Disposal of Hazardous Waste. Cr. 2**

Prereq: CHE 5510. Industrial landfill, biological methods of disposal, land disposal techniques, ocean disposal techniques, disposal of flue gas cleaning wastes. (F)

**5590 (HWM 5590) Biological Methods of Waste Disposal. Cr. 2**

Prereq: CHE 5510. Biological treatment of industrial wastes, including unit operations, solids handling and activated carbon processes. (F)

**5610 Highway Design. Cr. 4**

Prereq: C E 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 Problems. 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)

**5995 Special Topics in Civil Engineering I. Cr. 1-4**

Prereq: consent of chairperson. Topics to be announced in Schedule of Classes . (I)

**6010 Construction Organization and Management. Cr. 3**

Prereq: C E 4850 or consent of instructor. 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 Estimating. Cr. 3**

Prereq: C E 4850. Estimating construction costs of engineering projects including materials, manhours, equipment and overhead. Emphasis on construction equipment, including productivity and planning. Bidding and bid documents. (B)

**6130 Open Channel Hydraulics. Cr. 4**

Prereq: C E 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: C E 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: C E 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. (HWM 6270) Cr. 3**

Prereq: C E 4210. Review and application of techniques and practices. (Y)

**6330 Advanced Structural Analysis. Cr. 4**

Prereq: C E 4310. 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: C E 4350. 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 Reinforced and Prestressed Concrete Design. Cr. 4**

Prereq: C E 4350. 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: C E 4350. 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 Design of Waste Containment Facilities. Cr. 4**

Prereq: C E 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. 3**

Prereq: C E 4640. Principles and practices used in pavement management systems, including pavement serviceability, pavement design, priority programming. (Y)

# ELECTRICAL and COMPUTER ENGINEERING

Office: 3100 W. Engineering Building; 577-3920  
Chairperson: Y. Zhao

## Professors

R. Arrathoon (Emeritus), G. Auner, R. D. Barnard (Emeritus), M.H. Hassoun, F. Lin, J. Meisel (Emeritus), V. Mitin, M. B. Scherba (Emeritus), M. P. Shaw (Emeritus), D.J. Silversmith, H. Singh, F. Westervelt, Y. Zhao

## Associate Professors

J. S. Bedi, V. Chaudhary, R. F. Erlandson, S.M. Mahmud, P. Siy, L.Y. Wang  
J. R. Woodyard, H. Ying

## Assistant Professors

I. Avrutsky, X. Han, C.Z. Xu

## Adjunct Professors

G.R. Gerhart, L. Rimai

## Degree Programs

*BACHELOR OF SCIENCE in Electrical Engineering*

*\*MASTER OF SCIENCE in Computer Engineering*

*\*MASTER OF SCIENCE in Electrical Engineering*

*\*MASTER OF SCIENCE in Electronics and Computer Control Systems -- Interdisciplinary*

*\*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, cheaper, and more powerful computers, microprocessors, and other data processors, and their utilization in a growing range of system applications; the growing use of data communications and sophisticated satellite communication networks; the use of lasers, and the development of fiber optic and integrated optical 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 power systems; the application of electronics to health care and diagnostics (such as noninvasive measurements and ultrasound imaging); and energy conversion devices.

\* For requirements, see the Wayne State University Graduate Bulletin.

The areas of study available in the Department include: solid-state devices, lasers, integrated optics, optical computers, information sciences, digital circuits, computer engineering, integrated and active circuits, electric power systems, power electronics, bioengineering, image processing, neural networks, and modern control theory. Programs of both experimental and theoretical study are available in all these areas, as well as other interdisciplinary programs through the Electrical and Computer Engineering Department.

A more detailed exposition of the research activities of the Department is provided in a descriptive brochure available from the Departmental office. Senior students are encouraged to participate in research activities by means of independent study projects and student assistantships. Graduate students normally participate in the research program as graduate teaching assistants and research assistants.

The College of Engineering laboratory building contains seven instructional laboratories for experimental work in control systems, analog circuits, digital systems, microcomputers, power electronics, optics, and communication systems; these laboratories are an integral part of the Department's instructional program. In addition, the Departmental faculty have eight research laboratories dealing with computer systems, computer vision, semiconductor device materials including a clean-room facility, opto-electronics, machine intelligence, and computation and neural networks. Microprocessor system development forms a core for all Departmental activity. Personal computer facilities are available for student use; the College Computer Center as well as the University Computing Services Center are available to all students through individual student accounts.

## Bachelor of Science in Electrical Engineering

In addition to the Undergraduate Program Goals listed on page 127, the specific objectives of the electrical and computer engineering B.S. programs include the following:

- 1) Providing thorough coverage of relevant engineering and scientific principles.
- 2) Providing experience in the professional manner in which these principles are to be applied to engineering problems.
- 3) Developing problem-solving skills, as well as the background and confidence needed by electrical engineers to enable continuing engineering education throughout their careers.
- 4) Developing computer skills for effective use in engineering. This objective includes 'learning how to learn' modern engineering computer languages like C and C++ and the skills necessary to develop good programming and software system design practices. It also includes the development of skills for effective use of operating systems and software packages for text processing, spreadsheets, databases, graphics, design and simulation. Design and simulation experiences include ORCAD, SPICE, VHDL, Mentor Graphics CAD, and other systems.
- 5) Providing hands-on laboratory experience with state-of-the-art facilities and equipment to achieve skill and familiarity with principles of measurement, data analysis, and design of experiments. This objective includes design experience with Xilinx, Aptix, DSP, and other technologies. Problem-solving skills will be developed for analysis and design of both analog and digital circuits and systems.
- 6) Developing awareness of the societal responsibility of engineers and the essential nature of high ethical standards of professional behavior.
- 7) Providing effective engineering design experiments through active participation in design processes that present a variety of technical alternatives while considering cost, environmental, safety, and other constraints.

**Admission Requirements:** see pages 127-128 .

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science degree must complete 136 credits in course work, including satisfaction of the University General Education Requirements (see page 29), as outlined in the following curriculum. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 127-132, respectively. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin. However, students should consult an academic adviser for verification of current requirements.

In the freshman and sophomore years, the student acquires a foundation in the principles of science and mathematics required for the study of engineering. In addition, newly-revised general education studies are provided to ensure a well-rounded education. Basic concepts of electrical circuits, electronics, computers and electromagnetic fields are studied after prerequisite mathematics and science backgrounds are mastered. In the senior year, a choice of electrical and computer engineering electives permits the student to specialize in one or more areas. These electives are chosen under the guidance of a faculty adviser. Alternately, the student may elect the computer option, in which a planned program of computer engineering courses replaces the electives and a few of the required courses in the regular program.

**Substitutions:** In the curriculum below: ECO 2020 may be substituted for ECO 2010; any (HS) designated course for HIS 1995; any (AI) designated course for P S 1030; and any foreign language (FC) through 2010 for ANT 3150.

## ELECTRICAL ENGINEERING CURRICULUM

### Freshman Year

<i>First Semester</i>	<i>credits</i>
MAT 2010 -- Calculus I	4
CHM 1225 -- (PS) Chemical Structure, Bonding & Reactivity	3
CHM 1230 -- Chemical Principles in the Laboratory	1
B E 1010 -- (CL) Introduction to Computers in Engineering	3
ENG 1020 -- (BC) Introductory College Writing	4
UGE 1000 -- (GE) Information Power	1
	Total: 16

#### *Second Semester*

MAT 2020 -- Calculus II	4
PHY 2170 -- (PS) General Physics	4
PHY 2171 -- General Physics Laboratory	1
BIO 1510 -- (LS) Basic Life Mechanisms	3
B E 1300 -- Science of Engineering Materials I <sup>1</sup>	4
B E 1310 -- Science of Engineering Materials I Lab	0
P S 1030 -- (AI) The American Governmental System	3
Mathematics Proficiency Exam	0
	Total: 19

### Sophomore Year

#### *First Semester*

MAT 2030 -- Calculus III	4
PHY 2185 -- General Physics	4
B E 3220 -- Probability & Statistics in Engineering	3
ECE 2620 -- Introduction to Microcomputers	4
Visual & Performing Arts(VP) Elective	3
	Total: 18

#### *Second Semester*

MAT 2150 -- Differential Equations and Matrix Algebra	4
B E 3040 -- Computational Methods in Engineering <sup>1</sup>	3
ECE 3300 -- Introduction to Electrical Circuits	3
ECE 3310 -- Electrical Circuits: Laboratory	1
ECE 3610 -- Digital Logic I	4
ECE 3630 -- Digital Circuits Laboratory <sup>1</sup>	2
ECO 2010 -- (SS) Principles of Microeconomics	3

English Proficiency Exam	0
Critical Thinking (CT) Exam	0
	Total: 20

### Junior Year

#### *First Semester*

ECE 3330 -- Electrical Circuits II	4
ECE 3570 -- Electronics I	4
ECE 3580 -- Electronics I Laboratory	2
ENG 3050 -- (IC) Technical Communication I: Report Writing	3
HIS 1995 -- (HS) Society and the Economic Transition	3
	Total: 16

#### *Second Semester*

ECE 4330 -- Linear Network and System Analysis	4
ECE 4340 -- Microcomputer-Based Instrumentation Laboratory	2
ECE 4570 -- Electronics II	4
ENG 3060 -- (OC) Technical Communication II: Writing and Speaking	3
ANT 3150 -- (FC) Anthropology of Business	3
	Total: 16

### Senior Year

#### *First Semester*

ECE 4470 -- Control Systems I	4
ECE 4700 -- Introduction to Communication Theory	4
ECE 4800 -- Electromagnetic Fields & Waves I	4
ECE Design Laboratory Elective	2
PHI 1100 -- (PL) Contemporary Moral Issues	3
	Total: 17

#### *Second Semester*

ECE 4600 -- (WI) Microcomputer Interface Design	4
ECE Electives	8
ECE Design Laboratory Elective	2
	Total: 14
TOTAL CREDITS	136

**Life Science Requirement:** Choose from the department-approved list. Substitution of a course not on this list requires approval of the department chairperson or delegated faculty adviser.

**Laboratory Requirements:** At least fourteen credits in laboratory courses are required. These credits include three credits in chemistry and physics laboratories, one credit in ECE 2620, seven credits in other ECE laboratory courses, plus four credits in ECE Design Laboratory courses (including, but not limited to, ECE 4480, 5630, 5730), and at least one credit in another approved laboratory course.

**Design Requirement:** Portions of the credit of specific ECE courses are designated as Design Component credits. At least sixteen such credits are required: two credits in ECE Design Laboratory courses (including, but not limited to, ECE 4480, 5630, 5730), and at least fourteen credits accumulated from the Departmental list of approved design component options. A description of the current design component content of ECE courses is available from Departmental advisors. Students should review their progress toward fulfillment of the design requirement each time they receive academic program counseling.

**Withdrawal Policy:** No course may be dropped after the fourth week of classes without a written excuse.

**Course Material Fee:** A course material fee is charged for laboratory courses using expendable materials.

## OPTIONS

In the junior and senior years students may elect courses aimed at furthering education in either the *electrical* or *computer* field:

## ELECTRICAL OPTION

Electrical Option courses are as given above, in the first semester of the Senior Year:

ECE 4470 -- Control Systems I	4
ECE 4700 -- Introduction to Communication Theory	4
ECE 4480 -- Systems & Control Laboratory	4
ECE Electives	8

## COMPUTER OPTION

The Computer Option courses listed below *replace* those given above for the Electrical Option:

ECE 4610 -- Introduction to Logical Design of Computers	4
ECE 4680 -- Computer Organization	4
ECE 4700 or ECE 4800	
-- Introduction to Communication Theory	4
-- Electromagnetic Fields and Waves I	4
ECE Electives	8

## UNDERGRADUATE COURSES (ECE)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493*

### 2620 Introduction to Microcomputers. Cr. 4 (LCT: 3;LAB: 3)

Prereq: B E 1010. Basics of digital systems, number systems, functional blocks of microcomputers, assembly language and machine code, applications of microcomputers and experimental demonstrations. Introduction to digital logic. Material fee as indicated in the Schedule of Classes. (T)

### 3300 Introduction to Electrical Circuits. Cr. 3 (LCT: 3)

Prereq: PHY 2185; coreq: MAT 2150. Electrical quantities and waveforms; resistance and Ohm's law; networks and Kirchhoff's laws; network equivalents; nodal and mesh analysis; Thevenin's theorem and other network theorems. Sinusoidal steady-state response. First- and second-order systems. Introduction to sinusoidal steady-state response. (T)

### 3310 Electrical Circuits: Laboratory. Cr. 1 (LAB: 4)

Coreq: ECE 3300. Introduction to DC/AC circuits and electronic instrumentation with applications to measurements in simple electrical networks. Material fee as indicated in the Schedule of Classes. (T)

### 3330 Electrical Circuits II. Cr. 4 (LCT: 4)

Prereq: ECE 3300 and 3310, MAT 2150. Continuation of sinusoidal steady-state concepts from ECE 3300. Three-phase systems. Complex frequency concepts. Frequency response and S-plane. Resonant and coupled circuits. Two-port networks. (T)

### 3570 Electronics I. Cr. 4 (LCT: 4)

Prereq. or coreq: ECE 3330. Graphical and small signal analysis of semiconductor devices; equivalent circuits; gain and bandwidth; multi-state and feedback amplifiers; special-purpose circuits. Material fee as indicated in the Schedule of Classes. (T)

### 3580 Electronics Laboratory. Cr. 2 (LCT: 1;LAB: 3)

Prereq. or coreq: ECE 3570. Experimental investigation of semiconductor devices and their behavior in single-stage amplifier, pulse, and power circuits. Design of simple single-state circuits. Material fee as indicated in the Schedule of Classes. (T)

### 3610 Digital Logic I. Cr. 4 (LCT: 4)

Prereq: PHY 2185, ECE 2620; prereq. or coreq: MAT 2150. Introduction to Boolean algebra; switches, gates. Minimization of switching circuits, ROMs, PROMs, and PLAs. Flip-flops. Reduction and minimization of sequential machines. The state-assignment problem. Asynchronous sequential circuits. (T)

### 3630 Digital Circuits Laboratory. Cr. 2 (LCT: 1;LAB: 3)

Prereq: or coreq: ECE 3610; coreq: MAT 2150. Design of decoders and other combinatorial logic circuits, design of flip-flops, counters, shift registers, and other sequential logic circuits. Choice of logic families, interfacing different logic families. Material fee as indicated in the Schedule of Classes. (T)

### 4330 Linear Network and System Analysis. Cr. 4 (LCT: 4)

Prereq: ECE 3330. Laplace transform for complete solution of linear network or system response. Homogeneity, superposition, and time invariance properties. Convolution; Fourier analysis of periodic signals; discrete-time signals, difference equations, and z-transform methods. Formulation of equilibrium equations for electromechanical systems. Linear incremental concepts. (T)

### 4340 Microcomputer-Based Instrumentation Laboratory. Cr. 2 (LCT: 1;LAB: 3)

Prereq: ECE 3570, 3580, 3630; prereq. or coreq: 4330. Multipurpose personal-computer-based approach to real time instrumentation. Current interfacing and software used for data acquisition, transmission, analysis and report writing. Material fee as indicated in the Schedule of Classes. (T)

### 4470 Control Systems I. Cr. 4 (LCT: 4)

Prereq: ECE 4330. System representations; feedback characteristics; time-domain characteristics; Routh-Hurwitz; Root Locus Plots; Nyquist criteria, Bode plots and Nichols charts; series compensation. (T)

### 4480 Systems and Control Laboratory. Cr. 2 (LCT: 1;LAB: 3)

Prereq: ECE 4470. Response of electromechanical devices and mechanisms in open- and closed-loop systems. D.c., a.c., and digital systems with cascade and feedback compensation techniques. Material fee as indicated in the Schedule of Classes. (Y)

### 4570 Electronics II. Cr. 4 (LCT: 4)

Prereq: ECE 3300, PHY 3300, MAT 2150 for non-ECE students. Aspects of electrical properties of semiconductors, the physical electronics of P-N junction, bipolar, field effect transistors, and device fabrication technology essential to understanding semiconductor active devices and integrated circuits. Introduction to the behavior of semiconductor and electronics devices. (T)

### 4600 (WI) Microcomputer Interface Design. Cr. 4 (LCT: 4)

Prereq: ENG 3050, ECE 3610. Introduction to digital logic families, microcomputer buses, and interfacing devices: optoisolator, SCR, TRIAC, A/D, D/A, PIA, ACIA, and the like. Designing and interfacing microcomputer with real-world devices. (T)

### 4610 Introduction to Logical Design of Computers. Cr. 4 (LCT: 4)

Prereq: ECE 3610, 3570. Design of arithmetic units, counters, and registers. Design of core memories and semiconductor memories. Direct memory access circuits. Design of hardwired and microprogrammed control units. Design of a small computer. Introduction to VLSI design. (T)

### 4680 Computer Organization. Cr. 4 (LCT: 4)

Prereq: ECE 3330, 3610. Introduction to basic concepts of digital computers including representation of information, storage mechanisms, logical circuits, I/O devices and interfaces, elementary machine, special features in computers. (T)

### 4700 Introduction to Communication Theory. Cr. 4 (LCT: 4)

Prereq: I E 3220 and ECE 4330. Basic information transmission concepts. Spectral analysis. Transmission through linear networks. Sam-

pling principles. Digital and analog communication signals and systems. The effect of noise in communication systems. Elementary decision theory. (T)

**4800 Electromagnetic Fields and Waves I. Cr. 4 (LCT: 4)**

Prereq: ECE 3330. Fundamentals of electromagnetic engineering, static electric and magnetic fields using vector analysis and fields of steady currents, Maxwell's equations and boundary value problems. Basic principles of plane waves, transmission lines and radiation. (T)

**4850 Fiber Optics. Cr. 4 (LCT: 4)**

Prereq: ECE 3330. Light-wave fundamentals, optical fibers and waveguides, basic optical transmitters and receivers, couplers and switches, basic fiber optic networks, optic link design. (T)

**4990 Directed Study. Cr. 1-4 (Max. 4) (IND: 1)**

Prereq: senior standing; written approval of proposed study outline by adviser and chairperson prior to registration. Supervised study and instruction in a field selected by the student. (T)

**5020 (CSC 6620) Matrix Computation I. Cr. 4 (LCT: 4)**

Prereq: CSC 2110, CSC 2060 or equiv.; and CHE 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. (I)

**5040 Numerical Methods for Engineers. (CHE 5040) Cr. 4 (LCT: 4)**

Prereq: MAT 2150, B E 3040. Solution of ordinary and partial differential equations of engineering by modern numerical methods, including digital computation aspects. (B)

**5100 (BME 5010) Engineering Physiology. (CHE 5100) (I E 5100) (M E 5100) Cr. 4 (LCT: 4)**

Prereq: senior standing. 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)

**5120 Artificial Neural Systems I. Cr. 4**

Prereq: ECE 4330 or M E 5000. Introduction to theory, architecture and application of artificial neural systems. Supervised, unsupervised and reinforcement learning in single- and multiple-layer neural networks. Associative neural memory recording and retrieval dynamics. Self-organizing maps. Learning capacity and generalization. Hardware implementations. (Y)

**5170 (BME 5570) Design of Human Rehabilitation Systems. (I E 5170) (M E 5170) Cr. 4**

Prereq: senior standing. Design, fabrication and testing of customized hardware to aid handicapped patients. (F)

**5310 Active Filters. Cr. 4 (LCT: 4)**

Prereq: ECE 4330, 4340. Introduction to active filter design. Basic concepts in filter theory. Op. Amp. and applications. Active-RC filter synthesis. Multiloop feedback design. Computer-aided design and sensitivity optimization. (Y)

**5370 Mechatronic System Design I. (BME 5530) Cr. 4**

Prereq: ECE 4330 and 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 "clients" and the student will work as part of a cross-disciplinary team. (F)

**5380 Mechatronic System Design II. (BME 5540) Cr. 4**

Prereq: 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. (F)

**5410 Power Electronics and Control. Cr. 4 (LCT: 3)**

Prereq: 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)

**5430 Electric Energy Systems Engineering. Cr. 4 (LCT: 4)**

Prereq: 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. (I)

**5440 Computer-Controlled Systems. Cr. 4**

Prereq: ECE 4470 or CHE 4600 or M E 4400. 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)

**5460 Stochastic Processes in Engineering. Cr. 4**

Prereq: I E 3220; and ECE 4330 or M E 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. (B)

**5470 Control Systems II. Cr. 4 (LCT: 4)**

Prereq: ECE 4470; prereq. or coreq: 4480. Continuation of cascade and feedback compensation techniques using root-locus and frequency-response methods, describing functions and phase-plane techniques; introduction to the state-space formulation, Liapunov's direct method, pole-placement using state-variable feedback. (Y)

**5500 Current Electronic and Photonic Materials Technology. Cr. 4**

Prereq: ECE 4570, MSE 1300, or consent of instructor. Introduction to new and innovative technologies for electronic and photonic materials synthesis and processing. New semiconducting materials. Growth of single crystals of semiconducting materials. Semiconducting material processing techniques. (F)

**5510 Electronic and Photonic Materials Laboratory. Cr. 2**

Prereq: ECE 5500 and written consent of instructor. Laboratory experience in state-of-the-art techniques for electronic and photonic materials synthesis, processing, and characterization. (W)

**5550 Solid-State Electronics I. Cr. 4 (LCT: 4)**

Prereq: ECE 4570, 4800. Physical basis for the energy band structure of solids with particular emphasis on semiconductors and insulators. Basic principles associated with solid-state devices. Extrinsic and intrinsic semiconductors. Behavior of P-N junctions, bi-polar and field-effect transistors. (Y)

**5600 Design of Computer Languages. Cr. 4 (LCT: 4)**

Prereq: ECE 4600, 4680. Statement structure, algorithmic structure, as well as list processing, string and array manipulation; and special topics in programming languages. (Y)

**5610 Introduction to Parallel and Distributed Systems. (CSC 5350) (SCP 7300) Cr. 4**

Prereq: ECE 4680. Fundamentals of parallels and distributed systems. Programming experience in both computing environments. (F,W)

**5620 Mini- and Microcomputers. Cr. 4 (LCT: 4)**

Prereq: ECE 4600 and 4680. Treatment of the architecture and organization of microcomputers. The configuration, application and programming of several microcomputers. Design and applications of minicomputers. Processor organization, instruction set selection, memory structure and addressing methods, controller designs, hardware arithmetic functions, I/O interface, peripheral devices, applica-



tions and required software systems. Personal computers and their applications. (T)

**5630 Microcomputer Laboratory. Cr. 2 (LCT: 1;LAB: 3)**

Prereq: ECE 4340, 4600. Study of interrupt structures, interfacing with teletypes, floppy disks, cassettes, keyboards and displays, testing and evaluation of microprocessors. Design and development of complete digital systems using a microprocessor development system. Material fee as indicated in the Schedule of Classes. (T)

**5640 (CSC 6280) Advanced Operating Systems. Cr. 4**

Prereq: CSC 4420. Distributed operating system design issues including communication, synchronization, processes, file systems, and memory management; study and discussion of systems such as UNIX, MACH, AMOEBA, and CHORUS. (I)

**5650 Network Programming for Engineers. Cr. 4**

Prereq: ECE 5600 or CSC 5050 or consent of instructor; junior standing or above. Fundamentals of ethernet protocols, shell programming, network programming using sockets, remote command execution, other topics. Programming assignments give students hands-on experience. (W)

**5680 Switching Circuits. Cr. 4 (LCT: 4)**

Prereq: ECE 4610. 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: I E 3220, ECE 4330. 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 Analog and Digital Communication Circuits. Cr. 4 (LCT: 4)**

Prereq: ECE 4570 and 4700. Amplitude, frequency, pulse modulation and digital modulation. Detection, operational amplifiers; introduction to linear integrated circuits. Digital modulation. (I)

**5730 Communications Laboratory. Cr. 2 (LAB: 2)**

Prereq: ECE 4700; coreq: 5700. Analog and digital modulation techniques, pulse code modulation, delta modulation, FSK, PSK and ASK, data communication, signal processing. Material fee as indicated in the Schedule of Classes. (Y)

**5760 Fiber Optics Engineering Laboratory. Cr. 2**

Prereq: ECE 4850. Laboratory study of basic components of fiber optic systems: fibers, semiconductor lasers and light emitting diodes, photodetectors, digital and analog receivers and transmitters, filters, and couplers. (W)

**5770 Digital Signal Processing. Cr. 4 (LCT: 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 (LCT: 4)**

Prereq: ECE 4700; 4850. Laser and detectors; modulation and demodulation; optical transmitters and receivers; optical filters; optical amplifiers; architecture and network control; multiaccess networks; FDDI networks, SONET/SDH, ATM, system performance. (Y)

**5885 Security and Electronic Commerce. Cr. 4**

Prereq: ECE 5600. Basic principles of computer security and cryptography; focus on electronic commerce applications. (W)

**5990 Directed Study. Cr. 1-4 (Max. 4) (IND: 1)**

Prereq: admission to M.S. program, written approval of proposed study outline by adviser 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 (LCT: 1)**

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) (O T 6620) Cr. 4**

Prereq: consent of instructor. Principles of application of enabling technology: across life stages, for differing ethnic and cultural backgrounds, for individuals with varying functional abilities. (Y)

**6180 (BME 6480) Bioinstrumentation. (I E 6180) (M E 6180) Cr. 4 (LCT: 4)**

Prereq: ECE 3300, BME 5010 or PSL 5550, and BME 5020. Engineering principles of physiological measurements, signal conditioning equipment, amplifiers, recorders and transducers. Recent advances in instrumentation. (F)

**6550 Solid State Electronics II. Cr. 4 (LCT: 4)**

Prereq: ECE 5550. Advanced concepts on the electronic properties and fabrication of solid state devices. Semiconductor surface devices and their technology. Charge-coupled devices and integrated circuit configurations. Solid state devices in the microwave region. Avalanche diodes. Magnetism and magnetic bubbles. Solar cells and optoelectronic devices. (Y)

**6570 Smart Sensor Technology I: Design. (BME 6470) (PHY 6570) Cr. 4**

Prereq: B.S. degree in engineering or science. Various types of sensors; design of basic analog VLSI circuit building blocks. (F)

**6600 Engineering Software Design. Cr. 4 (LCT: 4)**

Prereq: CSC 3700 or ECE 5620. Software engineering principles developed and integrated to identify, modify, extend, and apply computational and information-processing methods in a variety of systems applications. Structural analysis, design and programming is assumed and integrated into an engineering systems design context. (Y)

**6640 Database Machines. Cr. 4 (LCT: 4)**

Prereq: ECE 5620. Theory, design, and applications of database machines. Hardware implementation of database functions; search, sort, relation operations, and the like. (Y)

**6660 Digital VLSI Design Using VHDL. Cr. 4 (LCT: 4)**

Prereq: ECE 4680, 5620. Behavioral, data flow, and structural VHDL modelling. Mentor Graphics tools used to simulate and generate the schematic and layout of the synthesized VHDL code. (T)

**6690 Fuzzy Systems and Applications. Cr. 4**

Prereq: I E 3220, CHE 3040. Fuzzy set theory, fuzzy measures, relations and graphs, extension principle, approximate reasoning, fuzzy neurosystems and applications in controller design, expert systems, robotics, and pattern recognition. (Y)

# INDUSTRIAL and MANUFACTURING ENGINEERING

Office: 2146 Manufacturing Engineering Building,  
4815 Fourth St.; 577-3822  
Chairperson: Frank E. Plonka

## Professors

Kenneth R. Chelst, Donald R. Falkenburg, H. Allan Knappenberger (Emeritus), Frank E. Plonka, Nanua Singh

## Associate Professors

Herbert G. Ludwig (Emeritus), Olugbenga Mejabi, Gary Wassermani, Kai Yang

## Assistant Professors

Darin Ellis, Jeffrey Lockledge, Leslie Monplesier

## Adjunct Professor

Marietta Baba

## Degree Programs

*BACHELOR OF SCIENCE in Industrial Engineering*

*\*MASTER OF SCIENCE in Industrial Engineering*

*\*MASTER OF SCIENCE in Manufacturing Engineering*

*\*MASTER OF SCIENCE in Operations Research*

*\*DOCTOR OF PHILOSOPHY with a major in Industrial Engineering*

The industrial engineer is a broadly-trained integration engineer, 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. The industrial engineer plays an important role in defining information needs and developing strategies for decision making based on incomplete knowledge. However, the skills of the industrial engineer have much greater application than to traditional production environments. In a growing service sector of the economy including health care delivery, public safety, air transportation, and banking, for example, issues of resource management, scheduling, quality of service, and systems design are important.

Traditionally, the manufacturing engineer was responsible for developing the process capability to realize the output of design engineering. Today, however, the boundary between design and manufacturing engineering is becoming blurred. Both groups work together in teams to assure the soundness of design and producibility of product. The manufacturing engineer must have an understanding of the design process, but the special expertise which is brought by the manufacturing engineer is the knowledge and understanding of the production process.

\* For requirements, consult the Wayne State University Graduate Bulletin.

Today's production is computer-based and provides flexibility through computer control. The manufacturing 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 engineer must understand the multi-layered control architecture of the integrated factory, and the computer-based technologies which enable it.

The Department maintains laboratories in systems simulation, computer-aided manufacturing, human systems, and concurrent engineering design.

## Bachelor of Science Degree in Industrial Engineering

In addition to the Undergraduate Program Goals listed on page 127, the specific goals of the industrial engineering B.S. program include the following:

- 1) The ability to design and implement computer code in a structured programming language.
- 2) The ability to apply modern tools including statistical methods, operations research, and computer simulation for systems analysis and process design.
- 3) The ability to develop the business case to justify an engineering system.
- 4) The ability to design processes, including the important roles that humans play in integrated systems.
- 5) The ability to apply modern management tools such as Total Quality Management, Continuous Improvement, Agile Production Systems, and Team Building.

**Admission Requirements:** see pages 127-128.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science degree must complete 130 credits in course work, including satisfaction of the University General Education Requirements (see page 29), as outlined in the following curriculum. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 127-132, respectively. Non-engineering courses, cited below by subject rather than by individual course numbers, indicate courses to be selected in fulfillment of University General Education Requirements. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin. However, students should consult an academic adviser for verification of current requirements.

The Bachelor of Science degree programs are built on a strong core of common courses. In the junior and senior years, students must choose a concentration leading to either the manufacturing engineering degree or the industrial engineering degree. These options are described below.

The directed elective must be approved by the undergraduate adviser. A list of courses appropriate for the directed elective is available from the Department.

**Prerequisites for I E 4800, Engineering Design Project:** I E 4800 is a capstone course and is intended to build on the knowledge that the student has accumulated throughout the undergraduate program. In order to qualify to take I E 4800 the student must complete at least six of the following seven core courses: B E 3220, I E 4250, I E 4310, I E 4420, I E 4850, I E 5260, I E 5560. One of the six may be taken concurrently with the engineering design project. In addition, the student must complete at least two of the four I E electives, one of which may be taken concurrently with I E 4800.

**Substitutions:** In the curriculum below: ECO 2020 may be substituted for ECO 2010; any (HS) designated course for HIS 1995; any (AI) designated course for P S 1030; and any foreign language (FC) through 2010 for ANT 3150.

## Freshman Year

<i>First Semester</i>	<i>credits</i>
MAT 2010 -- Calculus I	4
CHM 1225 -- (PS) Chemical Structure, Bonding & Reactivity	3
CHM 1230 -- Chemical Principles in the Laboratory	1
ENG 1020 -- (BC) Introductory College Writing	4
UGE 1000 -- (GE) Information Power	1
B E 1010 -- (CL) Introduction to Computers in Engineering	3
<b>Total:</b>	<b>16</b>

<i>Second Semester</i>	
MAT 2020 -- Calculus II	4
PHY 2175 --(PS) General Physics	4
B E 1300 -- Science of Engineering Materials I <sup>1</sup>	4
B E 1310 -- Science of Engineering Materials I Lab	0
B E 1100 -- Introduction to Engineering	3
P S 1030 -- (AI) The American Governmental System	3
Mathematics Proficiency Exam	0
<b>Total:</b>	<b>18</b>

## Sophomore Year

<i>First Semester</i>	
MAT 2030 -- Calculus III	4
PHY 2185 -- General Physics	4
M E 2400 -- Statics & Mechanics of Materials <sup>1</sup>	4
B E 3220 -- Probability and Statistics in Engineering	3
Visual and Performing Arts (VP) elective	3
<b>Total:</b>	<b>18</b>

<i>Second Semester</i>	
MAT 2150 -- Differential Equations and Matrix Algebra	4
B E 3040 -- Computational Methods in Engineering <sup>1</sup>	3
I E 4250 -- Engineering Data Analysis	4
ECO 2010 -- (SS) Principles of Microeconomics	3
BIO 1510 -- (LS) Basic Life Mechanisms	3
English Proficiency Exam	0
Critical Thinking (CT) Exam	0
<b>Total:</b>	<b>17</b>

## Junior Year

<i>First Semester</i>	
M E 2210 -- Thermodynamics: Theory & Lab	4
I E 4850 -- Engineering Economy	3
I E 3120 -- Work Environment	4
ENG 3050 -- (IC) Technical Communication I: Report Writing	3
HIS 1995 -- (HS) Society and the Economic Transition	3
<b>Total:</b>	<b>17</b>

<i>Second Semester</i>	
I E 4420 -- Systems and Simulation	4
I E 5560 -- Operations Research	4
ENG 3060 -- (OC) Technical Communication II: Writing & Speaking	3
ECE 3300 -- Introduction to Electrical Circuits	3
ECE 3310 -- Electrical Circuits Laboratory	1
<b>Total:</b>	<b>15</b>

## Senior Year

<i>First Semester</i>	
I E Technical Elective	4
I E Technical Elective	4
I E 5260 -- Principles of Quality Control	4
ANT 3150 -- (FC) Anthropology of Business	3
<b>Total:</b>	<b>15</b>

### *Second Semester*

I E 4800 -- Engineering Design Project	4
I E 4310 -- (WI) Production Control	4
Directed Elective	3
PHI 1100 -- (PL) Contemporary Moral Issues	3
<b>Total:</b>	<b>14</b>

TOTAL CREDITS..... 130

## MANUFACTURING OPTION

Students wishing to complete a course of study with a manufacturing option should elect the following courses as the I E electives and Directed Elective:

I E 3450 -- (M E 3450) Manufacturing Processes I	3
I E 4450 -- Concurrent Engineering Design	4
I E 4410 -- Computer Aided Manufacture	4

## UNDERGRADUATE COURSES (I E)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### **3120 The Work Environment. Cr. 4**

Prereq: I E 3220. Role of the human as an element of the work environment. Traditional issues of work standards, productivity analysis and occupational safety are introduced. Examination of functional and organizational role of the worker; impact of emerging computer-based technologies on work design and implementation strategies is discussed. (Y)

### **3450 (M E 3450) Manufacturing Processes I. Cr. 3**

Prereq: M E 2400. A study of the field of manufacturing processes from a mechanical engineering design standpoint. Topics include: processing of metals, polymers, and ceramics, and computer-aided manufacturing. Material fee as indicated in the Schedule of Classes. (Y)

### **4250 Engineering Data Analysis. Cr. 4**

Prereq: I E 3220. Advanced concepts for the analysis of variability in engineering problems, multivariate distributions, hypothesis testing, non-parametric statistics, point and interval estimation, fitting straight lines, goodness of fit tests, contingency tables and introduction to the analysis of variance. (W)

### **4310 (WI) Production Control. Cr. 4**

Prereq: I E 5560, ENG 3050, I E 4250. The design of production planning and control systems. Materials management, forecasting, planning, scheduling of production systems, the planning and scheduling for large scale projects and introduction to the design of computerized materials management systems. Applications of operations research models to production control problems. (Y)

### **4330 Facilities Design. Cr. 4**

Prereq: I E 3120, 4310, 4870. Design of manufacturing, warehouse and material handling facilities. Use of analytic and computer-aided methods in the facilities design process. (Y)

### **4410 Computer Aided Manufacture. Cr. 4**

Prereq: B E 1010. The use of microprocessors in the design of computer-aided manufacturing systems. A design project involving software development and the construction of a physical simulation is required. (Y)

1. Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

**4420 Systems Simulation. Cr. 4**

Prereq: I E 3220, B E 1010. Systems modeling and discrete event simulation. Methodology applied to analysis and design of a broad range of systems including both production and service systems. Computer assignments and a term project are required. (Y)

**4450 Concurrent Engineering Design. Cr. 4**

Prereq: I E 3450. Integration of product and process design. Topics include: design for manufacture, design for assembly, material selection and producibility. Introduction to a strategic approach to product design which integrates technical aspects of product design with basic issues of manufacturing system design. (Y)

**4800 Engineering Design Project. Cr. 4**

Prereq: I E 4250, 4310, 4870, 5560. An intensive design experience defined and executed by the student; course serves both industrial engineering and manufacturing engineering branches of the curriculum. (Y)

**4850 Engineering Economy. (C E 4850) Cr. 3**

Economic analysis of engineering projects. Selection of appropriate interest rates and methods of analysis, analysis and evaluation of alternatives, depreciation and tax considerations, and use of accounting data in comparison of investment alternatives. Material fee as indicated in the Schedule of Classes. (Y)

**4990 Directed Study. Cr. 1-6**

Prereq: senior standing; consent of chairperson; outline of proposed study approved by instructor and chairperson prior to election of course. Supervised study and instruction in a field selected by the student. (B)

**5100 (BME 5010) Engineering Physiology. (CHE 5100) (ECE 5100) (M E 5100) Cr. 4**

Prereq: senior standing. 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)

**5170 (BME 5570) Design of Human Rehabilitation Systems. (ECE 5170) (M E 5170) Cr. 4**

Prereq: senior standing. Design, fabrication and testing of customized hardware to aid handicapped patients. (F)

**5260 Principles of Quality Control. Cr. 4**

Prereq: I E 3220. Statistical quality control including process capability, control charts, and acceptance sampling procedures. Procedures for measurement of dimensional tolerance are introduced. Computer-based data collection and analysis. (Y)

**5560 Operations Research. Cr. 4**

Prereq: I E 3220, MAT 2150. An introduction to the philosophy of operations research. Formulation of linear programming models and their solution. Duality and sensitivity analysis. The transportation model. Introduction to probabilistic modeling and applications of queueing models. (F)

**6140 Electronic Manufacturing. Cr. 4**

Thick film hybrid, and printed wire board. Technologies, processes, materials, equipment; process design guidelines, electronics industrial standards, statistical process control methods. (Y)

**6150 Semiconductor Manufacturing. Cr. 4**

Wafer fabrication and IC packaging. Process design guidelines, standards, statistical process control methods. (Y)

**6180 (BME 6480) Bioinstrumentation. (ECE 6180) (M E 6180) Cr. 4**

Prereq: ECE 3300, BME 5010 or PSL 5550, and BME 5020. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (I)

**6210 Probability Models and Data Analysis. Cr. 4**

Prereq: MAT 2040. No credit after I E 5250. Analysis of variability in engineering decision making; data analysis, probabilistic models, expectation, joint distributions, confidence limits and hypothesis testing. (F)

**6240 Quality Management Systems. Cr. 4**

Prereq: I E 3220 or 6210. Survey of topics relating to effective management of a product assurance organization. Two team-design projects assigned. (W)

**6260 Reliability and Quality Control. Cr. 4**

Prereq: I E 4250 or 6210. Introduction to product assurance in engineering design and manufacturing: system reliability models, life testing strategies, use of the exponential and Weibull distributions, process capability analysis, control charts, sampling plans, organization and economics. (F)

**6270 Engineering Experimental Design. Cr. 4**

Prereq: I E 4250 or 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. (W)

**6310 Production Systems I. Cr. 4**

Prereq: I E 6210. No credit after I E 4310 or I E 4330. Fundamental theories and concepts in the design and operation of production systems for manufacturing and service organization. (W)

**6420 Computer Aided Manufacturing II. Cr. 4**

Prereq: I E 4410 or consent of instructor. The integration of automated manufacturing systems into large manufacturing cells with emphasis on distributed processing problems, hierarchical control structures and interaction with a manufacturing data base. (F)

**6430 Computer Simulation Methods. Cr. 4**

Prereq: I E 4250 or 6210 and computer programming experience. 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)

**6450 (M E 6450) Advanced Manufacturing Processes and Methods. Cr. 4**

Prereq: M E 3450, CHE 3040, or consent of instructor. Review of novel manufacturing processes, methods and systems; emphasis on optimum design for manufacturability, technical, economic, and industrial limitations. Elements of computer-aided manufacturing, and numerical methods application. (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)

**6510 Information Systems for the Manufacturing Enterprise. Cr. 2**

Methods for information flow modeling. Information needs of global manufacturer: design, testing, manufacture, delivery. Partnership relation to suppliers via information. (Y)

# MECHANICAL ENGINEERING

Office: 2100 W. Engineering Building; 577-3845

Chairperson: K. A. Kline

Associate Chairperson: T. Singh

## Professors

V.L. Berdichevsky, C. N. DeSilva (Emeritus), R. Gibson, N. A. Henein, R. A. Ibrahim, A. I. King (Distinguished Professor), K. A. Kline, M.C. Lai, G.M. Newaz, R. A. Piccirelli (Emeritus), E. Rivin, T. Singh, D. Taraza, A. B. Whitman, S.F. Wu

## Associate Professors

E.O. Ayorinde, J. Cavanaugh, N. Chalhoub, M. G. Koenig (Emeritus), J.C. Ku, S. Liu, C.A. Tan, K.H. Yang, S.T. Yu, E. C. Zobel (Emeritus)

## Assistant Professors

M. Grimm, X. Wu

## Adjunct Professors

B. Abdunnour, J. Agapiou, D.D. Ardayfio, W. Bryzik, B. Gans, J. Hassan, R. S. Levine, K.N. Morman, S. Nagesh, D. Schmueser, R. Stevenson, S. Tung, D. Viano, A. Zeid

## Adjunct Associate Professors

T. Khalil, D.M. Lawson, J.W. Melvin, D.G. Penney, J.A. Sedensky

## Degree Programs

*BACHELOR OF SCIENCE in Mechanical Engineering*

*\*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 many and diverse. 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 of a device that will be duplicated a million-fold or in the control optimization of a single complex system of unique design. To prepare undergraduate students for these opportunities, the Wayne State University Mechanical Engineering curriculum is designed to give a basic core education in the humanities, mathematics, natural sciences, basic applied sciences, engineering fundamentals, and to provide advanced electives in many applied fields.

Fields of departmental expertise include such important areas as bio-mechanics, energy conversion, combustion engines, emissions controls, structural analysis, automatic controls, robotics, thermodynamics, continuum mechanics, fluid dynamics, vibrations, heat transfer, mechanisms, acoustics and noise control, design, machine tool design, manufacturing, laser diagnostics, and mechanics of composite materials. Research and teaching is carried out in all of these areas.

\* For requirements, consult the Wayne State University Graduate Bulletin.

## Bachelor of Science in Mechanical Engineering

The Bachelor of Science in Mechanical Engineering is accredited by the Accreditation Board for Engineering and Technology.

In addition to the Undergraduate Program Goals listed on page 127, the specific goals of the mechanical engineering B.S. program include the following:

Mechanical engineering B.S. graduates will be able to apply basic engineering principles to identify and solve problems, and to design, specify the manufacturing of, and evaluate the performance of mechanical systems and processes.

### Program Educational Objectives:

The main objective of the undergraduate program is to provide an outstanding curriculum and learning environment, so that undergraduates who have earned the B.S. will:

- 1) be able to understand scientific principles and apply them to the practice of engineering;
- 2) be able to communicate effectively;
- 3) possess the problem-solving skills, background, and confidence necessary to continue self-education throughout their careers;
- 4) be able to apply computers as tools for engineering;
- 5) be able to apply the basic principles of measurement, data analysis, and design of experiments learned through hands-on laboratory experience;
- 6) be able to practice engineering with ethical standards and a sense of responsibility to society;
- 7) be able to develop creative solutions to engineering problems;
- 8) be able to work well as part of a team;
- 9) be able to apply the design process to engineering problems, including the consideration of different technical alternatives, while bearing in mind cost, environmental concerns, safety, and other constraints;
- 10) be able, based on their first-hand experience, to analyze, construct, test, and evaluate an engineering design.

In support of these educational objectives, faculty members will seek outstanding levels of achievement in their research and engineering practices. To further foster professionalism, the Department encourages students to be active participants in ASME, Pi Tau Sigma, SAE and other student professional organizations.

**Admission Requirements:** see pages 127-128. All entering freshmen are initially advised by the Associate Chairperson of the Department. Subsequently, at the end of the sophomore year the student may be assigned a different Department faculty member as an adviser for the last two years. The student and adviser together plan a complete program of study, including electives, which meets departmental requirements and the interests of the individual student. Three technical electives must be chosen from among the 5000 level courses offered by the Mechanical Engineering Department. These may include advanced (second) courses in strength of materials, fluid mechanics, approximate methods of analysis, automatic controls, or vibrations; or they may build on prior sequences such as thermodynamics and heat transfer or mechanical design and mechanisms; or they may be in new directions such as acoustics, biomechanics, engine combustion, or directed study and research in an area of mutual interest to the student and a faculty member.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science degree must complete 136 credits in course work, including the University General Education Requirements (see page 29), as outlined in the following curriculum. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15 -46 and 127-132, respectively.

Evening courses and cooperative programs allow professionals working in local industry to pursue an undergraduate degree while continuing employment. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin; however, students should consult an academic adviser for verification of current requirements.

**Substitutions:** In the curriculum below: ECO 2020 may be substituted for ECO 2010; any (HS) designated course for HIS 1995; any (AI) designated course for P S 1030; and any foreign language (FC) through 2010 for ANT 3150.

## MECHANICAL ENGINEERING CURRICULUM

### Freshman Year

First Semester	credits
MAT 2010 -- Calculus I	4
CHM 1225 -- (PS) Chemical Structure, Bonding & Reactivity	3
CHM 1230 -- Chemical Principles in the Laboratory	1
ENG 1020 -- (BC) Introductory College Writing	4
UGE 1000 -- (GE) Information Power	1
B E 1010 -- (CL) Introduction to Computers in Engineering	3
	Total: 16

### Second Semester

M E 2050 -- Introduction to Computer-Aided Mechanical Drafting	2
B E 2060 -- Introduction to Engineering Design & Problem Solving	2
MAT 2020 -- Calculus II	4
PHY 2175 -- (PS) General Physics	4
B E 1300 -- Science of Engineering Materials I	4
B E 1310 -- Science of Engineering Materials I Lab	0
Mathematics Proficiency Exam	0
	Total: 16

### Sophomore Year

First Semester	credits
MAT 2030 -- Calculus III	4
PHY 2185 -- General Physics	4
M E 2400 -- Statics and Mechanics of Materials	4
M E 2210 -- Thermodynamics: Theory and Lab	4
ECO 2010 -- (SS) Principles of Microeconomics	3
	Total: 19

### Second Semester

M E 3400 -- Dynamics	4
MAT 2150 -- Differential Equations and Matrix Algebra	4
B E 3220 -- Probability and Statistics in Engineering <sup>1</sup>	3
ECE 3300 -- Introduction to Electrical Circuits	3
ECE 3310 -- Electrical Circuits: Laboratory	1
ENG 3050 -- (OC) Technical Communication I: Report Writing	3
English Proficiency Exam	0
Critical Thinking (CT) Exam	0
	Total: 18

### Junior Year

First Semester	credits
M E 3450 -- Manufacturing Processes I	3
M E 3300 -- Fluid Mechanics, Theory and Lab	4
ENG 3060 -- (OC) Technical Communication II: Writing & Speaking	3
M E 3480 -- Design of Machine Elements	4
B E 3040 -- Computational Methods in Engineering <sup>1</sup>	3
	Total: 17

### Second Semester

M E 4991 -- Heat Transfer Theory and Lab	4
M E 4993 -- Vibrations Theory and Lab	4

1. Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

M E 4250 -- Mechanical Engineering Design I	4
PHI 1100 -- (PL) Contemporary Moral Issues	3
Visual and Performing Arts (VP) elective	3
	Total: 18

### Senior Year

#### First Semester

M E 4300 -- Thermal Fluid Systems Design	4
Mechanical Engineering Technical Electives	8
HIS 1995 -- (HS) Society and the Economic Transition	3
P S 1030 -- (AI) The American Governmental System	3
	Total: 18

#### Second Semester

M E 4500 -- (WI) Mechanical Engineering Design II	4
ANT 3150 -- (FC) Anthropology of Business	3
BIO 1510 -- (LS) Basic Life Mechanisms	3
M E Technical Elective	4
	Total: 14

TOTAL CREDITS: 136

**Technical Electives** must be selected from the Mechanical Engineering Department at the 5000 level.

## UNDERGRADUATE COURSES (M E)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### 2050 Introduction to Computer-Aided Mechanical Drafting. Cr. 2

Prereq: B E 1010. Introduction to CAD system using available software system at the college computer center, including AutoCAD. (F,W)

### 2210 Thermodynamics: Theory and Laboratory. Cr. 4

Prereq: MAT 2020, PHY 2175; coreq: B E 1010. Transformation of heat energy to other energy forms. Introduction to basic concepts and laws of thermodynamics. Description of thermodynamic properties and processes for simple substances. Applications to energy conversion systems, power and refrigeration cycles. Laboratory experiments to supplement lectures; lab arranged. Material fee as indicated in the Schedule of Classes. (F,W)

### 2400 Statics and Mechanics of Materials. (C E 2400) Cr. 4

Prereq: MAT 2020, PHY 2175; coreq: MSE 1300. Application of equations of static equilibrium, geometric compatibility and force-deformation in estimation of load-carrying capability of simple structural or machine elements, and in design of those elements against failure. Forces, moments, couples, equilibrium, free body diagrams, centroids, elastic relationships between external forces acting on deformable bodies and associated stresses and deformations. Behavior of structural and machine elements under axial, torsional, and flexural loading; combined stresses; column buckling. (T)

### 3300 Fluid Mechanics: Theory and Laboratory. Cr. 4

Prereq: M E 2210, 2400; MAT 2350 or MAT 2150. Introduction to the nature and physical properties of fluids, statics, equation of motion, incompressible inviscid flow, dimensional analysis, incompressible one-dimensional compressible channel flow. Experiments to supplement lectures. (F,W)

### 3400 Dynamics. Cr. 4

Prereq: M E 2400. Basic concepts and principles of dynamics with application of Newton's Laws of Motion to engineering problems. Kinematics and kinetics of particles and rigid and variable-mass bodies. Equations of motion, impulse-momentum principles, impact and work-energy principles. (F,W)

**3450 Manufacturing Processes I. (I E 3450) Cr. 3**

Prereq: M E 2400. A study of the field of manufacturing processes from a mechanical engineering design standpoint. Topics include: processing of metals, polymers and ceramics, and computer-aided manufacturing. Material fee as indicated in the Schedule of Classes. (F,W)

**3480 Design of Machine Elements. Cr. 4**

Prereq: B E 2060, M E 2050, M E 2400, I E 3220. Static body stresses, strain and deflection, failure theories, introduction to impact loading and fatigue. Design of common mechanical elements: threaded fasteners, rivets, welding and bonding, springs, lubrication and sliding bearings, rolling element bearings. Material fee as indicated in the Schedule of Classes. (W,S)

**4250 Mechanical Engineering Design I. Cr. 4**

Prereq: M E 3450, M E 3480, ENG 3050. Engineering analysis of design case histories through the application of familiar engineering principles and methods. Critical evaluation of previously designed systems, and recommendations for possible improvement, in written and oral student reports. (F,W)

**4300 Thermal Fluid Systems Design. Cr. 4**

Prereq: M E 4991; ENG 3060; CHE 3040. Design of thermal-fluid systems to meet system performance requirements, computer-aided design, system simulation, design optimization including investment economics. Material fee as indicated in the Schedule of Classes. (F,W)

**4500 (WI) Mechanical Engineering Design II. Cr. 4**

Prereq: M E 3400, 4250, 4300; coreq: M E 4993. Students work in teams on a semester-long open-ended design project in which elements and subsystems are synthesized into larger systems. Formal written report required at the end of the project. Where applicable, hardware will be fabricated and tested. Material fee as indicated in the Schedule of Classes. (F,W)

**4991 Heat Transfer: Theory and Laboratory. Cr. 4**

Prereq: M E 3300, ENG 3050, and I E 3220. Fundamental concepts and basic modes of heat transfer. General equation of heat conduction, steady state heat conduction on one and more dimensions. Transient heat conduction. Heat transfer by radiation, Kirchoff's law and the black body. Radiation between diffuse surfaces. Radiation from gases, vapors and flames. Introduction to heat convection; concept of heat transfer coefficient and nusselt number. Lab experiments to supplement lectures. Material fee as indicated in the Schedule of Classes. (F,W)

**4993 Vibrations: Theory and Laboratory. Cr. 4**

Prereq: M E 3400, MAT 2150 or 2350, ENG 3050, I E 3220. Fundamentals of dynamic principles, energy relation and Rayleigh's principle. Undamped and damped free vibration of one degree of freedom systems. Forced vibrations with harmonic excitation. Vibration isolation, critical speed of shafting. Experiments to supplement theory. Material fee as indicated in the Schedule of Classes. (F,W)

**5000 Engineering Analysis I. Cr. 4**

Prereq: MAT 2150 and senior standing. Applications of ordinary differential equations. The method of Frobenius, Bessel functions, Legendre polynomials. Orthogonality of characteristic functions. Fourier series and Fourier integrals. Characteristics and solutions of partial differential equations. Method of separation of variables. Applications to initial and boundary value problems in engineering. Material fee as indicated in the Schedule of Classes. (F)

**5010 Engineering Analysis II. Cr. 4**

Prereq: MAT 2040 and senior standing. Basic operations of complex numbers. Analytic functions and Cauchy-Riemann conditions. Cauchy and Goursat theorem. Residue theorem. Conformal mapping and its applications. Schwarz-Christoffel transformation. Basic properties of the Laplace transformation. Convolution integral. Applica-

tions to mechanical and electrical engineering problems. Material fee as indicated in the Schedule of Classes. (W)

**5035 Applications of Finite Element Analysis in Design and Manufacturing. Cr. 4**

Prereq: M E 3600. Finite element methods applied in design and manufacturing processes practiced through the usage of state-of-the-art software packages. Analyses will include static analyses, non-linear analyses, thermal and fluid analyses, and modal analyses. (F)

**5040 Finite Element Methods I. Cr. 4**

Prereq: M E 2400; MAT 2150 or 2350. Introduction to finite element methods. Energy theorems, variational methods, review of equations from solid mechanics, displacement model of a single element, assemblage of elements. Detailed examples of problems in structural analysis, in part using the NISA general purpose computer code. Plane strain and plane stress elements, solid elements. (F,W)

**5100 (BME 5010) Engineering Physiology. (CHE 5100) (ECE 5100) (I E 5100) Cr. 4**

Prereq: senior standing. 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)

**5160 (BME 5210) Musculoskeletal Biomechanics. Cr. 4**

Prereq: BME 5010 or PSL 5550; M E 2400. 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 (BME 5570) Design of Human Rehabilitation Systems. (ECE 5170) (I E 5170) Cr. 4**

Prereq: senior standing. Design, fabrication and testing of customized hardware to aid handicapped patients. (F)

**5180 (BME 5370) Introduction to Biomaterials. (MSE 5180) Cr. 4**

Prereq: B E 1300, BME 5010 or PSL 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. (B)

**5210 Convective and Radiative Heat Transfer. Cr. 4**

Prereq: M E 4200. Radiative processes and properties of solids. Radiative heat transfer among surfaces in an enclosure. Introduction to gas radiation. Derivation of the energy equation for laminar flows. Application of semi-empirical correlation for forced and free convection of laminar and turbulent flows. Some analytical methods for convective heat transfer. Heat exchange analysis. (F)

**5300 Intermediate Fluid Mechanics. Cr. 4**

Prereq: M E 3300. Introduction to continua. Integral and differential equations of motion. Ideal flow theory. Flow over blunt bodies. Introduction to boundary layer. Sound waves. Compressible flows. (F)

**5330 Advanced Thermal Fluid System Design. Cr. 4**

Prereq: M E 4991, CHE 3040; ENG 3060 and senior standing in AGRADE program. Design of thermal fluid systems to meet system performance requirements, system simulation, design optimization and economics limitations. Material fee as indicated in the Schedule of Classes. (F/W)

**5400 Dynamics II. Cr. 4**

Prereq: M E 3400. Kinematics and rigid bodies in space. Classical particle solutions: central force, motion on a surface of revolution, spherical pendulum. Energy and momentum integrals. Equations of motion in general rotating coordinate frames. Euler angles, angular momentum and kinetic energy of rigid bodies. Fixed point motion, steady solutions. Applications to spatial motions of rigid bodies. Material fee as indicated in the Schedule of Classes. (F)

**5410 Vibrations II. Cr. 4**

Prereq: M E 4993. Multidegree-of-freedom systems. Eigenvectors and eigenvalues and orthogonality of normal modes. Mode-summation method. Solution to forced vibrations by Laplace transforms, numerical methods and Continuous Systems Modeling Program (CSMP). Rayleigh's principle and Dunkerley formula for approximate frequencies. Torsional geared and branched systems. Log ranges equations. Vibration of continuous systems: longitudinal and transverse vibrations of beams; torsional vibrations, vibrating string and membranes. (F)

**5440 Industrial Noise Control. Cr. 4**

Prereq: senior standing or consent of instructor. Nature and origin of noise in mechanical systems and design for their control. Measurement of sound pressure levels, sound power levels, sound intensity levels, reverberation time, absorption coefficients of materials. (B:W)

**5460 Fundamentals in Acoustics and Noise Control. Cr. 4**

Prereq: senior or graduate standing. Videotapes and multimedia materials on sound generation, propagation and interaction with solid boundaries. Fundamental theories of sound radiation and control; solving practical engineering noise and vibration problems. (B:F)

**5470 Creative Problem Solving in Design and Manufacturing. Cr. 4**

Coreq: M E 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. (W)

**5500 Advanced Engineering Design. Cr. 4**

Prereq: M E 4250 and 5330. Open only to AGRADE students. Team work on semester-long project, design concepts to be developed using various design theories, students perform patent literature search, design, fabricate and test prototypes. Final written report and public presentation required. Material fee as indicated in the Schedule of Classes. (F,W)

**5540 Analysis and Control of Dynamic Systems. Cr. 4**

Prereq: MAT 2350 or MAT 2040, M E 3400. Mathematical modeling of linear, lumped, time-invariant systems, open and closed loop systems, single-input-single-output system design using root locus method. (F,W)

**5600 Advanced Mechanics of Materials. Cr. 4**

Prereq: M E 2400. Statically indeterminate problems. Force method. Displacement methods. The three-moment equation. Euler formulas for columns. Column formulas for concentric and eccentric loadings. Energy methods and applications. Unsymmetrical bending of beams. Shear center. Bending of curved bars. Thick-walled cylinders. Torsion of non-cylinders. Rotating discs. Torsion of non-circular shafts. Membrane analogy. (W)

**5610 Experimental Mechanics of Materials. Cr. 4**

Prereq: M E 2400. Experimental characterization of mechanical behavior. Instrumentation and measurement of load, strain, deflection, etc., characterization of creep, fracture toughness, dynamic-mechanical response (damping and vibration). Statistical analysis of data. (W)

**5620 Fracture Mechanics in Engineering Design. Cr. 4**

Prereq: M E 2400. Linear and nonlinear fracture mechanics principles and their applications to structural design. Stress-intensity factors, J-integral, CTOD concepts to develop fracture control plans. (Y)

**5700 Fundamentals of Mechanics. Cr. 4**

Prereq: MAT 5070. Cartesian tensor analysis, integral theorems, invariants. Kinematics: material derivative, transport theorem, streamlines, associated theorems, motion gradient and deformation measures; material derivative, transport theorem; stretching and

spin; vorticity and circulation. Balance postulates: mass, linear momentum, angular momentum, energy. Constitutive equations: invariance, material isotropy group. Material fee as indicated in the Schedule of Classes. (F)

**5720 Mechanics of Composite Materials. Cr. 4**

Prereq: M E 2400, senior standing. Analytical modeling of micromechanical and macromechanical behavior of composite materials. Stiffness, strength, hydrothermal effects, laminate analysis, viscoelastic and dynamic behavior. Experimental characterization of mechanical behavior. (F)

**5730 Tribology and Lubrication Technology. Cr. 4**

Prereq: M E 2400. Friction, wear, and lubrication fundamentals: wear mechanisms, application of coatings, surface engineering fundamentals. (Y)

**5800 Combustion Engines. Cr. 4**

Prereq: M E 2200 and 2210 or equiv. Thermodynamics and cycle analysis of spark ignition, compression ignition, and gas turbine engines. Combustion processes in actual systems, performance characteristics, combustion abnormalities. Analysis of intake, fuel and exhaust systems. (F)

**5810 Combustion and Emissions. Cr. 4**

Prereq: M E 5800; or consent of instructor. 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, particulates. Effect of design parameters and engine operating variables on emission formation. Emission controls and instrumentation. (W)

**5820 Thermal Environmental Engineering. Cr. 4**

Prereq: M E 3200 and 4200. Design and analysis of heating, ventilating and air-conditioning systems. Moist air properties calculations, heat transfer and transmission coefficients, heating load, cooling load, heating equipment and cooling equipment, duct design, fans, air distribution, systems design and analysis, refrigeration principles. (S)

**5900 National Design Competition Projects. Cr. 1-4 (Max. 6)**

Prereq: written consent of director of undergraduate studies or graduate students' adviser. (T)

**5990 Directed Study. Cr. 1-4 (Max. 6)**

Prereq: Senior or graduate standing; seniors: written consent of adviser and chairperson; graduates: written consent of adviser, chairperson, and Engineering Graduate Office for Master's students. Open only to seniors and graduate students. (T)

**5992 Research Experiences for Undergraduates. Cr. 1-4 (Max. 6)**

Prereq: written consent of instructor and director of undergraduate studies. (I)

**5995 Special Topics in Mechanical Engineering I. Cr. 1-4**

Prereq: consent of chairperson. 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) Bioinstrumentation. (ECE 6180) (I E 6180) Cr. 4**

Prereq: ECE 3300, BME 5010 or PSL 5550, and BME 5020. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (F)

**6450 Advanced Manufacturing Processes and Methods. (I E 6450) Cr. 4**

Prereq: M E 3450, CHE 3040, or consent of instructor. Review of novel manufacturing processes, methods and systems; emphasis on optimum design for manufacturability, technical, economic, and



industrial limitations. Elements of computer-aided manufacturing, and numerical methods application. (W)

**6550 Modeling and Control of Dynamic Systems. Cr. 4**

Prereq: M E 5540. Modeling and analysis of physical systems comprised of interconnected mechanical, electrical, hydraulic and thermal devices; bond graphs; introduction to state-space equations and closed loop system dynamics. Material fee as indicated in the Schedule of Classes. (W)

**6991 Internship in Industry. Cr. 1-4 (Max. 4)**

Prereq: senior or graduate standing. Offered for S and U grades only. Presentation of oral and written material to peer group, describing internship experience. (T)

# DIVISION of ENGINEERING TECHNOLOGY

Office: 4855 Fourth Street; 577-0800

Chairperson: Mulchand S. Rathod

## *Professors*

Mulchand S. Rathod, Donald V. Stocker (Emeritus)

## *Associate Professors*

Seymour Cuker (Emeritus), Vladimir Sheyman, Mukasa E. Ssemakula, Ece Yaprak, Chih-Ping Yeh

## *Assistant Professor*

Radian Belu

## *Part-Time Faculty*

Francis Achampong, Mohammed Boussoufi, Abraham Choucair, Gary Cleary, Cedrick Dukes, Abbas Enteshari, Yavuz Goktas, Bryce Grevemeyer, Jay Hazra, Sudhakar Inguva, Gaoliang Lin, Charles Loehner, Ernie Luttrell, G.V. Narayan, Bob Opalinski, Sandra Overway, Sittaram Patabhi, Ravi Rao, Anthony Slominis, Tommy White

## Degree Programs

### *BACHELOR OF SCIENCE in Computer Technology*

*BACHELOR OF SCIENCE in Engineering Technology with major curricula in Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, Manufacturing/Industrial Engineering Technology, Mechanical Engineering Technology, and Product Design Engineering Technology*

### *BACHELOR OF SCIENCE in Manufacturing Engineering Technology*

### *MASTER OF SCIENCE in Engineering Technology*

The Division of Engineering Technology was founded in 1973 and offers an upper-division (junior and senior level) program and a graduate program. It stresses the applications of current technology to typical industrial problems. Entering students in the upper division program are assumed to have a background equivalent to an associate degree in engineering technology or in a related discipline. The program complements a community college education by providing more application-oriented analytical techniques. In the curriculum a close relationship is maintained between the theoretical principles taught in the classroom and their applications in corresponding laboratories.

Engineering technology is a profession closely related to engineering and deals with the application of knowledge and skill 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. They are responsible for work requiring technical and practical knowledge. They can apply their abilities in using technical equipment, selling technical products, serving as manufacturers' technical representatives, or supervising varied construction projects and manufacturing processes. They work with engineers in many aspects of project development, production planning, and final testing of industrial, military, or consumer products. Their talents are used in virtually every activity where technical expertise is required. They may be involved

with electronic and mechanical instruments, experimental equipment, computing devices, tool design, manufacturing, or drafting.

Technical skills in the use of electronic equipment, machinery, tools, and drafting instruments are characteristic of this type of work. Thus, engineering technology students can find challenging employment in business and industry. Graduates of Wayne State's Engineering Technology program have been employed in areas such as manufacturing engineering, engineering production, marketing, maintenance, quality control, product testing, field engineering, consulting engineering, design, and technical supervision. Baccalaureate Engineering Technology graduates are often called Technologists to distinguish them from baccalaureate graduates of engineering programs. However, the National Bureau of Labor Statistics does not have a category called 'technologist,' and consequently, many industrial job titles show little distinction between technologists and engineers. Graduates of Engineering Technology and Engineering programs complement each other in their skills and interests, and together with technicians and scientists, they form a technological team which has been able to produce an ever-increasing rate of technological advancement.

## BACHELOR OF SCIENCE IN COMPUTER TECHNOLOGY

The Bachelor of Science in Computer Technology (BSCT) prepares students for professional work relating advancements in basic science to practical computer applications. This degree is an interdisciplinary program of study which provides a combination of professional courses in computer science, information systems, electronics, and information technology. The particular strengths of the program include: applied hands-on curriculum; hardware oriented laboratory experiences; scientific advancement merged with applications; and the various skills and knowledge required for the enhanced job market in this field. The computer technology program offers excellent prospects for professional positions in both business and industry where the sophistication and implementation of computers dominate a broad spectrum of employment opportunities. This region of the state has a large concentration of high technology firms which employ information system designers and application integrators. Classes are usually offered both during the day and in the evening.

**Admission Requirements:** The BSCT degree program is designed to admit students with an associate degree or equivalent course work in preparatory programs such as computer information systems, computer technology, data processing or closely related disciplines. A minimum grade point average (g.p.a.) of 2.5 is required for admission into the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as Pre-Engineering Technology students, and may be transferred into the BSCT program upon successful completion of pre-calculus (MAT 1800) and physical science courses, with a g.p.a. of 2.5 or above. A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus. It is recommended that this examination be taken prior to first registration at Wayne State; contact the Testing and Evaluation Service (577-3400).

### Degree Requirements:

To earn a BSCT degree, a minimum of 128 semester credits are required. University policy allows a maximum of sixty-four semester credits transferred from community colleges to Wayne State; a minimum of thirty semester credits must be earned from Wayne State University. Division policy mandates that at least twenty-four semester credits must be earned in Division courses.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total residence credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements (see page 29).

**Plan of Study:** Due to wide variation in backgrounds of associate degree holders, as well as differing rates of progress of full- or part-time students, an individually-tailored plan of study will be developed for each student, in conjunction with a faculty adviser. Courses will be selected based on the student's academic preparation, course prerequisites, and proposed scheduling of courses.

**Required Background:** Any student deficient in any courses listed under Lower Division (Community College) Technical Transfer will be required to remove the deficiency before completion of fifteen credits in basic science/mathematics and technical core courses.

**PROGRAM REQUIREMENTS:** The BSCT program requires 128 credits as outlined below:

<i>BASIC SCIENCE AND MATHEMATICS</i>	<i>credits</i>
CSC 1050 -- (CL) Introduction to C and Unix	2
MAT 1800 -- Elementary Functions	4
MAT 3430 -- (E T 3430) Applied Differential and Integral Calculus	4
Physical Science (PS) elective (PHY 1020 recommended)	4
Life Science (LS) elective (PSY course recommended)	3
	Total: 17

### *BSCT TECHNICAL CORE*

EET 2100 -- Principles of Digital Design	3
EET 3100 -- Advanced Digital Design	3
EET 3720 -- Micro and Programmable Controllers	3
EET 4100 -- Computer Hardware Design	3
E T 3850 -- Reliability and Engineering Statistics	3
E T 3870 -- Engineering Economic Analysis	3
MIT 3350 -- Applied Human Factors	3
CSC 2200 -- Data Structures and Algorithm Analysis	4
CSC 4100 -- Computer Architecture	4
CSC 4110 -- Introduction to Software Engineering	3
CSC 4420 -- Computer Operating Systems	3
CSC 4996 -- (WI) Frontiers of Computing	2
E T 4999 -- (WI) Senior Project	3
	Total: 43

### *COMMUNITY COLLEGE TECHNICAL TRANSFER*

CSC 1100 -- (CL) Problem Solving and Programming	4
CSC 1140 -- Introduction to COBOL	3
CSC 2110 -- Introduction to Data Structures and Abstractions	4
CSC 4710 -- Information System Design	3
Other	27
	Total: 41

### *COMMUNICATION REQUIREMENTS*

ENG 1020 -- (BC) Introductory College Writing	4
ENG 3050 -- (IC) Technical Communication I: Report Writing	3
SPB 1010 -- (OC) Oral Communication: Basic Speech	2
English Proficiency Examination	0
	Total: 9

### *OTHER GENERAL EDUCATION REQUIREMENTS*

Historical Studies (HS)	3
American Society and Institutions (AI)	3
Social Sciences (SS)	3
Foreign Culture (FC)	3
Visual and Performing Arts (VP)	3
Philosophy and Letters (PL)	3
Critical Thinking (CT) Competency Examination	0
	Total: 18
Total minimum semester credits for the BSCT degree	128

## BACHELOR OF SCIENCE IN ENGINEERING TECHNOLOGY

**Admission Requirements:** This program is designed for students with an associate degree in an appropriate engineering technology discipline, an associate degree in engineering science, or college-level course work equivalent to an associate degree in an engineer-

ing/technology-related area. A minimum grade point average (g.p.a.) of 2.50 is required for admission to the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as pre-engineering technology students, and may be transferred into the engineering technology program upon successful completion of MAT 1800 and PHY 2130 with a g.p.a. of 2.50.

**Mathematics Qualifying Examination:** Students entering the Division are required to take a mathematics placement examination unless they have earned advanced credit in pre-calculus. This examination should be taken prior to the first registration at Wayne State University. Students should contact the Mathematics Department (313-577-2479) for examination schedules.

**Application for Undergraduate Admission** form is required and may be requested from: Office of Admissions, Wayne State University, Detroit, Michigan 48202.

## Degree Requirements

Candidates for a baccalaureate degree in engineering technology must earn a minimum of 128 credits, as outlined in one of the following major programs and including the University General Education requirements (see page 29). No more than sixty-four semester credits from community colleges can be transferred toward the baccalaureate degree at Wayne State. At least thirty credits must be earned from Wayne State, at least twenty-four of which must be in Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University and the College (see pages 15-46 and 127 -132, respectively) and must conform to Division academic standards.

At graduation, the University requires a minimum 2.0 grade point average in total residence credit. Additionally, the Division of Engineering Technology requires a minimum 2.0 g.p.a. in total work in the area of specialization. Satisfactory achievement in the Critical Thinking Competency Examination and the English Proficiency Examination, administered by the Testing and Evaluation Office, is required of each student.

**Plan of Study:** Due to the variation in educational backgrounds of associate degree graduates and the different rates of progress of full-time and part-time students, individual plans of study are developed for students in conjunction with faculty advisers.

NOTE: A student who, after receiving one undergraduate degree at Wayne State University, wishes to obtain a second bachelor's degree must complete at least thirty credits beyond those applied toward the first degree.

## Electrical/Electronic Engineering Technology (EET) Curriculum

With the continued expansion in the use of electrical power, automatic control systems, solid state and micro electronics, communications systems, and computer technology, electrical/electronic engineering technology is the fastest growing specialty area of all the engineering technologies.

Because the movement of electrons in a circuit is not a totally visible physical phenomena, the electrical/electronic engineering technologist does some work in the abstract. For example, mathematical calculations and formulae are used to determine the proper equipment or the proper components in an electronic circuit needed to amplify an electrical signal radiating from a star system millions of light years away.

Most electrical/electronic engineering technologists work in development, design, application, sales and in the manufacture of products.

The major divisions in the field are power and digital/analog electronics. The power specialist works primarily with power generation and distribution systems of electrical equipment, motors, generators, appliances, and controls. Electronic specialists develop and design electronic circuitry. This specialty also includes areas involving computers, communication systems, and electronic controls and devices.

The impact of the microprocessor is being felt, not only throughout the entire electrical/electronic field but in most design, analysis, control, testing, and data processing applications.

**Admission Requirements:** see page 154. Students with an associate degree in electrical or electronic technology from a community college or equivalent college-level coursework may be admitted to the baccalaureate degree program in electrical/electronic engineering technology.

This program is designed to extend the practical and applied base of the associate degree program by means of more theoretical electrical and broad engineering technology courses together with further background courses in mathematics, science, and socio-humanities.

**Required Background:** Any student deficient in any courses listed under Lower Division Technical Transfer will be required to remove the deficiencies before electing any EET courses.

**PROGRAM REQUIREMENTS:** The program in electrical/electronic engineering technology, leading to the Bachelor of Science in Engineering Technology degree, requires 128 credits as outlined in the following curriculum.

<i>BASIC SCIENCE AND MATHEMATICS</i>	<i>credits</i>
CSC 1050 -- (CL) Introduction to C and Unix . . . . .	2
MAT 1800 -- Elementary Functions . . . . .	4
MAT 3430 -- (E T 3430) Applied Differential and Integral Calculus . . . . .	4
MAT 3450 -- (E T 3450) Applied Calculus / Differential Equations . . . . .	4
PHY 2130 -- (PS) General Physics . . . . .	3
PHY 2131 -- General Physics Lab . . . . .	1
PHY 2140 -- General Physics . . . . .	3
PHY 2141 -- General Physics Lab . . . . .	1
CHM 1020 -- (PS) General Chemistry I . . . . .	4
Life Sciences (LS) elective . . . . .	3
<b>Total:</b>	<b>29</b>

<i>EET TECHNICAL CORE</i>	<i>credits</i>
E T 3030 -- Statics . . . . .	3
E T 3850 -- Reliability and Engineering Statistics . . . . .	3
E T 3870 -- Engineering Economic Analysis . . . . .	3
EET 3100 -- Advanced Digital Design . . . . .	3
EET 3150 -- Network Analysis . . . . .	4
EET 3180 -- Analog Electronics . . . . .	4
EET 3500 -- Electrical Machines & Power Systems . . . . .	3
EET 3720 -- Micro and Programmable Controllers . . . . .	3
EET 4200 -- Control Systems . . . . .	4
EET Upper Division Technical Electives . . . . .	9
E T 4999 -- (WI) Senior Project . . . . .	3
<b>Total:</b>	<b>42</b>

<i>COMMUNITY COLLEGE TECHNICAL TRANSFER</i>	<i>credits</i>
E T 1140 -- Engineering Graphics . . . . .	3
EET 2000 -- Electrical Principles . . . . .	3
EET 2100 -- Principles of Digital Design . . . . .	3
EET 2720 -- Microprocessor Fundamentals . . . . .	3
Other . . . . .	18
<b>Total:</b>	<b>30</b>

<i>COMMUNICATION REQUIREMENTS</i>	<i>credits</i>
ENG 1020 -- (BC) Introductory College Writing . . . . .	4
ENG 3050 -- (IC) Technical Communication I: Report Writing . . . . .	3
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	2
English Proficiency Examination . . . . .	0
<b>Total:</b>	<b>9</b>

<i>OTHER GENERAL EDUCATION REQUIREMENTS</i>	<i>credits</i>
Historical Studies (HS) . . . . .	3
American Society and Institutions (AI) . . . . .	3
Social Sciences (SS) . . . . .	3
Foreign Culture (FC) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3

Philosophy and Letters (PL) . . . . .	3
Critical Thinking (CT) Competency Examination . . . . .	0
Total: 18	
Total minimum semester credits for the EET program . . . . .	128

## Electromechanical Engineering Technology (EMT) Curriculum

The electromechanical engineering technology major offers an opportunity in interdisciplinary education, resulting from the implementation of electronics and computers in engineering systems. This major offers an individual plan of study with coursework in electronics, electrical, manufacturing, and mechanical areas, with appropriate prerequisite courses. The program is designed to extend the practical and applied base of the associate degree program by means of more theoretical and more comprehensive engineering technology courses, combined with background courses in mathematics, science, and socio-humanities.

**Admission Requirements:** Students with an associate degree in electrical, electronics, industrial, manufacturing, mechanical, or related technology from a community college or equivalent college-level coursework may be admitted to the bachelor's degree program in electromechanical engineering technology.

**Required Background:** Any student deficient in any courses listed under Lower Division Technical Transfer will be required to remove deficiencies before completing fifteen credits in basic science/mathematics and technical core courses.

**PROGRAM REQUIREMENTS:** The program in electromechanical engineering technology leading to the Bachelor of Science in Engineering Technology degree requires 128 credits as outlined in the following curriculum.

### BASIC SCIENCE AND MATHEMATICS credits

CSC 1050 -- (CL) Introduction to C and Unix . . . . .	2
MAT 1800 -- Elementary Functions . . . . .	4
MAT 3430 -- (E T 3430) Applied Differential and Integral Calculus. . . . .	4
MAT 3450 -- (E T 3450) Applied Calculus and Differential Equations. . . . .	4
PHY 2130 -- (PS) General Physics . . . . .	3
PHY 2131 -- General Physics Lab . . . . .	1
PHY 2140 -- General Physics . . . . .	3
PHY 2141 -- General Physics Lab . . . . .	1
CHM 1020 -- (PS) General Chemistry I . . . . .	4
Life Sciences (LS) elective . . . . .	3
Total: 29	

### EMT TECHNICAL CORE

E T 3030 -- Statics . . . . .	3
E T 3850 -- Reliability and Engineering Statistics . . . . .	3
E T 3870 -- Engineering Economic Analysis . . . . .	3
EET 3010 -- Instrumentation . . . . .	3
EET 3720 -- Micro and Programmable Controllers . . . . .	3
MCT 3100 -- Mechanics of Materials . . . . .	3
MIT 3510 -- Manufacturing Processes . . . . .	3
EMT Upper Division Technical Electives . . . . .	18
E T 4999 -- (WI) Senior Project . . . . .	3
Total: 42	

### COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 1140 -- Engineering Graphics . . . . .	3
E T 2140 -- Computer Graphics . . . . .	3
E T 2200 -- Engineering Materials . . . . .	3
EET 2000 -- Electrical Principles . . . . .	3
EET 2720 -- Microprocessor Fundamentals . . . . .	3
Other . . . . .	15
Total: 30	

## COMMUNICATION REQUIREMENTS

ENG 1020 -- (BC) Introductory College Writing . . . . .	4
ENG 3050 -- (IC) Technical Communication I: Report Writing. . . . .	3
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	2
English Proficiency Examination . . . . .	0
Total: 9	

## OTHER GENERAL EDUCATION REQUIREMENTS

Historical Studies (HS) . . . . .	3
American Society and Institutions (AI) . . . . .	3
Social Sciences (SS) . . . . .	3
Foreign Culture (FC) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3
Philosophy and Letters (PL) . . . . .	3
Critical Thinking (CT) Competency Examination . . . . .	0
Total: 18	

Total minimum semester credits for the EMT program . . . . . 128

## Manufacturing/Industrial Engineering Technology (MIT) Curriculum

The manufacturing/industrial engineering technologist is involved in the design, planning, supervision, construction and management of the methods and equipment for the production of industrial and consumer goods.

The magnitude of the manufacturing/industrial engineering technologist's responsibility can be best illustrated by examining a modern manufacturing plant. Within a typical facility, there are many machines performing hundreds of operations on thousands of parts. These processes include highly automated equipment which produce quality products built to exact specifications. Whether it be a single gear or a complete automobile engine, the logical set of events that result in a finished product is planned in advance. The location of every machine, every movement of a tool or part, the order of operations, even the machines themselves, are planned in detail as part of a total production system by the manufacturing/industrial engineering technologist.

A manufacturing/industrial engineering technologist may choose to specialize in such areas as quality control, plant engineering, manufacturing engineering, production planning and control, or supervision and management.

**Admission Requirements:** see page 154. Students entering this program would normally have an associate degree from a community college or equivalent college-level course work in one of the following technical areas:

Drafting	Metallurgy
Industrial Management	Metals Machining
Industrial Technology	Metrology and Calibration
Manufacturing	Numerical Control
Machine Tools	Welding

The program is designed to extend the practical and applied base of the associate degree by providing the graduate with depth and breadth in technical science and technical specialty courses as well as in non-technical related areas.

**Required Background:** Any student deficient in any courses listed under Lower Division Technical Transfer will be required to remove the deficiency before completing fifteen credits in basic science/mathematics and technical core courses.

**PROGRAM REQUIREMENTS:** The program in manufacturing/industrial technology leading to the Bachelor of Science in Engineering Technology degree requires 128 credits as outlined in the following curriculum.

**BASIC SCIENCE AND MATHEMATICS** *credits*

CSC 1050 -- (CL) Introduction to C and Unix	2
MAT 1800 -- Elementary Functions	4
MAT 3430 -- (E T 3430) Applied Differential and Integral Calculus	4
MAT 3450 -- (E T 3450) Applied Calculus and Diff. Equations	4
PHY 2130 -- (PS) General Physics	3
PHY 2131 -- General Physics Lab	1
PHY 2140 -- General Physics	3
PHY 2141 -- General Physics Lab	1
CHM 1020 -- (PS) General Chemistry I	4
Life Sciences (LS) elective	3
<b>Total:</b>	<b>29</b>

**MIT TECHNICAL CORE**

E T 3030 -- Statics	3
E T 3050 -- Dynamics	3
E T 3850 -- Reliability and Engineering Statistics	3
E T 3870 -- Engineering Economic Analysis	3
EET 3010 -- Instrumentation	3
MCT 3100 -- Mechanics of Materials	3
MCT 3410 -- Kinematics and Dynamics of Machines	3
MIT 3510 -- Manufacturing Processes	3
MIT 4700 -- Computer-Aided Design and Manufacturing	3
MIT Upper Division Technical Electives	12
E T 4999 -- (WI) Senior Project	3
<b>Total:</b>	<b>42</b>

**COMMUNITY COLLEGE TECHNICAL TRANSFER**

E T 1140 -- Engineering Graphics	3
E T 2140 -- Computer Graphics	3
E T 2200 -- Engineering Materials	3
EET 2000 -- Electrical Principles	3
Other	18
<b>Total:</b>	<b>30</b>

**COMMUNICATION REQUIREMENTS**

ENG 1020 -- (BC) Introductory College Writing	4
ENG 3050 -- (IC) Technical Communication I: Report Writing	3
SPB 1010 -- (OC) Oral Communication: Basic Speech	2
English Proficiency Examination	0
<b>Total:</b>	<b>9</b>

**OTHER GENERAL EDUCATION REQUIREMENTS**

Historical Studies (HS)	3
American Society and Institutions (AI)	3
Social Sciences (SS)	3
Foreign Culture (FC)	3
Visual and Performing Arts (VP)	3
Philosophy and Letters (PL)	3
Critical Thinking (CT) Competency Examination	0
<b>Total:</b>	<b>18</b>

Total minimum semester credits for the MIT program . . . . . 128

**Mechanical Engineering Technology (MCT) Curriculum**

The upper division program in Mechanical Engineering Technology is intended primarily to provide the graduate with depth and breadth in technical science and technical specialties as well as in non-technical related areas. Graduates of this curriculum will receive the degree of Bachelor of Science in Engineering Technology and enter a field of challenging work in which they are broadly concerned with energy, its transformation from one form to another, its transmission, and its utilization. This includes the conversion of chemical, nuclear, or solar energy into mechanical work; the transmission of energy via heat exchangers, pipe lines and mechanical systems; and the harnessing of energy to perform useful tasks. Mechanical engineering technologists are employed by every kind of industry to seek new

knowledge through creative design and development, and to build and control the modern devices and systems needed by society. Sequential elective courses to enhance a candidate's job opportunities can be selected in the areas of design and thermal sciences.

**Admission Requirements:** see page 154.

Students having an associate degree or equivalent college-level course work in one of the following or related technical areas may be admitted to the program:

Aerospace Technology	Fluid Power
Automotive Technology	Manufacturing
Climate Control	Mechanical Design
Drafting	Mechanical Technology
Energy Technology	Powerplant

**Required Background:** Any student deficient in any course listed under Lower Division Technical Transfer will be required to remove the deficiency before completing fifteen credits in basic science/mathematics and technical core courses.

**PROGRAM REQUIREMENTS:** The program in mechanical engineering technology leading to the Bachelor of Science in Engineering Technology degree requires 128 credits as outlined in the following curriculum.

**BASIC SCIENCE AND MATHEMATICS**

CSC 1050 -- (CL) Introduction to C and Unix	2
MAT 1800 -- Elementary Functions	4
MAT 3430 -- (E T 3430) Applied Differential and Integral Calculus	4
MAT 3450 -- (E T 3450) Applied Calculus / Differential Equations	4
PHY 2130 -- (PS) General Physics	3
PHY 2131 -- General Physics Lab	1
PHY 2140 -- General Physics	3
PHY 2141 -- General Physics Lab	1
CHM 1020 -- (PS) General Chemistry I	4
Life Sciences (LS) elective	3
<b>Total:</b>	<b>29</b>

**MCT TECHNICAL CORE**

E T 3030 -- Statics	3
E T 3050 -- Dynamics	3
E T 3850 -- Reliability and Engineering Statistics	3
E T 3870 -- Engineering Economic Analysis	3
EET 3010 -- Instrumentation	3
MIT 3510 -- Manufacturing Processes	3
MCT 3100 -- Mechanics of Materials	3
MCT 3150 -- Applied Thermodynamics	4
MCT 3180 -- Fluid Mechanics	4
MCT 3410 -- Kinematics and Dynamics of Machines	3
MCT 4400 -- Design of Machine Elements	3
MCT Upper Division Technical Electives	4
E T 4999 -- (WI) Senior Project	3
<b>Total:</b>	<b>42</b>

**COMMUNITY COLLEGE TECHNICAL TRANSFER**

E T 1140 -- Engineering Graphics	3
E T 2140 -- Computer Graphics	3
E T 2200 -- Engineering Materials	3
EET 2000 -- Electrical Principles	3
Other	18
<b>Total:</b>	<b>30</b>

**COMMUNICATION REQUIREMENTS**

ENG 1020 -- (BC) Introductory College Writing	4
ENG 3050 -- (IC) Technical Communication I: Report Writing	3
SPB 1010 -- (OC) Oral Communication: Basic Speech	2
English Proficiency Examination	0
<b>Total:</b>	<b>9</b>

**OTHER GENERAL EDUCATION REQUIREMENTS**

Historical Studies (HS) . . . . .	3
American Society and Institutions (AI) . . . . .	3
Social Sciences (SS) . . . . .	3
Foreign Culture (FC) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3
Philosophy and Letters (PL) . . . . .	3
Critical Thinking (CT) Competency Examination . . . . .	0
Total: 18	

Total minimum semester credits for the MCT program . . . . . 128

## Product Design Engineering Technology (PDT) Curriculum

The upper-division program in Product Design Engineering Technology is intended to provide the student with depth and breadth in technical science and technical specialty courses, as well as in non-technical related areas. In the area of technical science and design, it prepares graduates for work in the field of design engineering technology.

The core of the program provides an integrated artistic perspective on technical considerations, to enhance the ergonomic design considerations of engineering products, and to prepare graduates for employment in that spectrum of engineering which emphasizes human and machine design relationships.

**Admission Requirements:** see page 154. Students entering this program would normally have an associate degree from a community college or equivalent college-level course work in auto body design, computer-aided design and drafting (CAD), or a related area:

**Required Background:** Any student deficient in any courses listed under Lower Division Technical Transfer will be required to remove the deficiency before completing fifteen credits in basic science/mathematics and technical core courses.

**PROGRAM REQUIREMENTS:** The program in Product Design Engineering Technology technology leading to the Bachelor of Science in Engineering Technology degree requires 129 credits as outlined in the following curriculum.

<b>BASIC SCIENCE AND MATHEMATICS</b>		<i>credits</i>
CSC 1050 -- (CL) Introduction to C and Unix . . . . .	2	
MAT 1800 -- Elementary Functions . . . . .	4	
MAT 3430 -- (E T 3430) Applied Differential and Integral Calculus . . . . .	4	
MAT 3450 -- (E T 3450) Applied Calculus and Differential Equations . . . . .	4	
PHY 2130 -- (PS) General Physics . . . . .	3	
PHY 2131 -- General Physics Lab . . . . .	1	
PHY 2140 -- General Physics . . . . .	3	
PHY 2141 -- General Physics Lab . . . . .	1	
CHM 1020 -- (PS) General Chemistry I . . . . .	4	
Life Sciences (LS) elective . . . . .	3	
Total: 29		

### PDT TECHNICAL CORE

E T 3030 -- Statics . . . . .	3
E T 3850 -- Reliability and Engineering Statistics . . . . .	3
E T 3870 -- Engineering Economic Analysis . . . . .	3
EET 3010 -- Instrumentation . . . . .	3
MIT 3350 -- Applied Human Factors . . . . .	3
MIT 3510 -- Manufacturing Processes . . . . .	3
MIT 4700 -- Computer-Aided Design and Manufacturing . . . . .	3
AID 3300 -- Introduction to Industrial Design . . . . .	3
AID 6300 -- Transportation Design . . . . .	3
PDT Upper Division Technical Electives . . . . .	12
E T 4999 -- (WI) Senior Project . . . . .	3
Total: 42	

### COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 1140 -- Engineering Graphics . . . . .	3
E T 2140 -- Computer Graphics . . . . .	3
E T 2200 -- Engineering Materials . . . . .	3
EET 2000 -- Electrical Principles . . . . .	3
Other . . . . .	18
Total: 30	

### COMMUNICATION REQUIREMENTS

ENG 1020 -- (BC) Introductory College Writing . . . . .	4
ENG 3050 -- (IC) Technical Communication I: Report Writing . . . . .	3
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	2
English Proficiency Examination . . . . .	0
Total: 9	

### OTHER GENERAL EDUCATION REQUIREMENTS

Historical Studies (HS) . . . . .	3
American Society and Institutions (AI) . . . . .	3
Social Sciences (SS) . . . . .	3
Foreign Culture (FC) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3
Philosophy and Letters (PL) . . . . .	3
Critical Thinking (CT) Competency Examination . . . . .	0
Total: 18	

Total minimum semester credits for the PDT program . . . . . 128

## BACHELOR OF SCIENCE IN MANUFACTURING ENGINEERING TECHNOLOGY

The Bachelor of Science In Manufacturing Engineering Technology (BSMFT) degree prepares students for professional work in manufacturing industry and advanced production systems. This degree is a program of study which provides a combination of professional courses in manufacturing, computer systems, electronics, engineering technology, communication, and social science/humanities. The particular strengths of the program include: applied hands-on curriculum; hardware-oriented laboratory experiences; scientific advancement merged with applications; and the various skills and knowledge required for the enhanced job market in this field. This region of the state has a large concentration of high technology firms which employ manufacturing professionals, designers, and application integrators. The program offers excellent prospects for professional positions in both business and industry, where manufacturing dominates a broad spectrum of employment opportunities. Classes in the BSMFT program are usually offered both during the day and in the evening.

**Admission Requirements:** The BSMFT degree program is designed to admit students from Focus:HOPE's Greenfield Coalition with an associate degree or equivalent course work in manufacturing from Lawrence Technological University. A minimum grade point average (g.p.a.) of 2.5 is required for admission into the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as Pre-Engineering Technology students, and may be transferred into the BSMFT program upon successful completion of pre-calculus (MAT 1800) and physics courses, with a g.p.a. of 2.5 or above. A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus. It is recommended that this examination be taken prior to first registration at Wayne State; contact the Testing and Evaluation Service (577-3400).

### Degree Requirements

To earn a BSMFT degree, a minimum of 132 semester credits are required. University policy allows a maximum of sixty-four semester credits transferred from community colleges to Wayne State; a minimum of thirty semester credits must be earned from Wayne State University.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total residence credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements (see page 29).

The degree credit distribution for the program is as follows:

<i>Area</i>	<i>Minimum Credits</i>
Basic Science and Mathematics . . . . .	33
Manufacturing Engineering Technology Core . . . . .	38
Associate Degree Technical Transfer Courses . . . . .	33
Remaining General Education Requirements . . . . .	19
	Total: 132

For specific curricular outlines, consult the Division of Engineering Technology.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information section, pages 15-46. The following additions and amendments pertain to the Division of Engineering Technology.*

## Dean's List of Honor Students

A student who achieves a semester grade point average of 3.5 or more, based on a program of at least twelve credits, is notified by the Dean of citation for distinguished scholarship and his/her name is included on the Dean's List of Honor Students.

## Substandard Performance

The grade 'D' is considered by the Division of Engineering Technology to represent substandard performance. The implications of this are particularly significant in the science, mathematics, and technical sequences, where a 'D' grade from another institution will not be accepted towards the degree.

If a grade 'D' is received in any course which is prerequisite to another course in the student's program, or in a course in his/her area of specialization, or in a required course in mathematics, physics, or chemistry, the student may be required, by his/her adviser, to repeat that course.

A student who is not required to repeat a course in which a 'D' grade has been received may elect to audit such a course to better his/her knowledge. However, he/she then may not later enroll in the course for credit or obtain credit for the course by Special Examination.

A course in which a grade below 'C' has been earned may not be subsequently passed by Special Examination.

When repeating a course, failure for the third time to pass it with a grade satisfactory to the Division constitutes grounds for denying a student further registration in the Division of Engineering Technology.

## Probation Policy

A student is considered to be on probation whenever his/her cumulative grade point average (g.p.a.) falls below 2.0. A student may also be placed on probation whenever his/her academic performance is deemed unsatisfactory. When placed on probation, the student is required to meet with the Division Head or the Academic Standards Committee of the Division of Engineering Technology, to remove an academic hold on his/her registration. While on probation, a student may not represent the Division of Engineering Technology in student activities. The Academic Standards Committee of the Division formulates the regulations for probationary students, and hears requests for exceptions.

A student on probation is expected to bring up his/her grade point average promptly. If, at the end of the first semester on probation, the student's cumulative grade point average has not increased to at least 2.0, he/she will be excluded from the Division of Engineering Technology for at least one calendar year. Course work taken at any institution during the period of exclusion may not be considered for transfer toward an engineering technology degree.

For part-time students, a semester will be considered to consist of twelve consecutive credits. If a student's cumulative g.p.a. reaches at least 2.0. by the end of the first semester after being placed on probation, he/she will be returned to regular status. Multiple occurrence of probation will result in the student's exclusion from the Division of Engineering Technology.

A student may be refused the privilege of registering in the Division if, at any time, his/her grade point average falls below 2.0. A student

may also be refused the privilege of registering in the Division for irresponsible attendance and performance in class, regardless of any probationary status.

A student who has been refused registration may request that the Division Head or Academic Standards Committee reconsider his/her status. Such request should only be made when evidence of extenuating circumstances can be provided.

## Changes of Election and Withdrawal

University policy regarding changes of program and withdrawal from courses may be found on page 42. The following additions and amendments apply to the Division of Engineering Technology:

**Registration and Adding Courses:** A student may register for courses through the last day of the second week of classes for fifteen-week courses. A registered student may add a course through the last day of the second week of classes by submitting a completed Drop/Add form. A student may not change from one section of a course to another section of the same course after the fourth week of classes. Drop/Add forms will be valid for ten calendar days from the date of the earliest signature of approval. Once a student is admitted to Wayne State University, he/she does not have to go through the admissions procedure again. If a student does not register for two or more terms, he/she must first have his/her status upgraded at the University Records Office.

**Withdrawals:** Through the last day of the fourth week of fifteen-week classes, any student may withdraw from any class by processing a Drop/Add form at the Registration Office. If a student wishes to withdraw from class after the end of the fourth week and through the eighth week, he/she must obtain written approval of the instructor and the Division Head. Division policy does not permit withdrawal from classes after the eighth week of classes except in cases of extreme emergency.

Failure to follow the above policies may result in a grade of 'E.'

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

## ENGINEERING TECHNOLOGY (E T)

### 1140 Engineering Graphics. Cr. 3 (LCT: 2;LAB: 2)

Theory and application of projection drawing; multiview drawing and sketching; pictorial drawing and sketching; sectional views; basic techniques of dimensioning; charts and graphs. Material fee as indicated in the Schedule of Classes. (T)

### 1500 Engineering Technology Trades Internship. Cr. 1-6

Prereq: consent of adviser. Offered for S and U grades only. Industrial practice dealing with specific skill trades in engineering technology, under supervision in cooperative internship program. (I)

### 2140 Computer Graphics. Cr. 3 (LCT: 2;LAB: 2)

Prereq: E T 1140; coreq: CSC 1050. Solution of drafting problems and development of graphic presentations using computer-assisted drafting techniques. Use of programming techniques for direct solution of drafting/graphic problems and available software routines. Introduction to the use of computer plotters, CRTs, digitizers. Material fee as indicated in the Schedule of Classes. (F,W)

### 2200 Engineering Materials. Cr. 3 (LCT: 3)

Coreq: CHM 1020. Application and characteristics, both physical and chemical, of metallic and nonmetallic materials, polymers, and com-

posites used in industry. The primary process involved in producing these materials. (Y)

### 2500 Co-op Experience. Cr. 1-4 (Max. 4)

Prereq: sophomore standing and consent of adviser. Offered for S and U grades only. Industrial practice under supervision in cooperative education. Work-study program. Report required. (T)

### 3030 Statics. Cr. 3 (LCT: 3)

Prereq: PHY 2130, E T 1140; coreq: E T 3430. The analytical and graphic techniques for determining the forces acting upon and within a body or structural component under static load. Centroids and center of gravity. Moments of inertia. (F,W)

### 3050 Dynamics. Cr. 3 (LCT: 3)

Prereq: E T 3030 and MAT 3430. Kinematics; kinetics of particles; kinetics of translation and rotation of a rigid body; relative motion; use of equations of plane motion. Application of impulse and momentum principles; work and efficiency. (Y)

### 3430 (MAT 3430) Applied Differential and Integral Calculus. Cr. 4 (LCT: 4)

Prereq: MAT 1800. No degree credit in Colleges of Science and Liberal Arts. Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. (F,W)

### 3450 (MAT 3450) Applied Calculus and Differential Equations. Cr. 4 (LCT: 4)

Prereq: E T 3430. No degree credit in Colleges of Science and Liberal Arts. A continuation of E T 3430, including logarithmic and exponential functions, first and second order ordinary differential equations, vectors, polar coordinates, Laplace transforms, Taylor series, and Fourier series. (F,W)

### 3850 Reliability and Engineering Statistics. Cr. 3 (LCT: 3)

Coreq: E T 3430. Probability, hypergeometric, binomial, Poisson, and normal probability distribution; confidence intervals; inferences concerning means; linear regression; introduction to statistical quality control and reliability; use of computers. (F,W)

### 3870 Engineering Economic Analysis. Cr. 3 (LCT: 3)

Prereq: MAT 1800. Techniques to economically evaluate major technical projects, rate of return and present worth, interest formulae, federal taxes, risk, inflation, and non-economic constraints. (T)

### 4990 Guided Study. Cr. 1-6 (Max. 6) (IND: 1)

Prereq: consent of instructor. Supervised study and instruction in field selected by student. (I)

### 4995 Special Topics in Engineering Technology I. Cr. 1-4

Prereq: consent of instructor. Topics to be announced in Schedule of Classes. (I)

### 4999 (WI) Senior Project. Cr. 3 (LAB: 3;DSC: 2)

Prereq: successful completion of English Proficiency Examination, SPB 1010. Must be taken during last semester before graduation. Student designs, builds, and tests product; philosophy of design. Project proposal to be submitted by second week, final outcome to be completed by thirteenth week; progress reports, and oral presentation required. (F,W)

## ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY (EET)

### 2000 Electrical Principles. Cr. 3 (LCT: 3)

Prereq: MAT 1800; coreq: PHY 2140. Kirchhoff's laws, D.C. and A.C. circuit analysis, impedance, phasors, power and power factor correction, mutual coupling. Power transformers, D.C. and A.C. generators and motors, motor controls. (Y)



**2100 Principles of Digital Design. Cr. 3 (LCT: 3)**

Applied Boolean algebra and number systems. Logic families, K-mapping; combinational logic, multiplexers and demultiplexers, read-outs and displays, flip flops. (Y)

**2720 Microprocessor Fundamentals. Cr. 3 (LCT: 2;LAB: 2)**

Coreq: CSC 1050. Use of microprocessors as interface devices, including software, interfaces, memory, registers, and microcomputer system architecture, computer programming design projects. Material fee as indicated in the Schedule of Classes. (Y)

**3010 Instrumentation. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: EET 2000 and PHY 2140. Theory and use of various instruments and measurement techniques; power supplies, bridges, potentiometers, oscilloscopes; transducers for temperature, pressure, flow, strain, thermocouples, etc.; signal conditioning. Material fee as indicated in the Schedule of Classes. (F,W)

**3100 Advanced Digital Design. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: EET 2100. System level design of digital logic circuits using hardwired and programmable logic devices. ROMs, PROMs, and PLAs. Synchronous and asynchronous circuit design and analysis. (F,W)

**3150 Network Analysis. Cr. 4 (LCT: 3;LAB: 2)**

Prereq: EET 2000, PHY 2140; coreq: E T 3450. Analysis of circuits with dependent sources, RL, RC, and RLC circuit transient and sinusoidal response, network functions, frequency response, and power analysis. (F,W)

**3180 Analog Electronics. Cr. 4 (LCT: 3; LAB: 2)**

Prereq: CHM 1020, EET 2000. Operational amplifiers, circuit and applications; summing and subtracting amplifiers; integrating and differentiating amplifiers; comparators. Design of active filters, oscillators and waveform generating circuits, and audio integrated circuits. Material fee as indicated in the Schedule of Classes. (F,W)

**3500 Electrical Machines and Power Systems. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: EET 3150; coreq: E T 3450. Energy fundamentals. Physical and operating characteristics of D.C. and A.C. generators and motors, transformers. Electric power network. Transmission line stability. Power factor correction. Load sharing by transformers and generators. Per unit notation. Environmental impact of electric power generation. (I)

**3720 Micro and Programmable Controllers. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: EET 2720, CSC 1050. Microprocessors and Programmable logic controllers; on-chip I/O resources, interfacing; controls, instrumentation, and communication; data manipulation and sequencer instruction set; development and debugging tools. Material fee as indicated in the Schedule of Classes. (F,W)

**4100 Computer Hardware Design. Cr. 3 (LCT: 2; LAB: 2)**

Prereq: EET 3100, 2720. Structural organization and hardware design of digital computers. Register transfer, microoperations, and microprogram control. Processing and control units, arithmetic algorithms, input-output systems, and memory systems. (Y)

**4200 Control Systems. Cr. 4 (LCT: 3;LAB: 2)**

Prereq: E T 3030, E T 3450; EET 3010 or EET 3150. Feedback control systems with topics in time response, stability criteria, system representation, frequency response, compensation. Simulation of electrical and mechanical systems. Material fee as indicated in the Schedule of Classes. (F,W)

**4300 Electromagnetic Fundamentals and Design. Cr. 3 (LCT: 3)**

Prereq: E T 3450, EET 3150. Forces in static electric and magnetic fields. Gauss and Coulomb laws, charge systems, potential energy. Electromagnetic induction, interference and shielding. Design of resistors, capacitors, inductors, transformers, solenoids, relays, trac-

tive magnets. Earth conductivity and method of images as related to transmission lines and short antennas. (I)

**4400 Electronic Communications. Cr. 3 (LCT: 3)**

Prereq: E T 3450, EET 3150. Analog and digital waveform, waveform spectra, filtering of signals. Communication theories and systems, amplitude modulation, angle modulation, and pulse modulation. Introduction of digital communication and fiber-optic communication. (I)

**4600 Power Electronics. Cr. 3 (LCT: 3)**

Prereq: EET 3150, E T 3450. Understanding different types of power semiconductor devices; analysis of typologies of uncontrolled and controlled converters, dc-dc converters. Simulation of power converters and application of power converter technologies in industrial and utility applications. (Y)

**4990 Guided Study. Cr. 1-6 (Max. 6) (IND: 1)**

Prereq: consent of instructor. Supervised study and instruction in field selected by student. (I)

**5720 Computer Networking Applications. Cr. 4 (LCT: 3;LAB: 2)**

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)

## MANUFACTURING/INDUSTRIAL ENGINEERING TECHNOLOGY (MIT)

**3350 Applied Human Factors. Cr. 3 (LCT: 3)**

Introduction to human physiological and psychological functions and capabilities from an engineering viewpoint; sensory information processing and motor abilities, human-machine design aspects. (Y)

**3500 Machine Tool Laboratory. Cr. 1 (LAB: 3)**

Prereq: E T 1140. Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. (F,W)

**3510 Manufacturing Processes. Cr. 3 (LCT: 2;LAB: 3)**

Prereq: CHM 1020, E T 2200, E T 1140. Study of manufacturing processes including machining, welding and forming. Manual and CNC tools. Fabrication of common materials. Manufacturing sequence and mechanization. Selection of tooling and machining parameters. Calibration and part-setup. (F,W)

**3600 Process Engineering. Cr. 3 (LCT: 3)**

Prereq: MIT 3510. Processing functions. Methods of manufacturing analysis. Manufacturing sequence, mechanization. Selection of tooling and equipment. Planning the process of manufacture. (Y)

**4220 Methods Analysis and Time Study. Cr. 3 (LCT: 3)**

Prereq: MIT 3510. Development of the fundamental concepts and approaches of time and motion study; application of the principles of motion economy. (I)

**4320 Production and Inventory Management. Cr. 3 (LCT: 3)**

Prereq: E T 3850, MIT 3510. Basic production scheduling and inventory management. Production planning, project management, inventory functions, and inventory costs. (Y)

**4700 Computer-Aided Design and Manufacturing. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: E T 2140, MIT 3510. Fundamentals of computer-aided manufacturing using computer software. Two- and three-dimensional applications programming, numerical control and programming. Material fee as indicated in the Schedule of Classes. (Y)

**4800 Quality Control. Cr. 4 (LCT: 4)**

Prereq: E T 3850. Introduction to total quality systems design and to basic analytical techniques for quality control. (I)

**4990 Guided Study. Cr. 1-6 (Max. 6) (IND: 1)**

Prereq: consent of instructor. Supervised study and instruction in the field selected by the student. (I)

**5500 Machine Tool Laboratory. Cr. 1 (LAB: 3)**

Prereq: E T 1140. Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. (F,W)

## MECHANICAL ENGINEERING TECHNOLOGY (MCT)

**3100 Mechanics of Materials. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: E T 3030; coreq: E T 3430. The elastic behavior of load bearing materials. Tension, compression, shear, combined stress, bending, torsion and columns. Failure analysis. Material fee as indicated in the Schedule of Classes. (F,W)

**3150 Applied Thermodynamics. Cr. 4 (LCT: 3;LAB: 2)**

Prereq: E T 3430, PHY 2130, CHM 1020. First and second laws of thermodynamics; power and refrigeration cycles; gas and vapor mixtures, nozzle and blade passage flow and combustion. Introduction to compressible flow. Direct energy conversion. Material fee as indicated in the Schedule of Classes. (Y)

**3180 Fluid Mechanics. Cr. 4 (LCT: 3;LAB: 2)**

Prereq: E T 3030. Properties of fluids, fundamentals of fluid flow, dimensional analysis and similitude, and flow measurement techniques. Analysis of hydrostatic equipment, hydrokinetic equipment and systems. Introduction to network analysis and calculation. (Y)

**3410 Kinematics and Dynamics of Machines. Cr. 3 (LCT: 2;LAB: 2)**

Prereq: E T 2140, E T 3030. Velocity and acceleration of moving parts in machine elements and mechanisms; cam, gear, and gear train design; static and inertial forces, balancing, gyroscopic effects, and critical speeds. (F,W)

**4210 Heat Transfer. Cr. 4 (LCT: 3;LAB: 2)**

Prereq: PHY 2140; coreq: MAT 3450. Basic modes of heat transfer and their applications. Steady state conduction in one and two dimensions and transient conduction. Numerical and graphical methods. Heat exchanges. Condensation and boiling heat transfer. Introduction to mass transfer. (Y)

**4230 Heating, Ventilation, and Air Conditioning. Cr. 3 (LCT: 3)**

Prereq: MCT 3150, 3180, or 4210. Psychrometry; air and humidity calculations; heat transfer and transmission coefficients; heating and cooling loads; physiological considerations; air distribution systems; building energy use optimization and ASHRAE standard. (Y)

**4400 Design of Machine Elements. Cr. 3 (LCT: 3)**

Prereq: MCT 3100, 3410. Fundamental concepts in the design of the separate elements which compose the machine; application of properties and mechanics of materials modified by practical considerations. (Y)

**4990 Guided Study. Cr. 1-6 (Max. 6) (IND: 1)**

Prereq: consent of instructor. Supervised study and instruction in the field selected by the student. (I)

## GREENFIELD COALITION CHEMISTRY (GCC)

**NOTE: All GCC courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

**0900 Orientation and Teaming. Cr. 0**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to the concept of working in teams, presentation of ideas for developing appropriate study skills and for time management, discussion of strategies for writing and taking tests, introduction to reference searches using the library and Internet, and review of basic computer skills for opening files and using the network. (Y)

**1011 Basic Chemistry I: Reactions. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Prereq: GCM 1011. The scope of chemistry, chemical reaction/measurement, mass, weight and density, temperature, periodic table, factor-label method. (Y)

**1021 Basic Chemistry II: Solutions. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Prereq: GCC 1011. Solutions, acid and base chemistry (Lewis's Law), redox reactions, energy/enthalpy and Hess's Law. (Y)

**2011 Chemistry/Materials Science I: Chemical Equilibria and Kinetics. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Prereq: GCC 1021, GCF 1031; coreq: GCM 2141. Chemical equilibria and chemical kinetics. Introduction to concepts of entropy and Gibbs free energy. The importance of metastable states in material science and the application of rate laws are discussed. Strong emphasis on heterogeneous and solid-state reactions. (Y)

**2021 Chemistry/Materials Science II: Electrochemistry, Degradation of Materials, and Kinetics. Cr. 1**

Prereq: GCC 2011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Continuation of GCC 2011 and the development of fundamental chemical principles. (Y)

## GREENFIELD COALITION ENGINEERING (GCE)

**NOTE: All GCE courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

**2261 Control Elements in Manufacturing Systems. Cr. 1**

Prereq: GCT 1221. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. An overview of control systems and study of the application of sensors and actuators in control systems, digital logic, and programmable logic controllers. (Y)

**2411 Manufacturing Planning I. Cr. 1**

Prereq: GCF 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to manufacturing economics, basic concepts for direct and indirect costs, and time value of money. Basic organization tools, such as linear programming, used to model manufacturing optimization problems. Inventory control and the tradeoffs involved in holding inventory. (Y)

**2421 Manufacturing Planning II. Cr. 1**

Prereq: GCE 2411. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Material requirements planning, basic dynamics of material requirements planning, the basic lot sizing techniques used in MRP, and the difference between MRP and other release control techniques such as kanban. (Y)

**2461 Engineering Economics I: Concepts. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Fundamental and advanced concepts of engineering; framework of economic analysis, equivalence, interest factors, pay-

ments, annuities, and rates; economic evaluation of singular or pairwise manufacturing engineering projects: equivalent uniform annual cost, present worth, internal rate of return, pay-off, and comparative analysis. (Y)

**2471 Engineering Economics II: Economic Evaluation. Cr. 1**

Prereq: GCE 2461. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Economic evaluation of independent, multiple, and mutually exclusive projects in manufacturing engineering. (Y)

**3011 Engineering Materials III. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Inspection and testing, heat treatment, and adhesives and coating of engineering materials. Simple preparation techniques for microstructure examination and mechanical testing and testing procedures, the effect of heat treatment on microstructure and properties of metals, and the basics of inorganic coating, polymeric coatings and adhesives. (Y)

**3261 Advanced Control Elements in Manufacturing Systems. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to computer numerical controls and linear systems. Mathematical foundation for control systems, presentation of case studies and student projects. (Y)

**3271 Control System Analysis and Design: PID Control. Cr. 1**

Prereq: GCE 3261. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Feedback control: time domain techniques, frequency domain techniques, PID controls, case studies and projects. (Y)

**3312 Manufacturing Systems I: Management, Planning, Executing Change. Cr. 2**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to dynamics behind creating new products and operating enterprises which produce it; methods to harness new technologies of greatest benefit and aligning these technologies with basic business models; development of confidence and leadership qualities to carry out implementations. (Y)

**3332 Manufacturing Systems II: Human Factors and New Operational Models. Cr. 2**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to human factors related to success of manufacturing operations. Assessment of effects of working environments on employee efficiency, loyalty, productivity, creativity and enthusiasm. Current issues and developments in manufacturing technologies and theory. Application of new operational models to the design of traditional manufacturing systems. (Y)

**3461 Engineering Economics III: Depreciation and Investment Decisions. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Depreciation accounting for capital goods procured for manufacturing operations. Income tax consequences for various accounting methods and the analysis of investment opportunities in manufacturing processes where information on likely outcomes is either imperfect or incomplete. Development of comprehensive case study comprising data collection, analysis, interpretation and conclusions. (Y)

## GREENFIELD COALITION FUNDAMENTALS (GCF)

**NOTE: All GCF courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

**1011 Introduction to Computers in Engineering I: Operating**

**Systems. Cr. 1**

Prereq: GCM 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Preparation for computer usage. Basic computer knowledge, skills in several applications, and background in programming. Introduction to computer basics, operating systems and hardware (Y)

**1021 Introduction to Computers in Engineering II: Software Packages. Cr. 1**

Prereq: GCF 1011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Continuation of GCF 1011. Basic computer knowledge, skills in several applications, background in programming; introduction to word processing and spreadsheets. (Y)

**1031 Introduction to Computers in Engineering III: Visual Basic. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Continuation of GCF 1021. Introduction to visual basic. (Y)

**1101 Basic Graphics. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to the operation of Unigraphics for manufacturing applications software. CAD/CAM/CAE, the concurrent engineering process, vehicle design creation, and the manufacturing transition. (Y)

**1113 Introduction to Design Graphics. Cr. 3**

Prereq: GCF 1011 - 1031 and GCF 1101. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to computer process used in design graphics and the coupling needed between design and manufacturing. Visualization, generation of design geometry using 3-dimensional solids as the geometry primitives, control and utilization of design geometry, the design-graphics process, and the CAD to CAM process including data base type of tracking and validation of processes, including process planning, materials, feature, etc. (Y)

**3211 Kinematics of Machines: Basic Concepts. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Definitions, terminologies and fundamental concepts in kinematics essential to mechanical functions of manufacturing. Systematic approaches for determining the position, velocity and acceleration of any point on a linkage mechanism. (Y)

**3221 Kinematics of Machines: Cam Design and Gear Trains. Cr. 1**

Prereq: GCF 3211. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Systematic approach to the design of cam and cam-follower systems and analyzing dynamic characteristics of cam and cam-follower systems; theory of gear tooth action and the design of gear trains for motion control. (Y)

**3231 Kinematics of Machines: Kinetics and Balancing. Cr. 1**

Prereq: GCF 3111-3141. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Theoretical approaches to determining the forces present in moving mechanisms and machinery; mathematics for determining and designing statically or dynamically balanced rotating elements; integration of concepts; analysis of the kinematics and dynamics of a crank-mechanism driven cut-off saw. (Y)

## GREENFIELD COALITION LIBERAL ARTS (GCL)

**NOTE: All GCL courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

**1011 Fundamentals of English Composition: Writing Strategy. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Steps in the writing process, using strategies for setting

objectives, planning, drafting, testing, revising, editing, and proof-reading. Writing the extended definition, a functional description, and a set of instructions or a process description with appropriate graphs, terminology, and format for designated audiences and purposes. (Y)

**1021 Fundamentals of English Composition: Memos, Reports, Letters. Cr. 1**

Prereq: GCL 1011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Writing report segments based on rhetorical patterns, writing memos and short reports, revising and editing reports; application of strategies for locating information for investigative research reports. (Y)

**1031 Fundamentals of English Composition: Essays and Visuals. Cr. 1**

Prereq: GCL 1021 Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Writing well structured and developed informative and persuasive essays; introduction to development and use of visual aids. (Y)

**1211 Psychology with Sociology I: Methods, Learning, and Memory. Cr. 1**

Prereq: GCL 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Methods used in the social sciences compared and contrasted with methods used in the physical sciences and engineering. Learning and memory principles. Classical conditioning and instrumental training, principles and strategies of concept learning. Accessible on the Internet using a web browser. (Y)

**1221 Psychology with Sociology II: Physiological and Sensory Psychology. Cr. 1**

Prereq: GCL 1211. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Central and periphery nervous systems, ducted and ductless glands, and basic genetics. The senses of vision, hearing, and smell including anatomy, usual stimuli, and particular aspects of each. Sensory damage and safety issues in the industrial environment. Accessible on the Internet using a web browser. (Y)

**1231 Psychology with Sociology III: Human Growth, Development and Personality. Cr. 1**

Prereq: GCL 1221. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to human growth and development. Structure and formation of human personality. Developing awareness of normal maturation process with family, friends, and co-workers. Interaction of personality types and team work studied to facilitate understanding of teams within which participants function. Accessible on the Internet using a web browser. (Y)

**1241 Psychology with Sociology IV: Social Psychology and Sociology. Cr. 1**

Prereq: GCL 1231. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Basic functioning of groups at work and outside of work; attitude and prejudice formation and change, the process of influence and group dynamics. Introduction to social structure, processes, conflict, and change and the application of knowledge in these areas. Accessible on the Internet using a web browser. (Y)

**2011 Communications in Manufacturing I: Fundamentals of Communications. Cr. 1**

Prereq: GCL 1011 and 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Theories of communication, persuasion, organizational communication, effective communication opportunities and obstacles, and the ethics of communication. (Y)

**2021 Communications in Manufacturing II: Methods of Communication. Cr. 1**

Prereq: GCL 2011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Planning effective communication strate-

gies for the written word, spoken word, and nonverbal communication as well as handling potential conflict. (Y)

**2031 Communications in Manufacturing III: Technical Presentations. Cr. 1**

Prereq: GCL 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Project proposals and technical presentations. Introduction to effective use and preparation of traditional and non-traditional media presentations. (Y)

**2614 Comparative Politics and Economics. Cr. 4**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Preparation for participation in globalization issues. Integration of social, political, and economic knowledge for a manufacturing company's expansion in the global market. Team building, research strategies, project planning, cultural understanding, comparative political systems, economic development models, and comparative economic systems. (Y)

**3013 Technical Communications in Manufacturing. Cr. 3**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Review of communications theory, semantics, effective strategies for composition and principles of proposal writing; fundamentals of technical writing, design of manuals and documentation and strategies for composing definitions, descriptions, instructions, procedures, and process explanations. (Y)

**3511 Arts in Action: Ways of Seeing. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Foundation of the appreciation of visual art as it transforms the world into a cultural laboratory. How visual images work, implications of how art is used and is defined depending on usage. Application of the principles, elements, and structure of visual art to view and interpret the urban landscape. (Y)

**3521 Arts in Action: Construction Zones. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Foundation for working with music video. Introduction to design elements audio/visual matching/contrasting picture form as content, rhythm as a structural element, iconography as meaning. Visualization of music. Development of basic mini keyboard skills for understanding fundamental elements of musical composition. Course project. (Y)

**3531 Arts in Action: Performance and Plays. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Principles of theatrical adaptation of other art forms. Study of theatre companies and their productions and how they communicate with their communities. (Y)

**3611 Global Cultural and Philosophy: Basics of Cultural Study. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Importance of culture in behavior and perception between peoples, the role of language in the transmission of cultural, barriers to intercultural interaction and understanding, establishing frames of reference, and introduction to Japanese and Mexican cultures. (Y)

**3621 Global Culture and Philosophy: Japan Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of the mythic, early, and recent history of Japan: culture, religion, philosophy and language. (Y)

**3631 Global Culture and Philosophy: Mexico. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of the mythic, early, and recent history of Mexico: culture, religion, philosophy and language. (Y)

## GREENFIELD COALITION MATHEMATICS (GCM)

**NOTE: All GCM courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

### **1011 Technical Mathematics: Quadratics and Functions. Cr. 1**

Prereq: placement. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Methods of solving quadratic equations, factorable quadratics, roots, completing the square and the quadratic formula; discriminates; complex roots, inequalities, critical values. Definitions, domain, range, relations; operations, one-to-one, inverse functions; graphing, properties of curves, interpreting graphs. (Y)

### **1021 Technical Mathematics: Linear Equation Systems, Logarithms, and Exponents. Cr. 1**

Prereq: GCM 1011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Systems of 2 and 3 linear equations; Cramer's Rule, second and third order determinants; algebraic and graphical solutions. Graphing of exponential growth and decay; conversions, natural logarithms, basic laws of logarithms, change of base. (Y)

### **1031 Technical Mathematics: Analytical Geometry. Cr. 1**

Prereq: GCM 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Equations of lines; distance formula, midpoint formula, angle of inclination; parallel and perpendicular lines; inequalities. Closed conic shapes, equations and properties of circles and ellipses; open conic shapes, equations and properties of parabolas and hyperbolas. (Y)

### **1041 Technical Mathematics: Trigonometry. Cr. 1**

Prereq: GCM 1031. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Angular measure; right-angle trigonometry, definition of trigonometric functions, signs of functions in quadrants, special angles; laws of sines and cosines. Areas of sectors and segments, arc length; graphing of trigonometric functions; fundamental identities, sum and difference formulae, double-angle and half-angle formulae; trigonometric equations. (Y)

### **1051 Technical Mathematics: Vector Algebra. Cr. 1**

Prereq: GCM 1041. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Vector definition, properties of vectors, scalar quantities; 2 D vectors, graphical addition and subtraction, rectangular components, vectors in polar coordinates; 3 D vectors, Cartesian components, vectors in spherical coordinates. Orthogonal vectors; dot and cross products; DeMoirve's theorem; unite vectors, exponential forms, complex numbers in vector form; parametric equations. (Y)

### **2111 Differential Calculus I: Limits, Derivatives and Derivative Rules. Cr. 1**

Prereq: GCM 1011 - 1051. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Limits of functions, slope of tangent to a curve, the normal to a curve, properties and meaning of the derivative, derivative as an instantaneous rate of change, derivative of polynomials. Derivative rules: derivative of products and quotients of functions, derivative of a power of a function, implicit differentiation, higher order derivatives. (Y)

### **2121 Differential Calculus II: Applications of the Derivatives; Curves. Cr. 1**

Prereq: GCM 2111. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Tangents and normals, curvilinear motion, related rates. Minimum and maximum Curve sketching; using derivatives in curve sketching, applied maximums and minimums, problems in differential forms. (Y)

### **2131 Integral Calculus I: The Integral and Numerical Integration. Cr. 1**

Prereq: GCM 2121. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Antiderivatives, indefinite integrals, area under a curve, definite integrals. The trapesoidal rule, Simpson's Rule, interpretation of numerical results, and the application of the indefinite integral. (Y)

### **2141 Calculus of Transcendental Functions. Cr. 1**

Prereq: GCM 2131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Derivative of trigonometric functions, inverse trigonometric functions, logarithmic functions, exponential functions, and applications. General power formula; integrals of trigonometric forms, basic logarithmic forms, exponential form; integration by parts; using tables of integration. (Y)

### **2412 Manufacturing Statistical Methods I. Cr. 2**

Prereq: GCM 1041. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Multimedia instruction in the use of statistical methods in manufacturing. Problem-solving tools, descriptive statistics, data collection, control charts, process capability and tolerancing systems. statistical computer packages used and field studies required. (Y)

### **2431 Manufacturing Statistical Methods II. Cr. 1**

Prereq: GCM 2411. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Multimedia instruction in the use of statistical methods in manufacturing. Hypothesis testing and regression analysis. Statistical computer packages used and field studies required. (Y)

### **3151 Applied Integral Calculus. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of integration by parts, partial fractions, substitution, and trigonometric identities. Sum and difference of two integrals, area between two curves, volumes of figures of revolutions, Theorem of Pappus, average value, and applications in force, pressure, and work. (Y)

### **3161 Applications of Infinite Series in Calculus. Cr. 1**

Prereq: GCM 3151. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of infinite and power series and the application of these in solving engineering problems. (Y)

### **3171 Applied Multivariate Calculus. Cr. 1**

Prereq: GCM 3161. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of differentiation of several variables and the integration of functions of two variables. (Y)

### **3181 Foundations of Differential Equations. Cr. 1**

Prereq: GCM 3171. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Terminology; separable equations; linear first order differential equations, homogeneous equations; solving differential equations. Initial value problems; Newtons law, free and damped vibrations (Y)

### **3191 Applications of Calculus. Cr. 1**

Prereq: GCM 3181. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Calculus notations of conic sections, Cartesian and polar coordinates; translation and rotation of axes; graphs of functions in two variables. Characteristics and properties of Laplace transforms, inverse Laplace transforms; Laplace transform methods of solving initial value problems; applications in electric circuits and control systems. (Y)

## GREENFIELD COALITION SCIENCE (GCS)

**NOTE: All GCS courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

### 2111 Mechanophysics I: Motion and Forces. Cr. 1

Prereq: GCM 1011 and 1031. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to basic physics concepts related to motion and forces. No prior experience in physics required. Units of conversion, displacements, velocity and acceleration, equations of motion and equilibrium. (Y)

### 2121 Mechanophysics II: Static Equilibrium. Cr. 1

Prereq: GCS 2111. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to basic physics concepts related to the static equilibrium of forces and load supporting elements. Particle equilibrium, rigid body equilibrium of motion, free body diagrams, shear forces and bending moments in beams and truss analysis. (Y)

### 2131 Mechanophysics III: Introduction to Kinematics. Cr. 1

Prereq: GCS 2121. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to the engineering analysis of moving mechanical components. Kinematics of translation and rotation in the context of machine elements. Translation and rotation of rigid body, coriolis effect, vectors and motion, velocity and mechanisms, and acceleration and mechanisms. (Y)

### 2141 Introduction to Engineering Mechanics. Cr. 1

Prereq: GCS 2131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to vibrations of mechanical systems and the basic concepts of structural analysis. (Y)

### 2211 Thermoscience. Cr. 1

Prereq: GCM 1041 and 2131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to laws of thermodynamics, fluid mechanics, and heat transfer. Fluid density, pressure, and viscosity; fluids at rest, conservation of mass; Bernoulli equation; temperature scales; thermal expansion of liquids and solids; heat transfer; specific heat and heats of transformation; kinetic theory of gasses. (Y)

### 2311 Electrostatics. Cr. 1

Prereq: GCM 1011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Fundamental principles of electrostatics which includes Coulomb's law, electric fields, potential difference and case studies. (Y)

### 2321 DC - Circuit Analysis. Cr. 1

Prereq: GCS 2311. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Concepts of DC - analysis which includes Ohm's Law, Kirchoff's Law, node-voltage, mesh current, superposition, voltage and current division rules and source transformation. (Y)

### 2331 Electromagnetism, Inductance, and Capacitance. Cr. 1

Prereq: GCS 2321 and GCM 2131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Functioning of many devices and everyday applications employing the principles of electromagnetism and/or inductors or capacitors. Magnetic force, sources of magnetic field, induced Emf, inductance, and capacitance. (Y)

### 3111 Mechanics for Engineering Technology I. Cr. 1

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to the section properties of mechanical elements and their relationship to strength, and the properties of mechanical elements. Centroid, inertia and their relation to kinetics. (Y)

### 3121 Mechanics for Engineering Technology II. Cr. 1

Prereq: GCS 3111. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to concepts of power and

energy and how they relate to translating and rotating objects. (Y)

### 3131 Engineering Mechanics: Solid Mechanics I. Cr. 1

Prereq: GCS 3121. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to mechanics of deformable bodies, comprising axial loads, beam bending, torsion and twist of circular rods, and the mechanical properties of materials. (Y)

### 3141 Engineering Mechanics: Introduction to Mechanical Vibrations. Cr. 1

Prereq: GCS 3131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to vibrations of mechanical systems, comprising simple undamped and damped free and forced vibrations; mode shapes and frequencies. (Y)

### 3211 Thermodynamics for Manufacturing Engineers. Cr. 1

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. First and second laws of thermodynamics and associated applications. Heat and work, internal energy and enthalpy, engine operations, energy conservation in machining operations, p-v-T diagrams and thermodynamic tables, entropy, and power and refrigeration cycles. (Y)

### 3221 Fluid Mechanics for Manufacturing Engineers. Cr. 1

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to fluid properties. Forces on submerged objects, buoyancy. Equations of fluid statics. Manometer, hydrolic presses and other fluid machines. Introduction to fluid flow, Bernoulli's equation, internal fluid flow, Couette and Poiseuille flow. Lubrication phenomena and Reynolds equation. Chemistry of cutting fluids. Viscosity and density variation with temperature, phase diagrams, organic and inorganic fluids. Fluid degradation. (Y)

### 3231 Heat Transfer for Manufacturing Engineers. Cr. 1

Prereq: GCS 3211. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to modes of heat transfer. Conservation of energy and heat transfer. Conduction through plane and cylindrical walls, conduction through extended surfaces. Transient conduction for lumped and one-dimensional systems. Dimensional analysis. Relations for internal, external, forced and natural convection, and phase changes. Radiation heat transfer relations for environmental gray surfaces in an enclosure. (Y)

### 3241 Thermal Aspects of Manufacturing Processes. Cr. 1

Prereq: GCS 3211-3231. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Applications of thermal science fundamentals to industrial processes. Introduction to concentric tube, shell and tube, and crossflow heat exchangers; thermal expansion and contraction and effects on tolerances; heat generation and dissipation in cutting operations; heat treatment and metal forming; welding heat transfer; heat transfer and fluid flow in casting. (Y)

### 3311 AC Circuit Analysis and Topics in Electronics. Cr. 1

Prereq: GCM 3181. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to concepts of AC - circuit, sinusoidal waveform, complex algebra, phasors, power calculations and measurements, power factor, and transformers. Operations and applications of electronics elements like diode and operational amplifier. (Y)

## GREENFIELD COALITION TECHNOLOGY (GCT)

**NOTE: All GCT courses below are open only to students in the Focus:HOPE/Greenfield Coalition BSMFT Program.**

### 1111 Machining Processes I: Cutting Technology. Cr. 1

Prereq: GCF 1131 and GCM 1031. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to basic machine tool operations and material removal technology. The geometry of cutting tools. (Y)

**1121 Machining Processes II: Process Technology. Cr. 1**

Prereq: GCM 1031, GCS 2121 and 2211. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Technological perspective on the process technology associated with material removal. Cutting tool mechanics, mathematical process relations, cutting fluids and process planning. (Y)

**1211 Foundations of Measurements. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Presentation of terminology, procedures, and capabilities of devices used in the field of measurement, and introduction to measurement statistics. (Y)

**1221 Instrumentation. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of instrumentation used in manufacturing environments. Overview of control system terms, discrete/binary signals, analog signals, multiplexed signals, analog to digital conversion, and programmable logic controllers. (Y)

**2011 Engineering Materials I. Cr. 1**

Prereq: GCM 1021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Study of many types of materials used in current technology. Metals, ceramics, and polymers studied in terms of their properties, processing and applications. Individual projects. (Y)

**2021 Engineering Materials II. Cr. 1**

Prereq: GCT 2011. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Continuation of GCT 2011. Composites, material selection and materials for manufacturing. Individual projects. (Y)

**2111 Manufacturing Processes I. Cr. 1**

Prereq: GCT 1221 and 2021. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to issues of product quality and tolerances, manufacturing processes for casting and various influences of secondary operations such as machining and metal forming processes. (Y)

**2121 Manufacturing Processes II. Cr. 1**

Prereq: GCT 2111. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to manufacturing joining processes including various types of welding, brazing and soldering. Heat flow in the work piece, weld microstructure, and weld discontinuities. (Y)

**2181 Tool Design I. Cr. 1**

Prereq: GCT 2021, 1121, and GCF 1131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Tool design methods, tool-work interaction, tool materials and work holding principles. (Y)

**2191 Tool Design II. Cr. 1**

Prereq: GCT 2181. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Design of drill jigs, design of fixtures, and tool design guide. (Y)

**2211 Electrical Machines I. Cr. 1**

Prereq: GCS 2321. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to theoretical and practical knowledge of DC/AC circuit analysis, industrial electric power specifications, and industrial transformers. (Y)

**2221 Electrical Machines II. Cr. 1**

Prereq: GCT 2211. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to theoretical and practical knowledge of industrial and special purpose electric machines and industrial solid state motor controllers and devices. (Y)

**2313 Manufacturing Systems I: Fundamentals and Analysis****Tools. Cr. 3**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to manufacturing systems design. Fundamentals of manufacturing systems design, graphical analysis tools, and mathematical analysis tools. (Y)

**2341 Manufacturing Systems II: Communications. Cr. 1**

Prereq: GCT 2313. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to manufacturing systems design. Data communications and networks. (Y)

**2451 Ethics and Industry I. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to ethical issues confronting engineers and related to industry. (Y)

**2461 Ethics and Industry II. Cr. 1**

Prereq: GCT 2451. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Continuation of GCT 2451 with case studies focusing on engineering ethics. (Y)

**2511 Design Project. Cr. 1**

Prereq: fifty credits and two job rotations. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Design project incorporating fundamentals learned in previous courses. The design process emphasized from the establishment of objectives and analysis of alternative solutions to a final evaluation and recommendation. Final written and oral report required; use of manufacturing facility in production of design is encouraged. (Y)

**3111 Machining Processes III: Production Technology. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Review of the technological basis for the production of machined parts. Preparation, selection and optimization of production processes are considered. Tool wear and life, process estimating, economics of metal cutting, non-traditional machining, and time studies. (Y)

**3131 Introduction to Joining. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to methods of joining; electric arc, thermo-mechanical, and radiation welding and fasteners. (Y)

**3151 Materials Forming I. Cr. 1**

Prereq: GCE 3011, GCS 3111 and 3131. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to bulk deformation processes, safety issues and the mechanics of metal forming. (Y)

**3161 Materials Forming II. Cr. 1**

Prereq: GCT 3151. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to sheet metal forming and cutting processes. (Y)

**4111 Computer-Aided Manufacturing I. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to computer software, EIA standard programming code, and two- and three-dimensional applications with emphasis on Center for Advanced Technologies systems. (Y)

**4121 Computer-Aided Manufacturing II. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Numerical control and programming. (Y)

**4131 Computer-Aided Manufacturing III. Cr. 1**

Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Introduction to rapid prototyping of parts. (Y)

**4513 Engineering Technology Design Project. Cr. 3**

Prereq: senior standing. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Development and presentation of design project carried out in the workplace. Validation of learn-

ing and absorption of competencies in engineering technology design. (Y)

**4990 Independent Study. Cr. 1-6**

Prereq: approved outline of proposal prior to registration. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. Supervised study and instruction in the field selected by the student. (Y)

**4995 Special Topics. Cr. 1-6**

Prereq: consent of instructor. Open only to students in Focus:HOPE/Greenfield Coalition BSMFT Program. (Y)



COLLEGE OF FINE, PERFORMING  
and COMMUNICATION ARTS

DEAN: Linda L. Moore

# Foreword

## Mission Statement

The College of Fine, Performing and Communication Arts at Wayne State University provides quality education for practitioners, scholars audiences and critics in art and art history, communication, dance, music and theatre. This education leads to careers, implementation of 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 conscience 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. Diversity, whether cultural, racial, ethnic or gender, is an important commitment of the College in public events and educational efforts.

Ultimately, the mission of the College is to focus on 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 Wayne State University Dance Company, the Symphonic Band and University Orchestra, the Intercollegiate Debate Team, plus exhibitions in the Elaine L. Jacob Gallery and the Community Arts Gallery which often feature work created by students and studio faculty. 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, and the Detroit Symphony Orchestra, among other institutions) provides further unique and enriching benefits for students; professional staff members of these institutions often serve as adjunct faculty in College of Fine, Performing and Communication Arts 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.

## DEGREE PROGRAMS

### *BACHELOR OF ARTS with majors in*

art	journalism
art history	music
fashion design and merchandising	public relations
film studies	radio-television
theatre	speech communication

### *BACHELOR OF FINE ARTS with majors in*

art	theatre
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### *BACHELOR OF MUSIC with concentrations in*

church music	music management
composition	music technology
jazz studies	music theatre
music education	performance
theory	

### *BACHELOR OF SCIENCE with majors in*

dance	fashion design and merchandising
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### *\*MASTER OF ARTS with majors in*

art	music
art history	radio-television-film
communication	theatre
design and merchandising	

### *\*MASTER OF MUSIC with concentrations in*

conducting	music education
theory	

### *\*MASTER OF FINE ARTS--with majors in*

art	theatre
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### *\*DOCTOR OF PHILOSOPHY--with majors in*

communication	theatre
---------------	---------

### *\*CERTIFICATE IN ORCHESTRAL STUDIES*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

# BACHELOR'S DEGREE REQUIREMENTS

## Credits

A candidate for a Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, or Bachelor of Science degree must complete at least 120 credits. Certain curricula may require additional credits. (See 'Restrictions on Credit', below.)

## General Education Requirements

University-wide general education requirements are designed to enhance students' basic skills and the diversity of their intellectual background. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth.

Beginning with the Fall semester of 1987, all first-semester freshmen entering the College of Fine, Performing and Communication Arts and all students who transfer twelve or fewer credits into the College are required to satisfy the University General Education Requirements (see page 29) and, for students in Bachelor of Arts degree programs, the following foreign language requirement:

**Foreign Language Requirement:** All students pursuing the Bachelor of Arts degree in the College of Fine, Performing and Communication Arts must successfully demonstrate proficiency equivalent to the three-course basic sequence in a single foreign language. Proficiency is proved by completing courses numbered 1010 (1100, 1110), 1020, and 2010 in the following subject areas: ARB, ARM, FRE, GER, GRK, HEB, ITA, LAT, POL, RUS, SPA, SWA, and UKR; as well as GRK 1110, 1120, and 2110. Those students continuing in the study of a foreign language begun in high school or at another college will be placed at an appropriate level in the sequence, as determined by means of qualifying examinations or interviews administered by the various language departments of the University, and must complete the sequence to demonstrate proficiency. The College Foreign Language Requirement will be considered satisfied by those students whose test scores place them beyond the intermediate (third course) level.

Students may satisfy the University General Education Requirement in Foreign Culture by successfully completing a three-course sequence (through 2010 or 2110) in a single foreign language.

*Bilingual Students:* The College Foreign Language Group Requirement will be considered satisfied for students who were born in and completed their secondary education in a country whose language is not English. However, no credit (through course work or by examination) will be granted for elementary- or intermediate-level courses in that language. Bilingual students who satisfy the Foreign Language Group Requirement in this manner will simultaneously fulfill the University General Education Requirement in Foreign Culture.

## Proficiency in English and Mathematics

All undergraduate students who register for the first time at Wayne State University in Fall Semester 1983 or thereafter will be required to demonstrate proficiency in English and mathematics by the time they have earned sixty semester credits towards a bachelor's degree. For full particulars of these requirements, as well as the requirements applicable to registrants at the University prior to Fall 1983, see the General Information section of this Bulletin, page 29.

## Curriculum Requirements

A curriculum usually designates the student's general area of interest or eventual professional choice. By choosing the General Curriculum, however, the student indicates only the intention to take a degree in one of the departments of the College or that a final goal has not been decided upon. Students planning to pursue a Bachelor of Arts degree program should select the general curriculum. Since educational interests may change during the course of the student's college career, a curriculum may be changed at any time by consulting an adviser.

Some curricula outline a specific program of study. Others are governed only by the *group requirements* and future major requirements and recommendations. Group, curricular, and major requirements may be modified from time to time during the student's course of study, and students should periodically consult with the appropriate adviser. Descriptions of the various curricula may be found in this Bulletin, under each Department in the College of Fine, Performing and Communication Arts.

Course requirements vary with each curriculum. Exceptions are permitted to the College rules governing the minimum and maximum credits in the major subject and the maximum hours allowed in restricted courses if such exceptions are stated or implied in the curriculum requirements outlined herein. Curriculum requirements are included in the departmental sections and are followed by a description of the courses pertinent to the major.

## Major Requirements

A major is a program of concentrated study in a department or area within the College. The specific course requirements or areas for majors are listed in this bulletin under each of the departments of the College. A major in art and art history, dance, music, speech communication, public relations, radio-television, journalism, or theatre requires intensive study. Students who plan to elect one of these majors should consult with a departmental adviser during the freshman year. Students may declare majors at any time, but generally select areas of concentration during their sophomore year and formally declare majors by the beginning of their junior year. Students must complete all courses in the major with the grade of 'C' or better.

**Declaration of Major:** To declare a major, the student should consult a departmental adviser well in advance of a formal declaration, since the acceptance of the declaration of major is subject to the advice of the department concerned. *Declaration of Major* forms are available in the University Advising Center, 3 West, Helen Newberry Joy Student Services Center. At the time of formal declaration, the student must present to the department a current transcript and a Degree Audit from University Advising, obtain the signature of the department chairperson or designated representative on the *Declaration* form, and file it in the College of Fine, Performing and Communication Arts Dean's Office, 5104 Gullen Mall. All courses elected or changed by the student after the declaration of a major must be approved by the department adviser.

All undergraduate students must successfully complete a capstone course within their major. This course will be taken during the senior year (last thirty credits in course work). The capstone course will provide a systematic focus on and assessment of the knowledge and skills obtained in the major.

The major must include at least twenty credits in one subject, exclusive of the introductory courses and inclusive of some advanced work. No more than forty-six credits in the major subject (including introductory courses) may be counted toward a degree, except in special curricula in which additional courses are specified in the curriculum outline.

For majors which require intensive study in a particular subject, more than forty-six credits are allowed.

Within the above limits, each major program has specific requirements, and these requirements may be modified from time to time;

therefore, it is the student's responsibility to obtain the current requirements from the major department.

The major completed is part of the degree designation on the diploma.

**Double Major:** If a student wishes to declare a double major, the approval of the chairperson or delegated representatives of each of the departments of intended major must be obtained. In order for a student to graduate with a double major, the major requirements in both areas of concentration must be fulfilled. The student must complete all courses in both majors with an over-all grade point average of 2.0 ('C'). In the College of Fine, Performing and Communication Arts, the grade of 'C' or better must be achieved in the major. Both majors are designated on the diploma.

## Minor Fields

The College of Fine, Performing and Communication Arts offers the option of a minor. Students may choose to fulfill a minor but are not required to do so. In general, minors require 18-21 credits. Courses that do not apply toward the major cannot apply toward a minor. Students are strongly encouraged to consult with departmental advisers for course selections.

The notation of the minor will appear on the transcript but not on the diploma. Declaration of the minor will be made by the student only when filing for graduation.

### *Special Concentrations Available within Departments*

**Art:** Ceramics, Drawing, Fibers, Graphic Design, Industrial Design, Interdisciplinary Electronic Arts, Interior Design, Metalsmithing, Painting, Photography, Print-making, Sculpture (Bachelor of Fine Arts Degree)

**Art:** Apparel Design, Fashion Merchandising (Bachelor of Arts or Bachelor of Science Degree)

**Dance:** Choreography and Performance, Dance Education (Bachelor of Science Degree)

**Music:** Church Music, Composition, Jazz Studies and Contemporary Media, Music Education, Music Management, Music Technology, Music/Theatre, Music Therapy, Performance, Theory (Bachelor of Music Degree)

**Communication:** Speech communication, journalism, public relations, radio-television, interdisciplinary film studies (Bachelor of Arts Degree)

**Theatre:** Performance, Production (Bachelor of Fine Arts Degree)

## Teacher Preparation Curricula

**Health Examinations:** At the beginning of the freshman year, all students entering the University who are considering teacher education work should take the health examination. Students may wish to avail themselves of the services of the Speech and Language Center, 503 Manoogian Hall, if they feel that they have defects which might impair their effectiveness as teachers. A health re-check is required at the time of admission to the College of Education.

Students preparing to teach in dance or music will register in the College of Fine, Performing and Communication Arts for their freshman and sophomore years and enroll in the combined curriculum with the College of Education at the beginning of their junior year. During the first two years, they will see the departmental advisers for general counseling. Application for entrance to the College of Education should be submitted after the completion of fifty-three credits in course work.

## -- Combined Curriculum for Music, Dance and Communication Majors

*This curriculum leads to a bachelor's degree and a Michigan Secondary Provisional Certificate.*

The Combined Curriculum for Secondary Teaching is offered in cooperation with the College of Education and prepares the student for a teaching major in grades K-12 (music, dance) and 7-12 (speech) and a teaching minor in grades 7-12. In this curriculum the student takes the first two years of work in the College of Fine, Performing and Communication Arts. Courses in the third and fourth years are taken concurrently in Education and Fine, Performing and Communication Arts. Students interested in this program should consult a departmental academic adviser who will supply a curriculum outline.

*Degree in the College of Fine, Performing and Communication Arts:*

The student will remain registered in the College of Fine, Performing and Communication Arts and officially elects a departmental major at the beginning of the junior year. The student then applies to the College of Education for official admission to the combined curriculum for secondary teaching and must be approved by the College of Education as a candidate for teacher certification. During junior and senior years the program requests will be signed by both a College of Fine, Performing and Communication Arts major adviser and by the appropriate adviser in the College of Education.

## Second Degree

A student who has received a Fine, Performing and Communication Arts degree from Wayne State University or any other accredited institution may obtain a second bachelor's degree in another academic area by registering in the undergraduate School. A graduate of Wayne State University who has earned a degree from the College of Fine, Performing and Communication Arts may be ranked as an undergraduate by declaring a new major and indicating a desire to earn a second undergraduate degree in the departmentally-approved areas. Other Wayne State University graduates must transfer to the College of Fine, Performing and Communication Arts. A student from another institution must be admitted to the College by the University Admissions Office.

In order to be granted a second degree, the student must fulfill the University General Education Group Requirements and all major requirements, including the foreign language requirement, for all Bachelor of Arts degrees. The University also requires that the student complete at least thirty credits in coursework at Wayne State University beyond the first degree, in order to be granted a second bachelor's degree from Wayne State University. Generally, no second degree will be granted in the academic area in which the first degree was earned.

## Concurrent Degrees

A student who has satisfied all the requirements for two different major programs leading to degrees offered by the College and who has accumulated 150 or more degree credits may apply for both degrees simultaneously. However, students intending to earn concurrent degrees are required to obtain permission from the Office of the Dean prior to the accumulation of 120 degree credits. Another, and more usual, procedure for students satisfying the requirements of two different major programs is to declare a double major and graduate with one degree, in which case as little as 120 degree credits may be required. (See 'Double Major,' page 172.)

## Restrictions on Credit

*The College imposes the following restrictions on credit:*

**Maximum Credits in One Subject:** A student may not count as credit toward a degree more than forty-six credits in courses in any one subject except in special curricula in which additional courses are specified in the curriculum outline.

**Over-Age Credits:** A student attempting to complete a major after a protracted interruption in education, or on a part-time basis over an extended period of time, may find that some of the early course work is out of date. In such cases, a department may require refresher work or demonstration of preparation for advanced courses in the department.

**Restrictions on Transfer Credit -- Two-year Schools:** No more than sixty-four semester credits may be transferred from two-year colleges.

-- **Interdisciplinary Studies (College of Lifelong Learning):** No more than sixteen credits, which may include six credits of Independent Study, may be transferred from Interdisciplinary Studies.

-- **Labor School:** A maximum of ten hours of elective credit may be granted students who have been certified as having completed the Labor School curriculum, have a letter of recommendation from the Director, and have earned sixty credits with a grade point average of at least 2.0.

**Restricted Courses:** Degree credit is not given for elections in restricted courses which exceed the approved limit specified below.

**Advanced Courses:** At least fifteen credits in courses numbered 3000 or above must be earned.

**Professional Courses:** A maximum of sixteen credits may be elected as cognate credit by any student from courses offered for degree credit by the several professional schools and colleges within the University. These credits may be elected with the approval of the departmental adviser.

**Repeated Subjects:** It is understood that degree credit will not be granted for course work for which credit has already been granted. Since similar courses may have different names at different times and at different colleges, students are advised to make sure they do not offer repeated work as credit towards a degree.

**Extra Credits:** Extra credits are any credits taken in excess of the normal load of eighteen credits. A student with a 3.0 grade point average may take more than eighteen credits only when the proposed program carries the written approval of the adviser and the Dean.

## Grade Point Average

All students are required to maintain an over-all grade point average of 'C' (2.0) for all degree work elected. See 'Grade Point Average' in the General Information section of this Bulletin, page 45.

## Residence

To qualify for a baccalaureate degree in the College of Fine, Performing and Communication Arts a minimum of thirty credits must be earned in the College. The last thirty credits applicable to the degree, not including credit by special examination, must be completed in an undergraduate college or school of Wayne State University. Credit by special examination may not be counted as residence credit but such credit, if earned during a semester in which the student is registered, will not be considered an interruption of residence.

In special circumstances, senior residence may be interrupted with the approval of the student's major department and the College of Fine, Performing and Communication Arts Dean's Office; however, when the candidate has less than the minimum thirty credits of residence in the College of Fine, Performing and Communication Arts, no such exceptions are permitted.

## Scholarships and Financial Aid

Financial aid information may be found in the general information section of this bulletin (see page 20), and in the individual department sections. The following is open to all students majoring in the fine and performing arts:

**Sol Nathan Cohen Memorial Scholarship:** Amount depends on funds available; open to full-time undergraduate students majoring in the fine and performing arts, maintaining a minimum 3.0 g.p.a. and demonstrating financial need.

# ACADEMIC REGULATIONS

For complete information regarding academic rules and regulations of the University, students should consult the general information section of this bulletin, beginning on page 5. The following additions and amendments apply to the College of Fine, Performing and Communication Arts.

## Recommended High School Preparation

The College of Fine, Performing and Communication Arts strongly supports the University's recommendations concerning academic preparation. See page 15.

## Attendance

Regularity in attendance and performance is necessary for success in college work. Each instructor, at the beginning of the course, will announce attendance requirements.

## Normal Program Load

The requirements for graduation are based upon an average program of fifteen credits per semester for eight semesters. The normal load shall not exceed eighteen credits.

Because two hours of outside preparation are normally expected for each class hour in each course, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy. A few hours of employment a week may be safely added to this program by a capable student.

## Retention of Records

Term papers and examinations shall either be returned to the student or retained by the instructor for a minimum of six months. Thereafter they may be destroyed. Instructors shall retain grade books for at least five years following the end of a term, and instructors who leave the institution shall give grade books for courses conducted during the past five years to their department chairperson. Five years after the end of a course, grade books may be returned to the instructor or destroyed by the department.

## Study Abroad

Various opportunities for study abroad are available through the University. Students should contact their major department and the University Advising Center for further information regarding these programs.

## Honors Courses

Students with a 3.0 grade point average are eligible to enrich their education through election of honors courses. Information on these courses may be obtained in the Schedule of Classes under Honors Program. For a complete listing of available honors courses, see page 276.

Students enrolled in the College of Fine, Performing and Communication Arts who are interested in pursuing a University Honors degree should refer to page 39 of the bulletin. Further information regarding the Honors Program is available in the Honors Program Office located in room 2305 Faculty Administration Building.

## Graduation With Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: *Cum Laude*,

*Magna Cum Laude*, and *Summa Cum Laude*. Graduation with Distinction will be indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each commencement the top twenty percent of students in the College of Fine, Performing and Communication Arts who have earned the highest grade point average in the College with the following approximate distribution:

Top 5% . . . . . *Summa Cum Laude*  
Next 5% . . . . . *Magna Cum Laude*  
Next 10% . . . . . *Cum Laude*

The specific minimum grade point average making for these distinctions will be determined each year in the following manner (except that it shall not be less than 3.0):

Based on the grade point average distributions of the previous year's senior class, the grade point average cut-offs for the College will be established to provide for recognition of the top eighteen to twenty per cent of the graduating students.

The criteria for Graduation with Distinction include:

1. A minimum of sixty credits in residence at Wayne State University;
2. A minimum grade point average, as established above, on all work at Wayne State University completed by the end of the term of graduation. (For notation in the Commencement Program, the grade point average on all work completed prior to the term of graduation will be used.)

## Dean's List

The Dean's List of academically superior students is compiled each fall and winter term based on the following criteria: a 3.75 grade point average for students registered for full-time programs of twelve credits or more which contribute to the grade point base; and a 4.0 grade point average for students registered for between six and eleven credits. Students who receive marks of 'I' or 'W' or 'X' and grades of 'N' or 'U' are not eligible. (For explanation of these marks and grades, see page 44.)

## Academic Probation

**Low Grade Point Average:** If a student's work averages below 2.0, the student will be placed on academic probation; see 'Undergraduate Academic Probation,' page 42. The student will be required to obtain permission from the University Advising Center before registering. Such permission will be granted only after an interview during which the student and adviser identify previous causes of failure and formulate a plan for future academic success.

**Registration and Holds on Records:** A student on academic probation has an academic probation 'hold' placed on his/her record, and must obtain a release of this hold each term before being permitted to register. To obtain this release, the student must see an academic adviser in the University Advising Center, as indicated above under 'Low Grade Point Average.' The hold will not be released after the last day of the final registration period for the term in which the student intends to register. It cannot be released at the advising station in the Student Center during final registration.

**Restriction:** While on academic probation, a student may not represent the College in student activities.

**Removal of Probation:** Academic probation will be removed at the end of any term in which the student achieves an over-all average of 2.0 ('C') or better for all degree work taken at the University.

## Exclusion

**Low Grade Point Average:** A student on academic probation shall be allowed two subsequent terms for enrollment in probationary status. At the conclusion of the two terms, a student who has not achieved a cumulative g.p.a. of at least 2.0 shall be excluded from

the University. This exclusion may be reviewed by the Probation Committee and the Dean upon the request of the student. A student excluded from the University may not apply for readmission for one calendar year.

**Reinstatement:** After one year of exclusion, the student may apply for reinstatement to the College. The reinstatement application must be returned to the University Advising Center at least two weeks prior to the first day of any registration period. The decision to reinstate the student will be based upon evidence presented by the student that circumstances have changed during the year and that the probability of success has increased.

**Cheating and Plagiarism:** The principle of honesty is recognized as fundamental to a scholarly community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. Serious acts of dishonesty may lead to suspension or exclusion.

The instructor has the responsibility of notifying the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Information on procedures is available in the College of Fine, Performing and Communication Arts Dean's Office.

## Academic Advising

*Freshmen and sophomores* are required to consult departmental advisers each time they register. A staff of academic advisers is available in the University Advising Center, 2 East, Helen Newberry Joy Student Services Center, to answer general academic questions. Students should confer with advisers on all questions concerning degree requirements, academic regulations, course elections, and programs of study. It is of primary importance that students talk with an adviser when they are having difficulties in their academic work.

## 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 Class Board prior to the event.

## MULTIDISCIPLINARY COURSES (FPC)

*The following undergraduate courses are of a general nature and are used by students in various College disciplines. For interpretation of numbering system, signs and abbreviations, see page 493 .*

### 5020 Legal Environment of the Arts. Cr. 3

Prereq: junior standing. Law affecting persons in the entertainment business: artists, actors, musicians, producers, directors, writers, managers, agents, and others. Areas of contract, tort, copyright, trademark and First Amendment law which concern entertainment.

(Y)

### 5660 Creativity: Building the New. (ISP 5660) Cr. 3

Prereq: junior standing or above, or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Study of creativity with personal application. Investigations in artistic, scientific, social science, engineering, industrial, and other areas. Actual application and problem-solving skills. (Y)

## DIRECTORY OF THE COLLEGE

### Dean

Linda L. Moore . . . . . 5104 Gullen Mall; 577-5342

### Interim Associate Dean for Academic Affairs

Richard A. Wright . . . . . 5104 Gullen Mall; 577-5747

### Assistant Dean for Administrative Affairs

Joan M. Ferguson . . . . . 5104 Gullen Mall; 577-5362

### Assistant to the Dean

Lezlie H. Stivale . . . . . 5104 Gullen Mall; 577-5337

### Budget

Janine Dunlop . . . . . 5104 Gullen Mall; 577-5206

### Communications & Alumni Affairs

David Romas . . . . . 5104 Gullen Mall; 577-5448

### Computing Systems

Gary Cendrowski . . . . . 4121 Old Main; 577-8341

### Development Officer

Jennifer Harmon . . . . . 5104 Gullen Mall; 577-1458

### Information Technology

Byron Clemens . . . . . 5104 Gullen Mall; 577-5363

### Personnel

Robin Collins . . . . . 5104 Gullen Mall; 577-5365

### Student Services

Susan Tamm . . . . . 5104 Gullen Mall; 577-5364

## Departmental Offices

### Art and Art History

Robert J. Martin . . . . . 150 Art Building; 577-2980

### Communication

Craig A. Smith . . . . . 585 Manoogian Hall; 577-2943

### Dance

Eva Powers . . . . . 3226 Old Main; 577-4273

### Music

Dennis J. Tini . . . . . 1321 Old Main; 577-1795

### Theatre

Blair Anderson . . . . . 3225 Old Main; 577-3508

Website: <http://www.comm.edu/cfpca>

Mailing address for all offices:

(Department Name), College of Fine, Performing and Communication Arts, Wayne State University, 5104 Gullen Mall, Detroit, MI 48202

# ART and ART HISTORY

Office: 150 Art Building, 450 Reuther Mall; 577-2980

Interim Chairperson: Robert J. Martin

Undergraduate Adviser: Paul Clemens

Slide Collection Curator: Susan Nalezty

Exhibition Curator: Sandra Dupret

Art Studio Supervisor: Todd Mitchell

## Professors

John G. Hegarty, Marion E. Jackson, Robert J. Martin, James Nawara, Thomas C. Parish, Melvin Rosas

## Associate Professors

Jeffrey Abt, Pamela DeLaura, Thomas P. Fitzgerald, Urban Jupena, Nancy Locke, Brian Madigan, Judith Moldenhauer, James M. Raymo, Stanley L. Rosenthal, Peter Williams, Joseph B. Zajac, Marilyn Zimmerman

## Assistant Professors

Sarah Bassett, Tammy Evans, Margaret Franklin, Brian Kritzman, John Richardson

## Lecturers

Rayneld Johnson, Jiro J. Masuda, Dennis Robare, Susan Widawski

## W. Hawkins Ferry Endowed Chair in Twentieth Century Art History and Criticism

Dora Apel

## Emeritus/Emerita Faculty

William A. Allen, Phyllis A. Ashinger, Richard J. Bilaitis, Robert Broner, Peter J. Gilleran, Bernard M. Goldman, Joseph Gutmann, Louise J. Nobili, William E. Pitney, Patricia A. Quinlan, Horst Uhr, Robert J. Wilbert

## Degree Programs

*BACHELOR OF ARTS with a major in art, art history, or fashion design and merchandising.*

*BACHELOR OF FINE ARTS with a major in art and a concentration in one of the following: ceramics, drawing, fibers, graphic design, industrial design, interdisciplinary electronic arts, interior design, metal arts, painting, photography, printmaking, or sculpture.*

*BACHELOR OF SCIENCE with a major in fashion design and merchandising*

*\*MASTER OF ARTS with a major in art and a specialization in one of the following: ceramics, drawing, fibers, graphic design, industrial design, metal arts, painting, photography, printmaking, or sculpture.*

*\*MASTER OF ARTS with a major in art history.*

*\*MASTER OF ARTS with a major in fashion design and merchandising*

*\*MASTER OF FINE ARTS with a major in art and a specialization in one of the following: ceramics, design, drawing, fibers, metal arts, painting, photography, printmaking, or sculpture.*

\* For specific requirements see the Wayne State University Graduate Bulletin.

The Department of Art and Art History reserves the right to retain, for its permanent collection, the work submitted by students for credit in any course, and to exhibit or reproduce such work in University publications. Students are encouraged to retain work as they proceed through their program, so as to have at least twenty works for a final portfolio review.

## Bachelor of Arts With a Major in Art

**Admission Requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Arts in Art must complete 120 credits including satisfaction of the University General Education Requirements (see page 29), College degree requirements (see page 176), and forty-eight credits in art courses, including the Core Requirements and Departmental Requirements cited below. The minimum grade for each course required in the major, which must be taken in the Department of Art and Art History, must be no less than a 'C' in order for the course credit to count toward completion of the degree. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 171). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees.

CORE REQUIREMENTS:	credits
ADR 1050 --Drawing I . . . . .	3
ADR 1060 --Drawing II . . . . .	3
ADE 1200 --Design I . . . . .	3
ADE 1210 --Design II . . . . .	3
A H 1110 -- (VP) Survey of Art History: Ancient through Medieval . . . . .	3
A H 1120 -- (VP) Renaissance Through Modern Art Survey . . . . .	3

## DEPARTMENTAL REQUIREMENTS

ADR 2070 --Beginning Life Drawing . . . . .	3
APA 2100 --Basic Painting . . . . .	3
ASL 2150 --Introduction to Sculpture . . . . .	3
ADE 2200--Design III: Three Dimensional (or craft course) . . . . .	3
One 3-credit course in printmaking (APR) or photography (APH) . . . . .	3
Art History (A H) elective (2000 level or above) . . . . .	3
Art History (A H) elective (3000 level or above) . . . . .	3
PHI 3700--(PL) Philosophy of Art . . . . .	3

## Bachelor of Arts With a Major in Art History

**Admission Requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates must complete 120 credits, including satisfaction of the University General Education Requirements (see page 29), College degree requirements (see page 176), and the major requirements listed below. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 171). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 171 - 175, respectively.

Students may elect this major as part of an undergraduate curriculum in either the College of Liberal Arts or the College of Fine, Performing and Communication Arts. Those electing the major in the College of Liberal Arts must fulfill the general requirements of that College; see page 228.

**Major Requirements:** Students must complete a minimum of thirty-three credits in art history, which includes six credits in the basic surveys (A H 1110, 1120), three credits from the non-western surveys



and at least twenty-four credits in advanced courses, of which a minimum of fifteen credits must be at the 5000 level or above. These courses should be selected to ensure exposure to the major periods and areas: ancient, medieval, renaissance-baroque, nineteenth and twentieth centuries, Oriental and ethnographic. All students must elect A H 5090. The minimum grade for each course required in the major, which must be taken in the Department of Art and Art History, must be no less than a 'C' in order for the course credit to count toward completion of the degree. In addition to the Art History course work, majors must complete at least two years of college-level study in German or French (a minimum of four semester courses).

## Bachelor of Arts or Bachelor of Science With a Major in Design and Merchandising

Curricula in this area provide a liberal education as well as the opportunity for a professional concentration in the fields of apparel design and fashion merchandising.

**Admission Requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for either Bachelor's degree must complete 120 credits including satisfaction of the University General Education requirements (see page 29), College degree requirements (see page 176), and all departmental and area requirements as indicated below. The minimum grade for each course required in the major, which must be taken in the Department of Art and Art History, must be no less than a 'C' in order for the course credit to count toward completion of the degree. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 171-175, respectively.

*Students pursuing the Bachelor of Arts Degree with a Major in Design and Merchandising must also fulfill the foreign language requirement (see page 171).*

*Students pursuing the Bachelor of Science Degree with a Major in Design and Merchandising must complete a minimum of twenty-four credits in Natural Science courses in lieu of the language requirements (University General Education Requirements must still be met.)*

<b>CORE REQUIREMENTS</b>	<i>credits</i>
AFA 2410 -- Textiles I . . . . .	3
AFA 2420 -- Clothing Selection and Construction. . . . .	3
AFA 3400 -- Clothing and Culture . . . . .	3
AFA 3460 -- Introduction to Merchandising. . . . .	3
AFA 5430 -- History of Costume . . . . .	3
AFA 5997 -- (WI) Seminar. . . . .	3

### **APPAREL DESIGN OPTION:**

Successful completion of this curriculum enables students interested in creative aspects of clothing to develop competencies needed for careers in apparel design and related fields. Possible careers include designing and patternmaking, and other related fields of the apparel industry.

Students are responsible for meeting program requirements as outlined in curriculum guides; these include a minimum of fifteen art credits. Curriculum guides are available in the Department of Art and Art History office.

### **FASHION MERCHANDISING OPTION:**

This curriculum develops understanding and practical skills related to the buying and selling of fashion merchandise. Students gain insights into the various aspects of the apparel industries including marketing, sales, styling, publicity, advertising, visual presentation, fashion coordination, and merchandising.

Possible careers include positions in management, buying, and fashion promotion and sales.

Students are responsible for meeting program requirements as outlined in curriculum guides; these include a minimum of fifteen business credits. Curriculum guides are available in the Department of Art and Art History office.

## Bachelor of Fine Arts

**Admission Requirements** for the Bachelor of Fine Arts Degree are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Fine Arts degree must complete 120 credits including satisfaction of the University General Education Requirements (see page 29) and College degree requirements (see page 176). Core and departmental requirements as cited above under Bachelor of Arts with a Major in Art must be met, as well as the major requirements below. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 171 -175, respectively.

**Major Requirements:** Students must complete twenty-four to fifty-one credits (depending on areas of specialization) in art courses, eighteen of which must be at the advanced level (from courses numbered 3000 and above) *plus the appropriate senior seminar for the selected concentration*. The minimum grade for each course required in the major, which must be taken in the Department of Art and Art History, must be no less than a 'C' in order for the course credit to count toward completion of the degree. Curriculum outlines with suggested scheduling patterns for the following fields of concentration are available in the Department of Art and Art History office:

- |                                      |                    |
|--------------------------------------|--------------------|
| a. Ceramics                          | g. Interior Design |
| b. Drawing                           | h. Metal Arts      |
| c. Fibers                            | i. Painting        |
| d. Graphic Design                    | j. Photography     |
| e. Industrial Design                 | k. Printmaking     |
| f. Interdisciplinary Electronic Arts | l. Sculpture       |

Required courses in each B.F.A. concentration are given below; exceptions may be made with consent of adviser.

### **CERAMICS**

ACR 2550 --Ceramics and Pottery Design I <sup>1</sup> . . . . .	3
ACR 2560 --Ceramics and Pottery Design II <sup>1</sup> . . . . .	3
ACR 3550 --Beginning Ceramics. . . . .	3
ACR 4000 -- Ceramics: Wheel Throwing. . . . .	3
ACR 4550 --Intermediate Ceramics. . . . .	3
ACR 5550 --Advanced Ceramics. . . . .	12

### **DRAWING**

ADR 2070 --Beginning Life Drawing . . . . .	3
ADR 3070 --Intermediate Life Drawing . . . . .	3
ADR 5060 --Advanced Concepts in Drawing & Painting. . . . .	3
ADR 5080 --Landscape Drawing and Painting . . . . .	3
Drawing Electives . . . . .	12

### **FIBERS**

AFI 2650 or AFI 2660	
--Beginning Weaving . . . . .	3
--Introduction to Fabric Printing & Dyeing . . . . .	3
AFI 3650 or AFI 3660	
--Intermediate Weaving . . . . .	3
--Intermediate Fibers . . . . .	3
5000-level AFI courses (Junior year). . . . .	9
5000-level AFI courses (Senior year) . . . . .	6

1. Students who have completed first year core program may start with ACR 3550/4550 and repeat ACR 5550.

## GRAPHIC DESIGN

AIA 1610 -- Architectural Drafting and Perspective Drawing	3
AGD 2250 -- Typography	3
AGD 3250 -- Graphic Design I	3
AGD 4250 -- Graphic Design II	3
AGD 5250 -- Graphic Design III	3
AGD 5260 --(WI) Senior Seminar	3
AGD 5997 -- Graphic Design IV	3
Graphic Design Electives	6

## INDUSTRIAL DESIGN

AID 3300 --Introduction to Industrial Design	6
AID 3310 --Basic Presentation	6
AID 5300 --Industrial Design	12
AID 5310 --Advanced Presentation	12
AID 6300 --Transportation Design	6
AID 6320 --History of Industrial Design I	3
AID 6330 --History of Industrial Design II	3

## INTERDISCIPLINARY ELECTRONIC ARTS

THR 1010 or THR 1030	
-- (VP) Introduction to the Theatre	3
-- (VP) Black Theatre: An Introduction	3
DNC 1010 -- Contemporary Dance I	2
MUH 1340 -- (VP) Music Appreciation: World Music	3
AGD 3250 -- Graphic Design I	3
AIN 2220 -- Video Art	3
AIN 3220 -- Computer Art	3
AIN 4220 -- Computer Animation	3
AIN 5220 -- Interactive Art	3
AIN 6830 -- Internship: Computer/Video/Multimedia	3
APR 2300-- Introduction to Printmaking	3

## INTERIOR DESIGN

AIA 1610 -- Architectural Drafting and Perspective Drawing	3
AIA 2600 -- Interior Design: CAD	3
AIA 2610 -- Interiors Design Studio I	3
AIA 3610 -- Interior Design Studio II	3
AIA 4600 -- Environmental Design Theory	3
AIA 4610 -- Interior Design Studio III	3
AIA 5010 -- Furniture/Product Workshop	3
AIA 5610 -- Interior Materials and Systems	3
AIA 5620 -- Building Construction Systems in Architecture I	3
AIA 5630 -- Interior Lighting Design & Application	3
AIA 5640 -- Building Construction Systems in Architecture II	3
AIA 5997 -- (WI) Senior Seminar	3
A H 5000- or 6000-level course	3
AIA 6610 -- Interiors Design Studio IV	3
AIA 6650 -- Business Practicum	2

### Suggested Electives:

AIA 3620 -- Interior Design CAD II	3
AIA 4620 -- Introduction to Perspective and Illustration	3
AIA 5660 -- Supervised Field Experience	3
AID 3310 -- Basic Presentation	3
AIA 5991 -- Directed Projects: Intro: Environmtl. Design & Products	3
AIA 5991 -- Directed Projects: Interior Residential Design Studio	3

## METAL ARTS

AME 2600 --Intro: Jewelry & Metalsmithing	3
AME 3600 --Intermediate Jewelry I	3
AME 5600 --Advanced Jewelry & Metalsmithing (Junior year)	6
AME 5600--Advanced Jewelry & Metalsmithing (Senior year)	12

## PAINTING

APA 2110 --Beginning Painting: Water Media	3
APA 2120 --Beginning Painting: Oil	3
3000-level Painting Elective	3

## APA 3130 or APA 3140

--Figure Painting: Water Media	3
--Figure Painting: Oil and Other Media	3
APA 5100 --Painting Seminar	3
5000-level Painting Electives	9

## PHOTOGRAPHY

APH 2400 --Introductory Photography	3
APH 2410 --Beginning Photography	3
APH 2420 -- Digital Imaging	3
APH 3400 --Evolution of Photography	3
APH 3410 --Intermediate Photography	3
APH 3420 -- Digital Imaging II	3
APH 4410 --Advanced Photography	3
APH 4420 --View Camera	3
APH 4430 --Color Photography	3
5000-level Photography Electives	6

## PRINTMAKING

3000-level APR courses	6
5000-level Printmaking courses	12
5000-level Advanced Printmaking courses	6

## SCULPTURE

ASL 3160 or ASL 3170	
--Intermediate Sculpture: Non-Figurative	3
--Intermediate Sculpture: Figurative	3
5000-level Advanced Sculpture courses	15
ASL 6160 or ASL 6170	
--Non-Figurative Sculpture	3
--Figurative Sculpture	3

## Transfer Students

Transfer students must complete a minimum of twenty-seven resident credits in art courses for either the B.A. or B.F.A. degree with a studio major; a minimum of twelve resident credits with an art history major; or a minimum of twelve resident credits for either the B.A. or B.S. degree with a major in design and merchandising.

## Minors in Art and Art History

**ART:** A minor in art will be granted upon completion of twenty-four credits, including: one Drawing course (ADR 1050), one Design course (ADE 1200), one Art History course (A H 1110 or 1120), and five studio electives (fifteen credits).

**ART HISTORY:** A minor in art history will be granted upon completion of twenty-one credits in art history courses, including A H 1110 and 1120, and fifteen credits at the 2000 level or above.

## Departmental Scholarships

See the section on Scholarships and Financial Aid on page 173. Detailed information on all Department scholarships and awards is available in the Art and Art History office.

**Wilfred C. Becker Memorial Scholarship:** Award of \$1500 per academic year renewable for four years; open to any high school senior recipient of a Scholastic Art Award sponsored by the Scholastic Art Association.

**Albert and Peggy deSalle Scholarship:** Awarded to an undergraduate or graduate art student majoring in metals, photography, or a closely related field.

**Brian Gahagan Memorial Scholarship.** Contact Department for information.

**Mary Kirk Haggarty Memorial Scholarship:** Awarded to an undergraduate or graduate student majoring in art history.

**Linda Marlene Iden Memorial Scholarship:** Awarded to a full-time or part-time fine art or design undergraduate or graduate student in the

Department of Art and Art History with demonstrated artistic talent and good academic performance.

*Marji Kunz Fashion Scholarship:* Awarded to a design and merchandising student (sophomore level or above) with aptitude in creative design, display work, writing, fashion retailing or modeling. Application deadline is October 31.

*John and Irene Sowinski Scholarship:* Awarded to an art student majoring in a studio art area.

*Albert L. and Alice W. Steinbach Scholarship:* Awarded to an undergraduate or graduate student majoring in art history.

*Talent Award:* Award of \$1000 per academic year (fall and winter terms) renewable for four years open to any Michigan high school senior planning to major in a studio art area.

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

Only courses passed with a minimum grade of 'C' will satisfy prerequisite requirements for subsequent courses in the Department of Art and Art History.

## CERAMICS (ACR)

### 2550 Ceramics and Pottery Design I. (ACR 2560) (ACR 3550) (ACR 4550) (ACR 5550) (ACR 7550) Cr. 3

Introduction to basic clay-forming techniques including slab, coil, wheel throwing, and glazing. Primarily for non-art majors. Material fee as indicated in the Schedule of Classes. (T)

### 2560 (ACR 2550) Ceramics and Pottery Design II. (ACR 3550) (ACR 4550) (ACR 5550) (ACR 7550) Cr. 3

Prereq: ACR 2550. Continuation of ACR 2550. Further development of basic clay techniques. Material fee as indicated in the Schedule of Classes. (T)

### 3550 (ACR 2550) Beginning Ceramics. (ACR 2560) (ACR 4550) (ACR 5550) (ACR 7550) Cr. 3

Prereq: ADR 1060 and ADE 1210. Open only to art majors. Experiences in basic techniques, processes and ideas fundamental to the ceramic medium. Material fee as indicated in the Schedule of Classes. (T)

### 4000 Ceramics: Wheel Throwing. Cr. 3

Prereq: ACR 2550 or 3550 or consent of instructor. Development of personal, technical and aesthetic skills in using potter's wheel as tool to create utilitarian and non-utilitarian objects. Group and individual critiques. Material fee as indicated in the Schedule of Classes. (Y)

### 4001 Handbuilding. Cr. 3 (Max. 6)

Prereq: ACR 2550 or 3550; or written consent of instructor. Intermediate and advanced handbuilding techniques including coiling, extrusions, mold and slab construction. Surfacing, glazing and firing processes as they apply to completing the objects. Material fee as announced in Schedule of Classes. (Y)

### 4550 (ACR 2550) Intermediate Ceramics. (ACR 2560) (ACR 3550) (ACR 5550) (ACR 7550) Cr. 3

Prereq: ACR 3550. Advanced building techniques; glaze and clay body calculation, mold-making and aesthetic evaluation. Material fee as indicated in the Schedule of Classes. (T)

### 5550 (ACR 2550) Advanced Ceramics. (ACR 2560) (ACR 3550) (ACR 4550) (ACR 7550) Cr. 3-6 (Max. 12)

Prereq: ACR 4550. Open only to art majors in ceramics. Election of more than 3 credits per semester requires consent of instructor. Individual research including kiln building, firing and studio management. Individual philosophy and group critiques emphasized. Material fee as indicated in the Schedule of Classes. (T)

### 5880 Directed Projects: Ceramics. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)

Prereq: consent of instructor. Individual problems. Material fee as indicated in the Schedule of Classes. (F,W)

## DESIGN (ADE)

### 1200 Design I. Cr. 3

Foundation course for all visual communication. Two- and three-dimensional experimentation in various techniques with achromatic media. (T)

### 1210 Design II. Cr. 3

Prereq: ADE 1200. Continuation of ADE 1200 with concentration on color theories and phenomena. Two- and three-dimensional concepts of structure with an emphasis on color. (T)

### 2200 Design III: Three Dimensional. Cr. 3

Prereq: ADE 1210. Elementary and advanced spatial constructions using a variety of tools, materials and machines. Relationships to other art forms and fields are stressed through lectures and discussions. Material fee as indicated in the Schedule of Classes. (F,W)

## DRAWING (ADR)

### 1050 Drawing I. (ADR 1060) Cr. 3

Introduction to basic drawing skills such as linear perspective, light and shadow, use of dry and wet media; emphasis on composition. Drawing primarily still life subjects. (F,W)

### 1060 (ADR 1050) Drawing II. Cr. 3

Prereq: ADR 1050. Further development of basic drawing skills and concepts. Continued exploration of media. Drawing based on observation and imagination. (F,W)

### 2070 Beginning Life Drawing. (ADR 3070) (ADR 5070) (ADR 7070) Cr. 3

Prereq: ADR 1060. Initial exploration of human figure using limited drawing media; essential aspects of the figure: proportion, gesture, composition. Material fee as indicated in the Schedule of Classes. (F,W)

### 3070 (ADR 2070) Intermediate Life Drawing. (ADR 5070) (ADR 7070) Cr. 3

Prereq: ADR 2070. Continued systematic study of human figure using broad range of media. Material fee as indicated in the Schedule of Classes. (F,W)

### 5060 Advanced Concepts in Drawing and Painting. (ADR 7060) Cr. 3-6 (Max. 15)

Prereq: ADR 3070 or APA 3120. Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. (Y)

### 5070 (ADR 2070) Advanced Life Drawing. (ADR 3070) (ADR 7070) Cr. 3-6 (Max. 24)

Prereq: ADR 3070. Election of more than three credits per semester requires consent of instructor. 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 and Painting. (ADR 7080)  
Cr. 3-6 (Max. 12)**

Prereq: ADR 1060. Election of more than 3 credits per semester requires consent of instructor. Drawing and/or painting outside at a variety of urban 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 in any appropriate drawing or painting medium. This course will fulfill drawing or painting major requirements. (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)

**5800 Directed Projects: Drawing.  
Cr. 3-6 (Undergrad. max. 15; grad. max. 30)**

Prereq: consent of instructor. Individual work supervised by faculty on arranged basis. (F,W)

## FASHION DESIGN and MERCHANDISING (AFA)

**2410 Textiles. Cr. 3**

Introduction to fibers, yarns, fabric construction, design and finishes and how they relate to selection, use and care of textile products. Material fee as indicated in the Schedule of Classes. (F,W)

**2420 Fashion Design: Basic Construction. Cr. 3**

Application of color and design principles in construction of structured and unstructured garments. Material fee as indicated in the Schedule of Classes. (F,W)

**3400 Clothing and Culture. Cr. 3**

Functions and meanings of dress in diverse cultures and contemporary society with an interdisciplinary approach. (F,W)

**3410 Textile Performance Analysis. Cr. 3**

Prereq: AFA 2410. Recent technological developments; introduction to textile testing. Material fee as indicated in the Schedule of Classes. (W)

**3460 Introduction to Merchandising. Cr. 3**

Psychological, economic considerations. Terminology and structure of apparel trades and career opportunities. Field trips. (F,W)

**3470 Merchandise Information. Cr. 3**

Quality and value in merchandising. Manufacturing processes, government regulations and selling points in hard and soft lines. (W)

**4430 Fashion Illustration. Cr. 3 (Max. 6)**

Prereq: ADR 1050. Basic fashion rendering techniques using a variety of media. (B)

**4990 Directed Study. Cr. 2-4**

Prereq: consent of instructor. (T)

**4991 Workshop: Special Topics. Cr. 2-4 (Max. 6)**

Application of theoretical principles to selected areas of design and merchandising. Topics and prerequisites to be announced in Schedule of Classes. (Y)

**5420 Fashion Design: Tailoring. Cr. 3**

Prereq: AFA 2420. Tailoring techniques applied to coats and suits. Material fee as indicated in the Schedule of Classes. (F)

**5430 History of Costume. Cr. 3**

Prereq: one art history course or consent of instructor. Survey of historic costumes from prehistoric to present. (F)

**5440 Fashion Design: Flat Pattern. Cr. 3 (Max. 6)**

Prereq: AFA 2420. Original designs from a basic sloper. Material fee as indicated in the Schedule of Classes. (Y)

**5450 Fashion Design: Draping. Cr. 3 (Max. 6)**

Prereq: AFA 2420. Creation of an original garment by draping on a form. Material fee as indicated in the Schedule of Classes. (I)

**5460 Merchandising II. Cr. 3**

Prereq: AFA 3460. Current trends in merchandising. Lectures by specialists. (F)

**5470 Visual Merchandising: Display. Cr. 3**

Prereq: ADE 1200, ADE 1210, or consent of instructor. 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)

**5490 Economics of Merchandising. Cr. 3**

Prereq: completion of Math Proficiency Requirements. Application of business theory to merchandising; design and implementation of the merchandise plan. (W)

**5992 Supervised Field Experience. Cr. 2-4**

Prereq: senior standing. Supervised field experience designed to correlate classroom theory with practical work. (F)

**5997 (WI) Seminar. Cr. 3**

Prereq: junior standing. Topics to be announced in Schedule of Classes. Satisfies the General Education Writing Intensive Course in the Major requirement. (F,W)

**6440 Computer-Aided Design for Apparel Design. Cr. 3**

Prereq: AFA 5440 or consent of instructor. 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**

Prereq: consent of instructor. Group tour to major market sources; observation and analysis of products and marketing procedures. Topics to be announced in Schedule of Classes. (B:S)

## FIBERS (AFI)

**2650 Beginning Weaving. Cr. 3**

Prereq: ADE 1210 and ADR 1060. Weaving techniques on a frame loom. Design concepts through application of tapestry, flossa, sumac, inlay and wrapping process. Material fee as indicated in the Schedule of Classes. (T)

**2660 Introduction to Fabric Printing and Dyeing.  
Cr. 3-6 (Max. 6)**

Emphasis on color, design, composition. Printing with found objects, stencil, silk screen resist method working with pigment and reactive dye. Material fee as indicated in the Schedule of Classes. (T)

**3650 Intermediate Weaving. (AFI 5650) (AFI 7650)  
Cr. 3-6 (Max. 12)**

Prereq: AFI 2650. Election of more than three credits per semester requires consent of instructor. Designs done on four- and eight-harness looms. Pattern drafting, layer weaving, ikat, and rug techniques offered on a rotating basis. Material fee as indicated in the Schedule of Classes. (T)

**3660 Intermediate Fibers Printing and Dyeing.  
(AFI 5660) (AFI 7660) Cr. 3-6 (Max. 12)**

Prereq: AFI 2660. Continuation of AFI 2660. Deeper study of fiber reactive dye; beginning of development of personal style. Material fee as indicated in the Schedule of Classes. (T)

**5650 (AFI 3650) Weaving: Senior Project. (AFI 7650) Cr. 3-6 (Max. 12)**

Prereq: AFI 3650. Election of more than three credits per semester requires consent of instructor. Directed project in weaving. Research and written evaluative statement required. Material fee as indicated in the Schedule of Classes. (T)

**5660 (AFI 3660) Fabric Printing and Dyeing: Senior Project. (AFI 7660) Cr. 3-6 (Max. 12)**

Prereq: AFI 3660. Election of more than three credits per semester requires consent of instructor. 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)**

Prereq: consent of instructor. Individual problems. (F,W)

## GRAPHIC DESIGN (AGD)

**2240 Orientation to Graphic Design Computer Software. Cr. 3**

Prereq: graphic design or interdisciplinary electronic arts concentration; consent of instructor. Introduction to computer layout, drawing and photo manipulation programs used in graphic design. Demonstrations, readings and assignments for development of design computer skills and integration into design process. Material fee as announced in Schedule of Classes. (F,W)

**2250 Typography. Cr. 3**

Prereq: ADR 1050, 1060; ADE 1200, 1210; and AGD 2240. Fundamental understanding of structure, history, technology and application of typography, the visualization of language. Functional and experimental aspects of typography; typographic syntax and hierarchies. Material fee as indicated in the Schedule of Classes. (F,W)

**3250 Graphic Design I: Principles and Problem Solving. Cr. 3**

Prereq. or coreq: AGD 2250; prereq: ADR 1050, 1060; ADE 1200, 1210; AGD 2240. Visual communication issues and applications: design methodology, problem-solving, relation of form to meaning, type/image relationships. Material fee as indicated in the Schedule of Classes. (F,W)

**4250 Graphic Design II: Word, Image, and Visual Organization. Cr. 3**

Prereq: AGD 2240, 2250, and 3250. Students apply knowledge of typography and visual design principles to specific design situations; emphasis on use of grid systems. Material fee as announced in Schedule of Classes. (Y)

**5250 Graphic Design III: Complexity and Variety in Design. Cr. 3 (Max. 18)**

Prereq: AGD 2240, 2250, 3250, and 4250. 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. 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. 6)**

Prereq: AGD 4250, senior standing or junior standing with consent of instructor. 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 announced in Schedule of Classes. (Y)

**5890 Directed Projects: Graphic Design. Cr. 3-6 (Undergrad. max. 9; grad. max. 18)**

Prereq: consent of instructor. Individual problems. Material fee as announced in Schedule of Classes. (F,W)

**5990 Field Study: Internship. Cr. 3-6**

Prereq: AGD 5250, consent of instructor. Written consent of instructor required if elected for more than three credits. Supervised field experience designated to correlate classroom theory with practical work. (T)

**5997 Graphic Design IV: Systems, Series, and Advanced Studies in Visual Communication. Cr. 3**

Prereq: AGD 2240, 2250, 3250, 4250, and 5250. 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 announced in Schedule of Classes. (F,W)

**6260 Advanced Typography. Cr. 3**

Prereq: junior standing and completion of AGD 4250. Advanced and experimental typography; typography as an expressive language in 2-D and 3-D; projects in information design. (Y)

**6270 Graphic Design Practicum. Cr. 3**

Prereq: senior standing, acceptance of portfolio. Students work on actual graphic design projects with clients from non-profit organizations. Initial discussion with client through delivery of printed work. Material fee as announced in Schedule of Classes. (Y)

**6280 Pre-Press and Production. Cr. 3**

Prereq: AGD 4250, junior standing. Preparation of design work for production. How print production influences design concept, connections between pre-press preparation and finished printed work. Field trips and actual print production. Material fee as announced in Schedule of Classes. (S)

## INDUSTRIAL DESIGN (AID)

**3300 Introduction to Industrial Design. (AID 5300) Cr. 3 (Max. 9)**

Prereq: ADE 2200, ADE 1210, AID 3310. Introduction to fundamental design methodology through problems involving two-dimensional presentation and three-dimensional form studies. Material fee as indicated in the Schedule of Classes. (F,W)

**3310 Basic Presentation. (AID 5310) Cr. 3 (Max. 9)**

Prereq: AID 1610. Fundamentals of free-hand perspective drawing. Achromatic sketches with emphasis on cast shadows and value studies. Introduction of color sketches during the second term. (F,W)

**4300 Product Design Engineering. Cr. 3**

Open only to College of Engineering students. Students build on basic skills in projects exploring conceptual problem-solving in two dimensions. (F,W)

**4600 Transportation Design Engineering. Cr. 3**

Prereq: AID 4300. Open only to College of Engineering students. Conceptual projects related to transportation design, utilizing skills developed in AID 4300. (F,W)

**5300 (AID 3300) Industrial Design. Cr. 3-6 (Max. 15)**

Prereq: AID 3300. Election of more than three credits per semester requires consent of instructor. Product design problems with emphasis on workability and form design. Sketches and three-dimensional models. Material fee as indicated in the Schedule of Classes. (F,W)

**5310 (AID 3310) Advanced Presentation. Cr. 3-6 (Max. 18)**

Prereq: AID 3310. Election of more than three credits per semester requires consent of instructor. Professional techniques in wet and dry media. Full size tape drawings and renderings. Sketch techniques in black and white and color. (F,W)

**5997 (WI) Senior Seminar. Cr. 3**

Prereq: senior standing in industrial design concentration. 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. (W)

**6300 Transportation Design. (AID 7300) Cr. 3-6 (Max. 18)**

Prereq: AID 3300. Election of more than three credits per semester requires consent of instructor. Form and proportion investigations of various transportation systems. Repetition of course allows a more comprehensive development of a particular project. Material fee as indicated in the Schedule of Classes. (F,W)

**6320 History of Industrial Design I. Cr. 3**

Modern design in architecture, furniture, decorative and graphic arts, transportation forms, in terms of style. 1850-1910: Victorian sub-styles, Art Nouveau, Arts and Crafts movement, Beaux Arts, Vienna Secession. (F)

**6330 History of Industrial Design II. Cr. 3**

Period of 1910 to present: de Stijl, the Bauhaus, Art Deco, Streamlining, the International School, contemporary design directions. Twentieth century developments: aircraft, automobiles, industrial design, architecture, decorative and graphic arts. (W)

## INTERDISCIPLINARY ELECTRONIC ARTS (AIN)

**1610 Architectural Drafting and Perspective Drawing. Cr. 3**

Prereq: ADR 1050. Basic architectural drawings: plans, elevations, obliques, sections, details, dimensioning and lettering; hand-drawn and basic CAD techniques; development of perspective presentation drawings. Material fee as indicated in the Schedule of Classes. (F,W)

**2600 Interior Design: CAD I. Cr. 3**

Prereq: AIA 1610. Open only to interior design students. Continuation of computer-aided design. Plans, elevations, sections, details, dimensioning and description. System furniture space planning; Windows-based auto CAD. Material fee as indicated in the Schedule of Classes. (F)

**2610 Interior Design Studio I. Cr. 3**

Prereq: AIA 1610. Single family residential/small-scale office. Presentation techniques; introduction to media and methods used in the preparation of presentation boards: layout, selection, rendering, plan, elevation, lettering and verbal presentation. Material fee as indicated in the Schedule of Classes. (W)

**3610 Interior Design Studio II. Cr. 3**

Prereq: AIA 2610. Hospitality/restaurant/health care. Continuation of graphic and presentation skill development incorporating plan, elevation, section, detailing, perspective, hand and CAD drawings. Experimentation with lighting, media, board, and verbal presentation. Material fee as indicated in the Schedule of Classes. (W)

**3620 Interior Design: CAD II. Cr. 3**

Open only to interior design students. Prereq: AIA 1610, 2600, and 2610. Intermediate-level CAD. Development and creation of construction documents, space planning of interior spaces, and systems layout, using autoCAD drafting techniques in two- and three-dimensional modes. Material fee as indicated in the Schedule of Classes. (F)

**4600 Environmental Design Theory. Cr. 3**

Prereq: AIA 2610. Open only to interior design majors. History of interiors: ergonomic, environmental elements. Introduction to building and barrier-free design codes. Acoustical, HVAC and electrical systems. Material fee as indicated in the Schedule of Classes. (W)

**4610 Interior Design Studio III. Cr. 3**

Prereq: AIA 2600 and 3610. Retail/contract open-office system, medium to large scale, new or adaptive reuse projects. Advanced hand and CAD graphic, presentation skill development, incorporating building and barrier-free codes, HVAC and lighting principles, furniture and equipment specification. Material fee as indicated in the Schedule of Classes. (F)

**4620 Interior Perspective and Illustration. Cr. 3**

Open only to interior design students. Prereq: AIA 1610, 2610. Visual perspective presentation techniques, including selection, construction, illustration of interior designs. Basic mechanical perspective layout and delineation techniques: pencil, pen, color marker and color pencil to relate effects of texture, volume, and light of interior space. Material fee as indicated in the Schedule of Classes. (W)

**4990 Directed Study. Cr. 2-4**

Prereq: consent of instructor. (F,W)

**5010 Furniture/Product Workshop. Cr. 3**

Prereq: AIA 1610, 2610, 5610; consent of instructor. 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. (Y)

**5610 Interior Materials and Systems. Cr. 3**

Prereq: junior standing or above in interior design concentration. 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. (F)

**5620 Building Construction Systems in Architecture I. Cr. 3**

Prereq: AIA 2610, 3610. Open only to interior design majors. 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. (Y)

**5630 Interior Lighting Design and Application. Cr. 3**

Prereq: AIA 3610, 4610. 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**

Open only to interior design majors. Prereq: AIA 2600, 4600, 4610, 5620. 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**

Prereq: consent of program adviser. Open only to interior design majors. Supervised field study experience designed to correlate classroom theory with professional practice. (F,W)

**5991 Directed Projects: Interior Design. Cr. 3-6 (Max. 9)**

Prereq: consent of program coordinator. Open only to interior design majors. Individual problems. (F,W)

**5997 (WI) Senior Seminar. Cr. 3**

Prereq: consent of instructor; senior standing. Investigation of designers, styles, and periods of interior design through charettes and documentation. Resume and portfolio development and review; writing of intensive research paper. (F,W)

**6610 Interior Design Studio IV. Cr. 3**

Prereq: AIA 4610, 5640. 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 interior design majors. Examination of different types of business formations and their characteristics; professional practices and procedures, professional ethics, contemporary topics in interior design practice. (W)

## INTERIOR DESIGN (AIA)

**1610 Architectural Drafting and Perspective Drawing. Cr. 3**

Prereq: ADR 1050. Basic architectural drafting and dimensioning. Linework and lettering. Construction of one- and two-point perspective drawings. Material fee as indicated in the Schedule of Classes. (F,W)

**2600 Interior Design: CAD. Cr. 3**

Prereq: AIA 1610. Open only to interior design students. Basic to intermediate level computer-aided design; MAC and DOS based platforms. (F)

**2610 Interior Design Studio I. Cr. 3**

Prereq: AIA 1610. Presentation techniques; introduction to contemporary media and methods used in the preparation of presentation boards: layout, rendering, matting and lettering. Material fee as indicated in the Schedule of Classes. (W)

**3600 Interior Design Studio: Transfer Students. Cr. 3**

Prereq: AIA 2610; consent of instructor; portfolio review. Open only to interior design major transfer students. Evaluation and development of the interior environment as it relates to the specific needs of the client and an existing architectural vernacular. (F)

**3610 Interior Design Studio II. Cr. 3**

Prereq: AIA 2610. Continuation of graphic skill development including detailing and section drawing, two-point perspective, lighting, media experimentation, presentation board design. Residential and contract. Material fee as indicated in the Schedule of Classes. (W)

**4600 Environmental Design Theory I. Cr. 3**

Prereq: AIA 2610. Open only to interior design majors. Theories of anthropometrics, human factors, thermal conditions; introduction to HVAC, electrical and acoustical engineering. (W)

**4610 Interior Design Studio III. Cr. 3**

Prereq: AIA 3610. Projects involve advanced graphic techniques, presentation, and material applications. Emphasis on space planning, utilizing systems furniture, including barrier-free design, safety codes and adaptive reuse. Material fee as indicated in the Schedule of Classes. (F)

**4990 Directed Study. Cr. 2-4**

Prereq: consent of instructor. (F,W)

**5010 Furniture/Product Workshop. Cr. 3**

Prereq: AIA 1610; consent of instructor. Open only to interior design or industrial design majors. Design process of furniture and product design. Projects involve quarter-scale models, drawing, and shop techniques. (Y)

**5610 Interior Materials and Systems. Cr. 3**

Prereq: junior standing or above in interior design concentration. 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. (F)

**5620 Building Construction Systems in Architecture I. Cr. 3**

Prereq: AIA 2610. Open only to interior design majors. Introduction to modern structural systems, basic documentation of architectural details. (Y)

**5630 Environmental Design Theory II: Lighting. Cr. 3**

Prereq: AIA 4600. Light sources, fixtures, selection and application in architectural interiors; energy efficiency, comfort, basic calculations. (W)

**5640 Building Construction Systems in Architecture II. Cr. 3**

Prereq: AIA 4600 and 5620. Preparation of detailed architectural working drawings for interior spaces. Material fee as indicated in the Schedule of Classes. (W)

**5660 Supervised Field Experience. Cr. 3**

Prereq: consent of program adviser. Open only to interior design majors. Supervised field study experience designed to correlate classroom theory with professional practice. (F,W)

**5991 Directed Projects: Interior Design. Cr. 3-6 (Max. 9)**

Prereq: consent of program coordinator. Open only to interior design majors. Individual problems. (F,W)

**5997 (WI) Senior Seminar. Cr. 3**

Prereq: consent of instructor. Senior standing. Topics to be announced in Schedule of Classes. (F,W)

**6610 Interior Design Studio IV. Cr. 3**

Prereq: AIA 4610. Projects involving large-scale facilities, adaptive re-use, and retail spaces. Integration of human factors as they relate to specific environments. Portfolio development. Material fee as indicated in the Schedule of Classes. (W)

**6650 Business Practicum. Cr. 2**

Prereq: AIA 4610. Open only to interior design majors. Examination of different types of business formations and their characteristics; professional practices and procedures, professional ethics, contemporary topics in interior design practice. (W)

## METALS (AME)

**2600 Introduction to Jewelry and Metalsmithing. Cr. 3**

Prereq: ADR 1060 and ADE 1210 for art majors. Basic skills: sawing, filing, drilling, sanding, polishing, creating textures on metal, riveting, soldering, and bezel setting of stones. Creation of jewelry and small functional objects. Material fee as indicated in the Schedule of Classes. (T)

**3600 Intermediate Jewelry I. (AME 5600) (AME 7600) Cr. 3**

Prereq: AME 2600. Lost-wax casting and mold-making. Creating, preparing and casting into metal of wax models. Vulcanized rubber mold-making. Commercial jewelry techniques. Material fee as indicated in the Schedule of Classes. (T)

**3601 Intermediate Jewelry II. Cr. 3**

Prereq: AME 2600. Advanced metal fabrication and surface treatment. Topics include: stone setting techniques, acid etching, granulation, keum boo, patination, hinge mechanisms and more complex soldering techniques. (F,W)

**4600 Metalsmithing I. Cr. 3**

Prereq: AME 2600. Utilizing plastic qualities of metal to generate low to middle relief forms. Introduction to hydraulic die forming, chasing and repousse and fold forming. Creation of objects with moderate level of relief and high degree of surface adornment. (F,W)

**4601 Metalsmithing II. Cr. 3**

Prereq: AME 2600. Utilizing plastic qualities of metal to generate high relief forms. Techniques include: raising and sinking, anticlastic and synclastic raising, nonferrous and ferrous forging. How metals may be stretched to create forms with a high degree of volume. (F,W)

**5600 (AME 3600) Advanced Jewelry and Metalsmithing. (AME 7600) Cr. 3-6 (Max. 24)**

Prereq: AME 3600. Election of more than three credits per semester requires consent of instructor. 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: Metal Arts. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)**

Prereq: consent of instructor. Individual problems. (F,W)

## PAINTING (APA)

**2100 Basic Painting. Cr. 3**

Prereq: ADR 1060 and ADE 1210. Introduction of traditional opaque painting media: oil, gouache, acrylic; materials and techniques. Painting from observation; form and composition. Material fee as indicated in the Schedule of Classes. (T)

**2110 Beginning Painting: Water Media. (APA 3110) (APA 5110) Cr. 3**

Prereq: APA 2100. Introduction to transparent and opaque water-based media. Composition based on observation and imagination. Material fee as indicated in the Schedule of Classes. (Y)

**2120 Beginning Painting: Oil. (APA 3120) (APA 5120) Cr. 3**

Prereq: APA 2100. Emphasis on structure of painting within individual's choice of imagery, either observed or invented. Material fee as indicated in the Schedule of Classes. (T)

**3110 (APA 2110) Intermediate Painting: Water Media. (APA 5110) Cr. 3**

Prereq: APA 2110. Continued work with watermedia compositions, based on observation or imagination. Material fee as indicated in the Schedule of Classes. (Y)

**3120 (APA 2120) Intermediate Painting: Oil and Other Media. (APA 5120) Cr. 3**

Prereq: APA 2120. Continued emphasis on structure of painting. Individual development of pictorial, emotional and conceptual aspects of image-making. Material fee as indicated in the Schedule of Classes. (T)

**3130 Figure Painting: Water Media. (APA 5130) (APA 7130) Cr. 3**

Prereq: APA 2110. Spontaneous and sustained paintings from direct observation of the human figure. Inquiry into the effects of scale, space and emotional responses are encouraged. Material fee as indicated in the Schedule of Classes. (Y)

**3140 Figure Painting: Oil and Other Media. (APA 5140) (APA 7140) Cr. 3**

Prereq: APA 2120. Sustained and gestural studies of human figure. Individual responses to scale, space, emotional content. Material fee as indicated in the Schedule of Classes. (T)

**5060 Advanced Concepts in Drawing and Painting. (APA 7060) Cr. 3-6 (Max. 15)**

Prereq: ADR 3070 or APA 3120. Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. (Y)

**5100 Painting Seminar. Cr. 3 (Max. 6)**

Philosophical and analytical inquiry into painting issues, past and present. Current values in art criticism and practice. Visits to studios, museums, galleries and private collections. (Y)

**5110 (APA 2110) Advanced Painting: Water Media. (APA 3110) Cr. 3-6 (Max. 18)**

Prereq: APA 3110. Election of more than three credits per semester requires consent of instructor. Individual development of work in

water media. Representational or abstract compositions. Material fee as indicated in the Schedule of Classes. (T)

**5120 (APA 2120) Advanced Painting: Oil and Other Media. (APA 3120) Cr. 3-6 (Max. 18)**

Prereq: APA 3120. Election of more than three credits per semester requires consent of instructor. Individual development in painting. Material fee as indicated in the Schedule of Classes. (T)

**5130 (APA 3130) Figure Painting Advanced: Water Media. (APA 7130) Cr. 3-6 (Max. 12)**

Prereq: APA 3130. Election of more than three credits per semester requires consent of instructor. Individual development in water media based on observation of human figure. Material fee as indicated in the Schedule of Classes. (Y)

**5140 (APA 3140) Figure Painting Advanced: Oil and Other Media. (APA 7140) Cr. 3-6 (Max. 12)**

Prereq: APA 3140. Election of more than three credits per semester requires consent of instructor. Individual development based on the human figure using any appropriate medium. Material fee as indicated in the Schedule of Classes. (Y)

**5810 Directed Projects: Painting. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)**

Prereq: consent of instructor. Self-directed work in consultation with graduate faculty on an arranged basis. (F,W)

## PHOTOGRAPHY (APH)

**2400 Introductory Photography. Cr. 3**

Lectures, demonstrations, projects involving basic camera techniques using color slides. (T)

**2410 Beginning Photography. Cr. 3**

Prereq: APH 2400. Film processing, printing and presentation in black and white medium. Introduction to basic photographic vocabulary through problem-solving approach. Demonstrations and group techniques. Material fee as indicated in the Schedule of Classes. (T)

**2420 Digital Imaging I. Cr. 3**

Prereq: APH 2400. Introduction to Macintosh computer basics, followed by scanning and image acquisition methods. Use of resolution and sizing principles. Introduction to Adobe Photoshop software for image editing and creation. Use of saving and storage options and basic printing techniques. Material fee as indicated in the Schedule of Classes. (T)

**3410 Intermediate Photography. Cr. 3**

Prereq: APH 2410. Further refinement of basic skills and concepts. More advanced techniques. Use of the camera's manipulative mechanisms. Emphasis on image and idea. Material fee as indicated in the Schedule of Classes. (T)

**3420 Digital Imaging II. Cr. 3**

Prereq: APH 2420. Advanced work with image editing and manipulation programs. Use of more advanced editing techniques, including masks, paths, layers and channels. Introduction to digital camera and video capture and editing options. Experiment with output methods including transparency and image transfer. Material fee as indicated in the Schedule of Classes. (T)

**4410 Advanced Photography. Cr. 3**

Prereq: APH 3410. Individual projects using advanced methods and techniques. In-depth photographic investigations exploring the possibilities of personal expression. Material fee as indicated in the Schedule of Classes. (T)

**4420 View Camera. (APH 5420) Cr. 3**

Open only to photography majors. Basic view camera techniques. Sheet film processing and printing. Studio lighting techniques. Material fee as indicated in the Schedule of Classes. (Y)



**4430 Color Photography. (APH 5430) Cr. 3**

Prereq: APH 3410. Open only to photography majors. Color film printing. Basic color theory and use of filtration. Class projects and group critiques. Material fee as announced in Schedule of Classes. (Y)

**5420 (APH 4420) Advanced View Camera. Cr. 3-6 (Max. 9)**

Prereq: APH 4420. Election of more than three credits per semester requires consent of instructor. Refinement of view camera techniques and advanced lighting techniques. Material fee as indicated in the Schedule of Classes. (Y)

**5430 (APH 4430) Advanced Digital Color Photography. Cr. 3-6 (Max. 9)**

Prereq: APH 4430. Election of more than 3 credits per semester requires consent of instructor. Open only to photography majors. Advanced color techniques and exposure situations. Film scanning color adjustments and manipulation, various digital output formulations. Material fee as announced in Schedule of Classes. (Y)

**5440 Experimental Photography. Cr. 3-6 (Max. 9)**

Prereq: APH 3410. Election of more than 3 credits per semester requires consent of instructor. Open only to photography majors. 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. (I)

**5450 Selected Topics in Photography. Cr. 3-6 (Max. 9)**

Prereq: APH 4410. Election of more than three credits per semester requires consent of instructor. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (I)

**5460 Photography Seminar. Cr. 3-6 (Max. 9)**

Open only to photography majors. Election of more than 3 credits per semester requires consent of instructor. Independent work in advanced photography discussed in seminar format. Emphasis on major ideological concerns and execution and development of a critical vocabulary. (Y)

**5850 Directed Projects: Photography. Cr. 3-9 (Undergrad. max. 15; grad. max. 30)**

Prereq: consent of instructor. Individual problems. (F,W)

## PRINTMAKING (APR)

**2300 Introduction to Printmaking. Cr. 3**

Prereq: ADR 1050, ADE 1200. Introduction to a variety of printmaking media including etching, monoprint, serigraphy and woodcut. Material fee as announced in Schedule of Classes. (Y)

**3480 Beginning Intaglio Printmaking. Cr. 3 (Max. 6)**

Prereq: ADR 1060 and ADE 1210. Basic metal plate techniques: etching, aquatint, engraving, drypoint, soft ground, lift ground. Material fee as indicated in the Schedule of Classes. (T)

**3490 Beginning Lithography. (APR 5490) (APR 7490) Cr. 3 (Max. 6)**

Prereq: ADR 1060 and ADE 1210. Fundamentals of stone and plate lithography. Black and white prints made. Material fee as indicated in the Schedule of Classes. (T)

**3500 Beginning Serigraphy. (APR 5500) (APR 7500) Cr. 3**

Prereq: ADR 1060 and ADE 1210. Introduction to basic techniques of screen printing. Material fee as indicated in the Schedule of Classes. (Y)

**3510 Beginning Relief and Experimental Printmaking. (APR 5510) (APR 7510) Cr. 3**

Prereq: ADR 1060, ADE 1210. 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. (T)

**3690 Introduction to Papermaking. Cr. 3**

Prereq: ADR 1060, ADE 1210. Introduction to hand-made paper. Basic techniques of both sheet and free-formed paper. Material fee as indicated in the Schedule of Classes. (Y)

**5480 Advanced Intaglio Printmaking. (APR 7480) Cr. 3-6 (Max. 21)**

Prereq: APR 3480. Election of more than three credits per semester requires consent of instructor. Advanced problems in intaglio. Multi-plate and rollup color printing. Photo intaglio techniques, experimental media. Material fee as indicated in the Schedule of Classes. (F,W)

**5490 (APR 3490) Advanced Lithography. (APR 7490) Cr. 3-6 (Max. 21)**

Prereq: APR 3490. Election of more than three credits per semester requires consent of instructor. Advanced problems in lithography. Black and white, multicolor, transfer methods. Material fee as indicated in the Schedule of Classes. (F,W)

**5500 (APR 3500) Advanced Serigraphy. (APR 7500) Cr. 3-6 (Max. 15)**

Prereq: APR 3500. Election of more than three credits per semester requires consent of instructor. Advanced problems in screen printing. Photo transfer, multi-media approaches. Material fee as indicated in the Schedule of Classes. (I)

**5510 (APR 3510) Advanced Relief and Experimental Printmaking. (APR 7510) Cr. 3-6 (Max. 21)**

Prereq: APR 3500 and 5490. Election of more than three credits per semester requires consent of instructor. 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. (I)

**5840 Directed Projects: Printmaking. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)**

Prereq: consent of instructor. Individual problems. (F,W)

## SCULPTURE (ASL)

**2150 Beginning Sculpture. Cr. 3**

Prereq: ADR 1060, ADE 1210. Instruction in traditional techniques and concepts of sculpture including modeling the figure from observation using clay, moldmaking, carving, construction, and casting. Lectures, demonstrations, critiques. Material fee as indicated in the Schedule of Classes. (T)

**3150 Intermediate Sculpture. (ASL 5150) (ASL 7150) Cr. 3**

Prereq: ASL 2150. Contemporary concerns in sculpture. Idea, scale, site, light, movement, and serial forms. Material fee as announced in Schedule of Classes. (T)

**3160 Intermediate Sculpture: Non-Figurative. (ASL 5160) (ASL 6160) (ASL 7160) Cr. 3**

Prereq: ASL 2150. Emphasis on non-figurative forms employing wider range of techniques: welding, foundry and plastics. Material fee as indicated in the Schedule of Classes. (T)

**3170 Figurative Sculpture. (ASL 5170) Cr. 3**

Prereq: ASL 2150. Instruction in traditional, representational, figurative sculpture. Historical examples, concepts and techniques. Basic anatomy, observation, modeling, gesture, proportion, plane, volume, mass, texture, portraiture; use of calipers, armatures, and moldmaking. Carving, construction, and casting are optional. Material fee as indicated in the Schedule of Classes. (I)

**3190 Metal Casting and Fabrication I. Cr. 3**

Prereq: ASL 2150 or consent of instructor. Creation of sculpture using metal. Bonded-sand and investment casting using bronze and aluminum; chasing and patinas; oxy-acetylene, stick, mig, and tig welding; plasma cutting. Material fee as announced in Schedule of Classes. (Y)

**5150 (ASL 3150) Advanced Sculpture. (ASL 7150) Cr. 3-9**

Open only to sculpture majors. Prereq: ASL 2150, 3150, 3170, 3190. Development of personal and professional body of work. Discussions, lectures, assignments. Material fee as announced in Schedule of Classes. (T)

**5160 (ASL 3160) Advanced Sculpture: Non-Figurative. (ASL 6160) (ASL 7160) Cr. 3-6 (Max. 18)**

Prereq: ASL 3160. Election of more than three credits per semester requires consent of instructor. Continuation of ASL 3160. Emphasis on advanced and self-directed problems in non-figurative sculpture. Material fee as indicated in the Schedule of Classes. (T)

**5170 (ASL 3170) Advanced Sculpture: Figurative. Cr. 3-6 (Max. 18)**

Prereq: ADR 3090 and ASL 3170. Election of more than three credits per semester requires consent of instructor. 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. 3-6 (Max. 18)**

Prereq: ASL 5160 or 5170. Election of more than three credits per semester requires consent of instructor. 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 Metal Casting and Fabrication II. Cr. 3-6**

Prereq: ASL 3190. Development of ideas and skills using either casting or fabrication or both. Material fee as announced in Schedule of Classes. (Y)

**5810 Special Topics in Sculpture. Cr. 1-6**

Open only to sculpture majors. Prereq: ASL 2150, 3150, 3170, and 3190. Topics to be announced in Schedule of Classes. Material fee as announced in Schedule of Classes. (Y)

**5820 Directed Projects. Cr. 3-6 (Undergrad. max. 15; grad. max. 30)**

Prereq: consent of instructor. Independent projects done in consultation with instructor. (F,W)

**6160 (ASL 3160) Non-Figurative Sculpture. (ASL 5160) (ASL 7160) Cr. 3-6 (Max. 18)**

Prereq: ASL 5160. Open only to sculpture majors. Election of more than 3 credits per semester requires consent of instructor. Continuation of ASL 5160. Expansion of concepts and expressive form. Emphasis on portfolio of work and professional plans. Material fee as indicated in the Schedule of Classes. (T)

**6170 (ASL 3170) Figurative Sculpture. (ASL 5170) (ASL 7170) Cr. 3-6 (Max. 18)**

Prereq: ASL 5170 and 5180. Open only to sculpture majors. Election of more than 3 credits per semester requires consent of instructor. Continuation of ASL 5170. Emphasis on concepts and expressive form, portfolio of work and professional plans. Material fee as indicated in the Schedule of Classes. (Y)

**SPECIAL COURSES (ACS)****5993 (WI) Writing Intensive Course in Applied Arts. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: AFA 5997, AIA 5997, or AID 5300. 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. (F,W)

**5997 (WI) Senior Seminar in the Visual Arts. Cr. 3**

Prereq: senior standing in a BFA degree program. Must be taken in final 15 credits before graduation. Interdisciplinary seminar on contemporary issues in the visual arts including studio practices, history, and criticism. Satisfies the General Education Writing Intensive Course in the Major requirement. (F,W)

**ART HISTORY (A H)****1000 (VP) Introduction to Art. Cr. 4**

Forms and functions of art; uses of art; roles of the artist; iconography and symbols. (T)

**1020 (VP) Image, Race, Gender, and Power. Cr. 3**

Introduction to critical thinking about images; the ways images manipulate us; the ways race and gender inflect images. (Y)

**1110 (VP) Survey of Art History: Ancient through Medieval. Cr. 3-4**

Offered for four credits only to Honors students. Survey of traditions and major developments in visual expression in the West, prehistory through Medieval period. Art studied in context of its cultures; techniques of visual analysis. (T)

**1120 (VP) Renaissance through Modern Art Survey. Cr. 3-4**

Offered for four credits to Honors students only. Traditions and developments in visual expression in the West, Renaissance through twentieth century. Art in context of its cultures; techniques of visual analysis. (T)

**3010 Art in the United States. Cr. 3**

Prereq: A H 1110, 1120. Works by major American artists, architects and artisans from colonial times to the present. Works are examined both as reflections of the aesthetic interests of their times and as cultural-historical documents. (Y)

**3070 Art and Archeology of Ancient Egypt. Cr. 3**

An introduction to the history and development of Egyptian artistic style in architecture, sculpture, painting and the applied arts; historical, social and religious background. (I)

**3210 Greek and Roman Art. Cr. 3**

Painting, sculpture and architecture of ancient Greece and Rome. Form and meaning of the works and how they functioned within society. (I)

**3240 Mythology in Greek Art. Cr. 3**

Mythology as subject matter of statues, wall paintings, temple decorations, and vase painting of ancient Greece. (I)

**3410 Monasticism and the Arts in the Middle Ages. Cr. 3**

Prereq: A H 1110. Monasticism as a driving force in medieval culture; art and architecture produced by and for Christian religious communities, A.D. 300-1400. (I)

**3470 Islamic Art and Architecture. Cr. 3**

Survey of art and architecture of Islam from its origins in the seventh century to the Ottoman Empire. (I)

**3700 Modern Art for the Studio Artist. Cr. 3**

Prereq: one 1000-level art history course. Introduction for studio art majors: ideas and styles of modern art. The gap between those who make art and those who write about it. Access to the discipline of art history through tracing the origins of a variety of contemporary art practices. (Y)

**3750 African American Art. (AFS 3750) Cr. 3**

Prereq: one 1000-level Art History course. Introduction to African American art from the colonial period to the present, with emphasis on the U.S. and some attention to South and Central America and the Caribbean. (Y)

**3800 Arts of Africa. Cr. 3**

Selected sub-Saharan African arts including body aesthetics, decorative arts, figurative wood sculpture, masking traditions, royal or kingdom arts, and domestic-sacred architecture. (Y)

**3820 North American Indian Art. Cr. 3**

Survey of the visual arts of North American Indian cultures. (I)

**5010 Alternative Media. Cr. 3**

Exploration of media not normally dealt with in courses on modernism: such as video, performance, installations, and computer technologies. (I)

**5090 (WI) Theory and Methods of Art Historical Research. Cr. 3**

Prereq: consent of instructor. Introduction to the methods of research in art history. History of the discipline's methodology examined through selected readings. (I)

**5200 Early Greek Art. Cr. 3**

Aegean and Greek Art from the beginning of the Bronze Age (c. 3000 B.C.) to end of the Archaic period (c. 480 B.C.). (B)

**5210 Hellenistic and Roman Art. Cr. 3**

Sculpture and painting in the Hellenistic kingdom and in Republic and Imperial Rome. (I)

**5250 Ancient Rome. Cr. 3**

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**

Greek painting, sculpture and architecture of the fifth and fourth centuries B.C. Emphasis on decorative programs of temples and cult statues. (I)

**5300 Early Christian Art and Architecture. Cr. 3**

Prereq: A H 1110, 1120. Art and architecture of the Mediterranean and Western Europe, A.D. 200-700. Formation and development of distinctive Christian tradition in context of the later Roman world. Emphasis on interaction between pagan, Christian and Jewish traditions. (B)

**5310 The Ancient City of Athens. Cr. 3**

The history of Athens as an urban center in antiquity. Public monuments, buildings and landscape as reflecting the city's aspirations and fortunes. (I)

**5320 Classical Architecture in Britain and the United States. Cr. 3**

Imitation and manipulation of ancient Greek and Roman architectural forms in Britain, its North American colonies and the United States from the seventeenth through the early nineteenth centuries. (I)

**5350 Byzantine Art and Architecture. Cr. 3**

Prereq: A H 1110, A H 1120. Art and architecture of the Byzantine Empire, A.D. 700-1453. Formation and development of a distinct Christian representational and architectural tradition in the context of Orthodox Christianity. Secular traditions considered in light of traditions of Hellenism. (Y)

**5400 Art and Architecture of the Early Middle Ages. Cr. 3**

Art and architecture in Western Europe from the Dark Ages through the twelfth century. (I)

**5410 Gothic Art and Architecture. Cr. 3**

Gothic art and architecture in Western Europe from 1140 to 1400, including manuscripts, metalwork, stained glass, as well as the architectural context in which they were used. (I)

**5450 Art and Architecture in the High Middle Ages. Cr. 3**

Prereq: A H 1110, 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**

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**

The art of Leonardo, Raphael, Michelangelo, Titian, and their contemporaries. (I)

**5530 Northern European Painting in the Fourteenth and Fifteenth Centuries. Cr. 3**

Northern painting from its sources in the Franco-Flemish manuscript tradition and Bohemian schools to the great masters of the fifteenth century. (B)

**5550 Flemish and German Painting in the Sixteenth Century. Cr. 3**

Development of Flemish and German painting from 1475 to 1600, with emphasis on the art of Bosch, Breugel, Durer, Grunewald and Holbein. (B)

**5700 Nineteenth Century European Painting. Cr. 3**

Prereq: A H 1110, 1120. Major styles, developments and masters. (B)

**5710 Trends in Nineteenth Century Art. Cr. 3**

Prereq: A H 1110, 1120. Topics to be announced in Schedule of Classes. (B)

**5720 Twentieth Century Art. Cr. 3**

Prereq: A H 1110, 1120. Specific topics to be announced in the Schedule of Classes. (B)

**5750 Contemporary American Art. Cr. 3**

Prereq: A H 1110, 1120. Major developments in American painting and sculpture from the Armory Show to the 1970s. (I)

**5770 Paris in the Nineteenth Century. Cr. 3**

Prereq: A H 1120. Social and economic change in nineteenth century Paris; impact on art from Romantics to Post-Impressionists. Reading in major works of literature and history. Dawn of modernism in painting. (B)

**5780 Seminar: Topics in Twentieth Century Art History. Cr. 3**

Prereq: A H 5720, 5750. Current issues in history and criticism of twentieth-century art. (Y)

**5790 History of Photography. Cr. 3**

Prereq: one 1000-level art history course or above, or consent of instructor. Technical, aesthetic and historical development of the art of photography from its invention to the present. (B)

**5820 Precolumbian Art of South and Central America. Cr. 3**

Prereq: A H 1110, 1120. Lecture-survey of art and architecture produced by the Precolumbian civilizations of Peru, Central America and Mexico, including the traditions of Chavin, Tiahuanaco, Inca, Maya, Olmec, Teotihuacan, Toltec and Aztec. (B)

**5890 Museums in Art History. Cr. 3**

Prereq: A H 1110, 1120. The development and function of the art museum from 300 B.C.E. to the present with emphasis on the museum's role in the institutionalization of art history, collection and criticism. (B)

**5990 Directed Study. Cr. 1-3**

Prereq: consent of instructor. Open only to art history majors. Supervised advanced reading and research in the history of art. (F,W)

**5993 (WI) Writing Intensive Course in Fine Arts. Cr. 0**

Prereq: junior standing, satisfaction of English Proficiency Requirement, completion of A H 1110, 1120 and one other A H course at 2000-level or above; coreq: A H course at 3000-level or above. Offered for S and U grades only. No degree credit. Required for all majors. (F,W)

**5997 Seminar. Cr. 3**

Prereq: junior standing or above; A H 1110, 1120. 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)

**6730 Contemporary Theory and the Visual Arts. Cr. 3**

Undergrad. prereq: consent of instructor. Methodological application of post-structuralist critical theory to the study of art and art history. (Y)

# COMMUNICATION

Office: 585 Manoogian Hall; 313-577-2943

Web: <http://www.com.wayne.edu>

Chairperson: Craig A. Smith

Academic Services Officer: Victoria Dallas

## Professors

Charles E. Bantz, Bernard L. Brock (Emeritus), Benjamin Burns, Jack Kay, Linda Moore, Edward J. Pappas (Emeritus), Sandra Petronio, Raymond S. Ross (Emeritus), George W. Ziegelmueller

## Associate Professors

Jackie Byars, Timothy T. Coombs, Sherry J. Holladay, Larry D. Miller, Matthew W. Seeger, Lawrence Silverman (Emeritus), John W. Spalding (Emeritus), Robert Steele, Richard A. Wright

## Assistant Professors

Daniel Marcus, Hayg H. Oshagan, Laura A. Wackwitz, Laura L. Winn

## Lecturers

Gerald Bluhm, Sandra Combs-Birdiott, Jack Lessenberry, Michele A. Najor, Ruth Seymour

## Degree Programs

*BACHELOR OF ARTS with a major in speech communication*

*BACHELOR OF ARTS with a major in journalism*

*BACHELOR OF ARTS with a major in public relations*

*BACHELOR OF ARTS with a major in radio-television*

*\*MASTER OF ARTS with a major in communication and emphases in: public relations and organizational communication; radio-television-film; speech communication education; speech communication; or speech communication studies*

*\*DOCTOR OF PHILOSOPHY with a major in communication and emphases in: speech communication; radio-television-film; or communication studies*

The primary aim of this department is to assist students in developing the ability to communicate effectively and to understand the principles of communication theory. The variety of degree programs provides broad liberal arts education as well as specific career training. Undergraduate and graduate majors may prepare for careers in a variety of fields: industrial relations; sales; personnel; public relations; radio, television, film; journalism; teaching; law; and the ministry.

The department sponsors a large number of student activities that are available to all University students. These include intercollegiate debate and speech teams. Wayne State University has undergraduate chapters of The Society of Professional Journalists, Lambda Pi Eta, Women in Communication, Forensic Union, Delta Sigma Rho-Tau Kappa Alpha, the Radio-TV and Film Student Association, and the Public Relations Student Society of America. There are talent scholarships available to students interested in forensics or debate.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

*SPB 1010 -- (OC) Oral Communication: Basic Speech* -- is designed for those who wish to improve their general communicative ability. This course can be taken to fulfill the University's General Education competency requirement in oral communication. Courses in voice and articulation, public speaking, discussion, debate, and oral interpretation offer additional opportunities to study and practice general communication skills. Students planning to major in the Department should plan to take SPB 1010 for three credits.

## Bachelor of Arts Degrees

**Admission Requirements** are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor's degree must complete 120 credits of course work including satisfaction of the University General Education Requirements (see page 29), College degree requirements (see page 176), as well as the major requirements of one of the programs listed below. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 171 -175, respectively.

A major will complete at least thirty but not more than forty-six credits in the department. Any course work elected over the forty-six credit maximum must have prior approval of both adviser and chairperson if the additional credits are to count toward the degree (120 credits). At least twelve credits are required in residence within the major. Students should see their adviser about completing the Writing Intensive competency requirement. A proper distribution of courses approved by the student's adviser is important.

**Writing Intensive (WI) Requirement:** The University General Education Program requirement of a writing intensive course in the major may be fulfilled by taking SPC 3210 (speech communication majors), SPC 4170 (public relations majors), SPJ 4100 (journalism majors) or SPR 3010 (radio-television majors) as a corequisite with its designated WI course; the WI courses (SPC 5993, SPJ 5993, SPR 5993) are non-credit courses offered for S and U grades. The writing intensive course and its corequisite should be taken simultaneously during the junior year after satisfactory completion of the English Proficiency Examination.

### -- With a Major in Speech Communication

A major in Speech Communication offers students an opportunity to develop excellent communication skills and a thorough knowledge of the theory of human communication. Speech communication majors take a variety of courses in which they develop exceptional skills in public speaking, interpersonal communication and group communication.

Employers in business, government, and education identify excellent communication skills as the most important quality they desire in hiring employees. Speech Communication majors find careers in many different fields including business, government, education, law and religion.

The degree of Bachelor of Arts with a major in speech communication is offered in two concentrations -- Speech Communication, and Speech Communication Education:

**Speech Communication:** All majors in this concentration must elect the following core courses: SPB 1010, SPB 1500, SPC 2100, SPC 2110, SPC 2160, SPC 2190, SPC 2200, SPC 3210 (this course fulfills the Writing Intensive (WI) requirement; majors' coreq: SPC 5993), SPC 4210, and SPC 5030. SPC 5030 is the senior assessment capstone course and should be taken in the last twenty-one credits of the student's program. An additional twelve credits in speech communication (SPC) courses are required and should be selected as follows:

(1) one course in the Interpersonal/Health group of courses: SPC 3200, 3220, 3250, 3270, 5170, and 5180.

(2) one course from the Public/Political group of courses: SPC 4030, 5110, 5120, 5300, and 6040.

(3) one additional course from either the Interpersonal/Health or Public/Political group.

(4) one additional course from either group mentioned above, or from the Communication/Skills group: SPC 2040, 2500, 3100, 3170, 5100, and 5220.

**Speech Communication Education:** All majors in this concentration must elect the following core courses: SPB 1010, SPC 1500, SPC 2040, SPC 2500, SPC 2100, SPC 2110, SPC 3210 (this course fulfills the Writing Intensive (WI) requirement; majors' coreq: SPC 5993), SPC 5030 and SPC 6060. SPC 5030 is the senior assessment capstone course and should be taken in the last twenty-one credits of the student's program. An additional twelve credits in speech communication (SPC) courses are required and should be selected from among the following: SPC 2160, 2190, 2200, 3270, 5040, and 6070.

A strong minor (18-24 credits) in the Department of English is recommended. Consult an adviser in the College of Education regarding requirements for the Michigan Teaching Certificate.

### -- With a Major in Journalism

**Major Requirements:** Journalism majors plan careers in news editorial, advertising, broadcast, or media relations. Journalism majors must have at least a 'C' average in their sequence courses to graduate. A journalism adviser must be consulted for verification of requirements which go beyond the College's requirements, such as additional course work in history, the social sciences and literature.

The core courses for journalism majors are: SPJ 1500, SPJ 2010, SPJ 2020, SPJ 2100, SPJ 3100, SPJ 3210, SPJ 4100, SPJ 4250, SPJ 5020, SPJ 5250 and SPJ 6190. SPJ 5250 is the senior assessment capstone course and should be taken in the last twenty-one credits of the student's program. Students must take an additional nine credits in electives from an approved list focusing on their specific area of career interest.

**Journalism Institute for Minorities:** The Journalism Institute for Minorities is a four-year departmental program designed to recruit and train talented minority students for careers in mass communication. The Institute pools the resources of the University, the business community and Detroit area media professionals to provide scholarships and internships for its students. For additional information contact: Director, Journalism Institute for Minorities, Wayne State University, Journalism Program, 191 Manoogian, Detroit, MI 48202; telephone: (313) 577-6304.

### -- With a Major in Public Relations

Students electing this major typically seek employment in one of the many career opportunities in public relations: business and industry; non-profit organizations; trade associations; government service; education; or account executive positions in an agency. Some students later pursue graduate-level study in fields such as organizational communication.

**Major Requirements:** Four Public Relations core courses are required: SPC 3170, SPC 4170, SPC 4210, and SPC 5160. The following courses are also required: SPC 1500; SPC 2100 or SPC 3100; SPC 2160, SPC 3210; SPC 3250; SPJ 2010, SPJ 2020, SPJ 2100; SPJ 3210; SPJ 5210 or SPJ 5300; SPR 2210.

Recommended electives include an internship (SPC 6190), as well as courses in Journalism (SPJ 4100) and Speech Communication (SPC 2200 and 3270). An adviser should be consulted early in the student's program. Direct inquiries to 531 Manoogian Hall (577-2946).

## -- With a Major in Radio and Television

Undergraduate majors in this program must take SPR 1500, SPR 1600, SPF 2010, and SPR 2210. After completion of these courses with a grade of 'C' or better, students will be allowed to declare a major and to take higher-level Radio, Television and Film courses and may proceed on a course of study: either the Studies Track, or the Production Track.

*Studies Track* majors must take SPF 2020, SPR 3010 (this course fulfills the Writing Intensive (WI) requirement; majors' coreq: SPR 5993), SPR 5010, SPF 5060, and SPR 5510. SPR 5510 is the senior assessment capstone course and should be taken in the last twelve credits of the student's program.

*Production Track* majors must take SPR 3010 (this course fulfills the Writing Intensive (WI) requirement; majors' coreq: SPR 5993), SPR 4010, SPR 4310, SPR 4410, and SPR 5400. SPR 5400 is the senior assessment capstone course and should be taken in the last twelve credits of the student's program.

Nine additional elective credits in SPR or SPF courses are required of both the Production and Studies Track majors. A total of forty credits in the major are required for graduation.

For a related major in Film, see the Film Studies program in the College of Fine, Performing and Communication Arts, page 198.

## Honors Program

The departmental Honors Program is available to students in the areas of radio-television-film, journalism, and speech communication. This program offers capable students the opportunity to pursue independent study and to work closely with department faculty members. All honors students must write a senior honors essay under the direction of a faculty adviser. Completion of the honors major results in an honors degree designation on the diploma.

**Requirements:** In order to enter the departmental program students must have achieved junior standing and an overall grade point average of at least 3.5. Students must meet all regular major requirements as well as the following courses: the honors section of SPB 1010, if the student has not already taken SPB 1010; SPB 4996, SPR 5510, and SPC 5110 or 5120 or 5300. By graduation, honors students are also required to take at least fifteen credits in departmental courses at the 5000- and 6000-level. However, this requirement cannot be satisfied by taking any practical skills courses or internships.

In addition to the departmental curriculum, the student must elect at least fifteen credits in honors-designated courses, from those in the department and those given by other departments, including at least one 4000-level seminar offered through the Liberal Arts Honors Program (see page 276). For further information about seminar topics or other honors-designated courses, consult the College of Liberal Arts section of the Schedule of Classes, under 'Honors Program.'

## Minor and Cognate Study

The following minors are available in the department and should be pursued in consultation with an adviser in each of the specialized areas of concentration. While a minor designation does not appear on the diploma, it will be noted on the student's transcript.

**Minor in Speech Communication:** A minor in this area requires: SPB 1010; SPC 2100, 2160, 2200, 3210 and one additional SPC course selected in consultation with an adviser.

**Minor in Journalism:** A minor in this area requires: SPJ 1500, 2010, 2020, 2100, 3210, 4100, 5020, and one additional course elected from among the following: SPJ 2110; SPR 1600; SPJ 2280, 3220, 5210, 5260, 5300, or 6190.

**Minor in Radio and Television:** A minor in this area requires: SPR 1500, SPR 1600, SPF 2010, SPR 2210, and six credits elected from

among the following courses: SPF 2020; SPR 3010; SPR 4010; SPR 4310, SPR 4410, SPR 5010; and SPF 5060.

**Minor in Public Relations:** A minor in this area requires: SPC 1500, 2160, 3170 and 3250; SPJ 2010, 2020, 2100 and 3210.

## Departmental Scholarships

See the section on Scholarships and Financial Aid on page 173. Detailed information on all Department scholarships and awards is available in the department office.

### JOURNALISM

*W. Sprague Holden Memorial Scholarship in Journalism:* Award of up to \$2000 open to any outstanding journalism major.

*Journalism Institute for Minorities:* Award of full resident tuition open to any high school senior or undergraduate student with minimum 3.0 g.p.a., writing skills and evidence of potential in the communication field.

*George M. and Mabel H. Slocum Scholarship in Journalism:* Award of \$250 - \$1000 open to any journalism major with outstanding scholarship and demonstrable financial need.

*David Wilkie Scholarship in Journalism:* Award open to any journalism major of at least junior class standing who has demonstrable scholastic achievement and financial need.

### SPEECH COMMUNICATION

*George Bohman - Rupert Cortright - Elizabeth Youngjohn Award Fund:* Award of \$100 - \$200 is open to any student specializing in debate.

*David and Alice Goldman Award:* Award of \$150 - \$200 open to outstanding freshman debaters.

*Raymond and Alice Hayes Scholarship Fund:* Award of \$150 - \$200 open to any student specializing in debate.

*Talent Award:* Monetary award renewable for four years based on continuance in debate program open to any high school debate student admitted to W.S.U.

### PUBLIC RELATIONS

*Renee M. Abraham-Harries Endowed Memorial Scholarship in Public Relations:* Award open to public relations students entering their junior or senior year who have demonstrated academic excellence and the ability to make a meaningful contribution in the area of public relations.

*Jeannine Gregory Memorial Scholarship in Public Relations:* Award is open to public relations students entering their junior or senior year who have demonstrated leadership abilities in public relations.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

## BASIC SPEECH (SPB)

### 1010 (OC) Oral Communication: Basic Speech. Cr. 2-3

No credit after SPB 2000. No new students admitted after first week of classes. Beginning course emphasizing fundamentals of speech preparation. Development of poise and confidence in speaking. Majors in department are required to take course for three credits, which includes persuasive speaking component and additional presentations. (T)

**1500 Survey of Mass Communication. (SPC 1500) (SPJ 1500) (SPR 1500) Cr. 3**

Required of all Communication majors. Introductory course in understanding communication theory and effects and the communication industry in the United States. (T)

**2030 Computers in Communication. Cr. 3**

Introduction to the use of computers in communication fields, including word processing, image editing, research on the Internet, E-mail, publishing for print and on-line publishing. (F)

**3990 Directed Study. Cr. 1-4 (Max. 4)**

Prereq: major in department with 16 credits in department completed; written consent of chairperson and adviser. Not open to journalism majors. (T)

**4996 Honors Seminar in Speech Communication. Cr. 3**

Prereq: admission to department honors program; written consent of adviser and department chairperson. Overview of theory and research in speech communication. Design of individual research topics. (Y)

## SPEECH COMMUNICATION (SPC)

**1500 (SPB 1500) Survey of Mass Communication. (SPJ 1500) (SPR 1500) Cr. 3**

Required of all Communication majors. Introductory course in understanding communication theory and effects and the communication industry in the United States. (T)

**2040 Voice and Articulation. Cr. 3**

Laboratory for individual improvement in voice and articulation. Analysis of voice and articulation of each student followed by intensive exercise. (T)

**2100 Persuasive Speaking. Cr. 3**

Prereq: SPB 1010 or equiv. Audience analysis and motivation; choice, arrangement, adaptation of materials. Talks to win attention, secure action, overcome prejudice and hostility. Theory and practice of social psychology as applied to persuasion. (T)

**2110 (CT) Argumentation and Debate. Cr. 3**

Prereq: completion of oral communication competency requirement. Logical and legal foundation of the argumentation process; practical experience in analysis, reasoning, case-building, evaluation of evidence, refutation and cross-examination. (T)

**2160 (PL) Contemporary Persuasive Campaigns and Movements. Cr. 4**

Critical discussion of the social foundations and values underlying human persuasion. Analysis of persuasive strategies and techniques used in contemporary society: political campaigns, social movements, advertising and consumerism in the U.S. (F,W)

**2190 Rhetoric in Western Thought. Cr. 3**

Prereq: sophomore standing or above, SPB 1010 or equiv. Major trends in rhetorical theory from classical times to the present; analysis and criticism of theoretical concepts in speechmaking and persuasion. (Y)

**2200 Interpersonal Communication. Cr. 3**

Introduction to theory and research on interpersonal communication; analysis of everyday communication situations; practice in interpersonal communication. (T)

**2240 Forensics Practicum. Cr. 1-2 (Max. 6)**

Prereq: SPC 2110 or consent of instructor. Two credits only with consent of instructor. Training and participation in debate and contest speaking. (T)

**2300 Intercultural Communication. Cr. 3**

Culture-general instruction in intercultural communication skills and theory. Field trips, simulations and conversations between interna-

tional and U.S. students provide intensive intercultural exposure and exploration. (F)

**2500 Oral Interpretation of Literature. Cr. 3**

Oral performance approach to literature, fusing voice, body and meaning in the reading aloud of poetry, prose, drama; interaction of reader, listener, and literature. (T)

**3100 Business and Professional Presentations. Cr. 3**

Prereq: SPB 1010 or equiv. Review and practice of various oral communication forms used in modern organizations. Topics include persuasive speaking, informative speaking, speech writing, proposal presentations, multi-media presentations and parliamentary procedures. (Y)

**3170 Fundamentals of Public Relations. Cr. 3**

Prereq: SPB 1010 or SPC 2100 or equiv. No undergraduate credit after SPC 5160. Historical background of the profession of public relations; communication variables in public relations; emphasis on presentational techniques, publicity preparation and development of special events. (F)

**3200 Nonverbal Communication. Cr. 3**

Channels and functions of nonverbal communication; contexts include: gender, culture, adult-infant interaction, therapy. Methods of study. (B)

**3210 Theories of Communication. Cr. 4**

Exploration of the role of theory in describing, explaining and predicting human communication behavior in face-to-face and mediated contexts. (Y)

**3220 Health Communication. Cr. 3**

Prereq: SPB 1010 or equiv. Communication demands of health care and health promotion; current communication issues and problems in modern health care systems; identification of communication strategies for health care consumers and providers. (T)

**3250 Introduction to Organizational Communication. Cr. 3**

Introduction to major theories and principles used to guide the effective practice of communication within organizations. (F)

**3270 Group Communication and Human Interaction. Cr. 3**

No Ph.D. credit in speech communication. Theory, research, and practice in small group and interpersonal communication. Decision-making strategies; analysis of personal communication strengths. (T)

**4030 Gender and Communication. (W S 4030) Cr. 3**

Analysis of gender communication issues within interpersonal, group, organizational, intercultural, public, and mass mediated contexts. (Y)

**4170 Public Relations Writing. Cr. 3**

Prereq: SPC 3170; coreq: 5993 for public relations majors. Writing for public relations purposes: backgrounders, fact sheets, press releases; brochures and newsletters. (Y)

**4210 Introduction to Research Methods in Communication and Public Relations. Cr. 3**

Prereq: junior standing. Quantitative and qualitative research methods designed to advance knowledge about human communication across applied settings and diverse contexts. (W)

**5010 Special Topics. Cr. 3 (Max. 9).**

No more than six credits may be elected in special topics courses in any graduate degree program. Selected topics in speech communication to be announced in the Schedule of Classes. (B)

**5030 Communication Ethics. Cr. 3**

Capstone course for speech communication majors; must be elected in last 21 credits before graduation. Issues of responsible communication in a variety of contexts including mass, organizational, and interpersonal communication. (B)

**5040 Diversity in Interpersonal Communication. (AFS 5040) (S E 5370) Cr. 3**

Issues and topics related to the study of communication behaviors and patterns in the black community. Topics focus on specific cultural, rhetorical and sociological aspects of life in African American communities. (Y)

**5100 Speech Writing. Cr. 3**

Prereq: SPC 2100 or 2110 or consent of instructor. 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. (Y)

**5110 Studies of Argument. Cr. 3**

Prereq: SPC 2110 or graduate standing. Uses of argument in a variety of fields and contexts including public and interpersonal contexts such as law, religion and politics. Different methods of studying argument will be examined. (B)

**5120 Presidential Rhetoric. Cr. 3**

Prereq: SPC 2100 or consent of instructor. American presidency's reliance on public persuasion to lead public opinion. Inaugurals, crises, scandals, and war messages analyzed. (B)

**5160 Public Relations Campaigns. Cr. 3**

Prereq: SPC 3170 and 4170 or graduate standing. Theory and practice of selected topics in communication relating to contemporary public relations campaigns and current issues in public relations; corporate image and awareness campaigns; persuasive efforts of non-profit agencies; educational programs of consumer-related agencies; political and social campaigns. (W)

**5170 Human Communication and Aging. Cr. 3**

How time and experience impact human communication, as seen through the media and through narrative stories crafted from oral histories of selected senior citizens. (B)

**5180 Family Communication. Cr. 3**

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. (B)

**5220 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 include screening, counseling, legal, journalism and research. (Y)

**5300 Women's Rights/Suffrage Rhetoric. Cr. 3**

Prereq: SPC 2100 or 2160 or 2190 or graduate standing or consent of instructor. Analysis of speeches and writings of women's rights and woman suffrage activists. (B)

**5993 (WI) Writing Intensive Course in Speech Communication. Cr. 0**

Prereq: junior standing recommended; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: SPC 3210 for speech communication majors, or SPC 4170 for public relations majors. Offered for S and U grades only. No degree credit. Required of 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 Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. (T)

**6040 Cultures and Rhetorics. Cr. 3**

Prereq: SPC 2100, 2160 or graduate standing. Analysis of philosophical, social and cultural foundations of rhetorical theory and practice in different cultures. Cultural rhetorics include: African, Asian, Native American, Latin American, Arab, and Jewish. (B)

**6060 Teaching Communication at the Secondary Level. (S E 6060) Cr. 3**

Prereq: fifteen credits in speech. Philosophy, pedagogical issues, and methods for teaching speech in secondary schools. (I)

**6070 Directing Forensics. Cr. 3**

Prereq: SPC 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)

**6170 Theories of Interpersonal Communication. Cr. 3**

Survey of theory and research on interpersonal interaction, with special emphasis on social perception, self-presentation, and the formation of relationships in interaction. (B)

**6190 Internship. Cr. 1-3 (Max. 6)**

Prereq: junior standing or above and at least 12 credits in SPC courses; written consent of instructor. On-the-job observations and work experience in business, service, social, governmental, and industrial organizations. Emphasis on public relations and organizational communication. (T)

**6200 Theories of Small Group Processes. Cr. 3**

Prereq: SPB 1010, SPC 5200. Theory and research on communication in the small, task-oriented group. (B)

**6250 Organizational Communication. Cr. 3**

Prereq: SPC 3250 or graduate standing. 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. (W)

**6350 Communication, Culture, and Conflict. (D R 6350) Cr. 3**

Prereq: SPC 6250 or graduate standing. Overview of communication theory and practice as it relates to issues of culture, conflict and dispute resolution. (Y)

**FILM (SPF)**

**2010 (FLM 2010) (VP) Introduction to Film. (ENG 2450) Cr. 4**

Examination of film techniques and basic methods of film analysis. Material fee as indicated in the Schedule of Classes. (T)

**2020 (FLM 2020) (VP) History of Film. (ENG 2460) Cr. 3**

Critical study of the motion picture as a modern visual art; screening and analysis of representative fiction films to illustrate important historical periods and genres. Material fee as indicated in the Schedule of Classes. (T)

**5020 Studies in Film History. Cr. 4 (Max. 12)**

Prereq: admission to radio-TV-film major, or SPF 2010 and consent of instructor. 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. (Y)

**5060 Documentary and Non-Fiction Film and Television. Cr. 4**

Prereq: admission to radio-TV-film major, or SPF 2010 and consent of instructor. 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)

**5250 Screenwriting. Cr. 3**

Prereq: SPR 2210, ENG 3010, junior standing or above. Principles and techniques of writing for motion pictures. Analysis and study of professionally-written scripts. Exercises in writing documentary and dramatic film scripts. (Y)

**5440 Film Production. Cr. 4**

Prereq: SPF 5400, senior standing or above, production-ready script, consent of instructor. All aspects of 16mm sound motion picture pro-



duction from scripting and budgeting through direction and cinematography to post-production AB roll editing and sound mixing. (B)

**5460 Motion Picture Animation Techniques. Cr. 3**

Prereq: junior standing or above. Theory and application of various forms and styles of film animation. Material fee as indicated in the Schedule of Classes. (B)

## JOURNALISM (SPJ)

**1500 (SPB 1500) Survey of Mass Communication. (SPC 1500) (SPR 1500) Cr. 3**

Required of all Communication majors. Introductory course in understanding communication theory and effects and the communication industry in the United States. (T)

**2010 Journalistic Grammar and Style. Cr. 2**

Grammar use in journalism; Associated Press Style Book. (T)

**2020 (CL) Using Computers in Journalism. Cr. 1**

Prereq: basic typing skills. Teaches students how to write on MAC system in journalistic style. (T)

**2100 News Reporting. Cr. 4**

Prereq: SPJ 1500, 2010, and 2020, or consent of program director. Basic reporting: getting the facts and writing them well. Journalism skills course. (T)

**2110 (SPR 2110) Radio and Television News Reporting. Cr. 3**

Prereq: SPJ 2100; must have access to cassette tape recorder. Theory and practice in broadcast media performance and reporting. Material fee as indicated in the Schedule of Classes. (T)

**2250 South End Workshop. Cr. 3**

Prereq: SPJ 2100 or consent of instructor. Students work in various editing, reporting and photography positions at student newspaper. (T)

**2280 Photojournalism. Cr. 3**

Still photography for print media. Camera, lighting and composition techniques for handling news, portrait, feature and illustration photographs. Students must supply an adjustable 35mm camera, color slide film, and film development, to complete graded assignments. Journalism skills course. (Y)

**3100 Public Affairs Reporting. Cr. 3**

Prereq: SPJ 2100 Advanced news reporting, focusing on governmental stories. (T)

**3210 (CL) News Editing. Cr. 4**

Prereq: SPJ 2100. Copy headline writing, AP style, familiarization with and use of VDTs. Journalism skills course. Material fee as indicated in the Schedule of Classes. (T)

**3220 Newspaper Design and Layout. Cr. 4**

Prereq: SPJ 3210 with grade of C or better. Theory and practice of designing and layout of newspapers and newspaper pages. (Y)

**4010 Special Topics in Journalism. Cr. 3 (Max. 9)**

Prereq: consent of instructor. Special areas of interest, such as multi-cultural communication, sports writing, business writing, gender factors in journalism. (Y)

**4100 Feature Writing. Cr. 4**

Prereq: SPJ 2100. Advanced news reporting, focusing on feature writing. (T)

**4250 Reporting Race, Sex, and Culture. Cr. 3**

Prereq: SPJ 2100 and 4100. Issues of gender, culture and race in media coverage, with some content analysis. Preparation for students to handle this content with greater sensitivity and accuracy. (T)

**4990 Directed Study. Cr. 1-3 (Max. 4)**

Prereq: SPJ 2100; written consent of adviser, professional studies director and department chairperson. Open only to journalism majors. Supervised individual research. (T)

**5020 History and Law of American Journalism. Cr. 4**

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)

**5210 Newsletters and Corporate Publications. Cr. 4**

Prereq: SPJ 3210. Editing journalism newsletter; field trips to area magazines; editing internal publications. Journalism skills course. Material fee as indicated in the Schedule of Classes. (T)

**5250 Professional Issues in News Media Management. Cr. 4**

Prereq: SPJ 4100 or consent of instructor. Capstone course for journalism majors; must be elected in last 21 credits prior to graduation. Ethics and management structure and practices of media organizations. Individual research projects. (Y)

**5260 Professional Writing Workshop. Cr. 3**

Prereq: senior standing or above. For students and professionals who want to improve freelance writing skills, and for graduate students who want to publish academic research in popular magazines and journals. (I)

**5300 Desktop Publishing. Cr. 4**

Practical skills course in publishing newsletters, magazines, newspapers and books; emphasis on new computer technology, so-called 'desktop publishing;' business aspects of publishing, including printing, promotion and marketing; skills in use of personal computer for publishing. (I)

**5310 Investigative Reporting. Cr. 4**

Prereq: SPJ 4100. Advanced reporting techniques involving use of Freedom of Information Act and computer-assisted data base searches; accessing public records. (I)

**5460 Magazine Writing. Cr. 3**

Prereq: SPJ 2100 and 4100 or consent of instructor. 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)

**5500 Publishing on the Internet. Cr. 3**

Technique and goals of publishing on World Wide Web. Preparing graphics, learning HTML, uses of World Wide Web. (Y)

**5700 Political and Governmental Reporting. Cr. 4**

Prereq: SPJ 2100, 4100. Covering politics, governmental and public affairs in the media. (Y)

**5993 (WI) Writing Intensive Course in Journalism. Cr. 0**

Prereq: junior standing recommended; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: SPJ 4100. Offered for S and U grades only. No degree credit. Required of all majors. Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite. (T)

**6190 Internship. Cr. 1-3 (Max. 6)**

Prereq: SPJ 4100 and junior standing; written consent of instructor. Work assignments on daily or weekly newspapers, radio-television stations, internet publications, or public relations and advertising agencies. Journalism skills course. (Y)

**6300 Advanced Desktop Publishing. Cr. 3**

Prereq: SPJ 5300. 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. (Y)

## RADIO and TELEVISION (SPR)

### **1500 (SPB 1500) Survey of Mass Communication. (SPC 1500) (SPJ 1500) Cr. 3**

Required of all Communication majors. Introductory course in understanding communication theory and effects and the communication industry in the United States. (T)

### **1600 Introduction to Audio-Television-Film Production. Cr. 3**

Introduction to production techniques and processes; hands-on use of image and sound recording and editing equipment; creation of dramatic and documentary projects. Material fee as indicated in the Schedule of Classes. (T)

### **2110 Radio and Television Reporting and Announcing. (SPJ 2110) Cr. 3**

Prereq: SPR 1500. Theory and practice in broadcast media performance. Material fee as indicated in the Schedule of Classes. (T)

### **2210 Writing for Radio-Television-Film. Cr. 3**

Prereq: completion of University-required Intermediate-level Composition Course with grade of C or above. Application of writing principles to various forms of copy; continuity, commercials, public service announcements, features, documentary, drama. (T)

### **3010 Mass Media Analysis and Criticism. Cr. 3**

Prereq: admission to radio-TV major or SPR 1500 and consent of instructor; coreq. for majors: SPR 5993. Formal properties and aesthetic considerations in media, especially film and television. Material fee as indicated in the Schedule of Classes. (T)

### **3110 Television Performance. Cr. 3**

Prereq: SPR 2110. Practical application of the principles and techniques of television performance. Material fee as indicated in the Schedule of Classes. (T)

### **4010 Video-Film-Audio Editing. Cr. 3**

Prereq: admission to radio-tv-film major; or SPR 1600 and consent of instructor. Varied technologies and techniques of editing video, film, and audio, including analog, digital, linear and non-linear editing. Material fee as announced in Schedule of Classes. (W)

### **4240 (AFS 4240) African Americans in Broadcasting. Cr. 4**

Historical overview of African Americans in radio and television with emphasis on three areas of study: news and documentary; entertainment and advertising; and ownership, employment and access. (Y)

### **4310 Audio Production. Cr. 4**

Prereq: admission to radio-TV major, or SPR 1600 and consent of instructor. Theory and practice in sound production techniques and experimentation with creative audio production. Material fee as indicated in the Schedule of Classes. (T)

### **4410 Television Production. Cr. 4**

Prereq: admission to radio-TV major, or SPR 1600 and consent of instructor. Theory and practical application of techniques used in television production; utilization of graphic materials, design and staging concepts, lighting techniques and studio operation; the role of the television producer-director. Material fee as indicated in the Schedule of Classes. (T)

### **5010 History of Television and Radio. Cr. 4**

Prereq: admission to radio-TV major or SPR 1500 and consent of instructor. History of electronic media; development of industry; rise of genres and styles; social and political impact. (Y)

### **5030 Studies in Television Criticism and Theory. Cr. 3**

Prereq: grade of C or above in SPR 3010, or consent of instructor. Analysis of development of a television genre, comparison of genres, or specific approach to television criticism. (B)

### **5400 Techniques of Film and Video Production. Cr. 4**

Prereq: admission to radio-TV-film major and SPR 4010, or SPR 1600 and 4010 and consent of instructor. Capstone course for seniors in production track sequence. Experience with the preparation, shooting and editing of video projects in film-style production. (T)

### **5420 Director's Workshop. Cr. 4**

Prereq: SPR 5400; senior standing or above; production-ready script; 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)

### **5510 Mass Communications and Society. Cr. 3**

Prereq: admission to Radio-TV major, or SPR 1500 and consent of instructor. Capstone course for seniors in studies track sequence. Theoretical and practical research on the social functions and effects of the mass media. (Y)

### **5530 Audience Measurement and Survey Techniques. Cr. 3**

Prereq: SPR 3010, junior standing or above. Theory and application of quantitative research techniques in surveying audiences for electronic media. (B)

### **5570 International Communications. Cr. 3**

Prereq: SPR 3010, junior standing or above. World mass communications systems, organizations and objectives. Political, economic and legal foundations of international media systems. (B)

### **5993 (WI) Writing Intensive Course in Radio/Television. Cr. 0**

Prereq: junior standing recommended; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: SPR 3010. Offered for S and U grades only. No degree credit. Required of 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 Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. (T)

### **6190 Internship. Cr. 1-3 (Max. 8)**

Prereq: junior standing or above and at least 12 credits in SPR courses; written consent of instructor. (T)

### **6680 Individual Projects in Radio-Television-Film. Cr. 1-4**

Prereq: SPR 5400; written consent of instructor and director of radio-TV-film program. (T)

# DANCE

Office: 3226 Old Main; 313-577-4273

Chairperson: Eva Powers

## Associate Professors

Eva Jablonowski Powers, Ann Zirulnik (Emerita)

## Assistant Professors

Georgia Reid, Linda Cleveland Simmons

## Degree Programs

### BACHELOR OF SCIENCE with a major in dance

The Dance Department provides opportunities for experiential and academic dance studies. The Department offers curricular choices at the undergraduate and post degree levels designed to meet individual needs and interests, prepare certified teachers of dance, and encourage students to perform, choreograph and produce concert dance of high quality. Undergraduate studies in dance are reflected in the following major and minor designations:

*Teaching major* in dance for K-12 certification.

*Teaching minor* along with any secondary school teaching major such as music, art, special education, speech, etc.; teaching minor or specialization in dance with a physical education major.

*Major in Dance* leading to the Bachelor of Science degree from the College of Fine, Performing and Communication Arts.

*Dance sequence* within any major in the College of Fine, Performing and Communication Arts.

## Bachelor of Science With a Major in Dance

The dance curriculum is designed for students who have had previous dance training and who wish to pursue careers in choreography and performance, dance history, labanotation, movement analysis and dance education.

**Admissions Requirements** include the general requirements for undergraduate admission to the University (see page 15) and an audition for placement at the appropriate technical level.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree with a major in dance must complete 124 credits in course work, including four semesters of performance in the University Dance Company, as well as the University General Education Requirements (see page 29), College degree requirements (see page 176), and the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College of Fine, Performing and Communication Arts; see pages 15-46 and 171-175, respectively. Company members are required to take a technique class four days per week. Forty-eight credits must be earned in specified dance courses with grades of 'C' or better; the grade of 'D' is not acceptable in any required dance course for dance majors.

### MAJOR REQUIREMENTS

	credits
DNC 2000 -- (VP) Introduction to Dance . . . . .	4
DNC 2010 --Technique Laboratory I: Part I . . . . .	2
DNC 2020 -- Technique Laboratory I: Part II . . . . .	2
DNC 2210 or 2220 or 3210	
--Ballet III . . . . .	8
-- Ballet IV . . . . .	8
-- Ballet V . . . . .	1
DNC 2310 -- (VP)Historical Perspectives of Dance . . . . .	3
DNC 2410 --Music and Dance Relationships . . . . .	2

DNC 3010 -- Technique Laboratory II (two semesters) . . . . .	4
DNC 3180 -- Dance Kinesiology . . . . .	3
DNC 3310 --Dance Production . . . . .	3
DNC 4010 --Technique Laboratory III (four semesters). . . . .	4-8
DNC 2500 --Choreography I . . . . .	2
DNC 3500 -- Choreography II . . . . .	2
DNC 5000 -- Performance Tour (two semesters) . . . . .	2
DNC 5410 --Dance Notation I . . . . .	2
DNC 5610 --Dance Company I <sup>1</sup> . . . . .	1
DNC 5800 --Repertory (two semesters) . . . . .	2
DNC 5993-- (WI) Writing Intensive Course in Dance . . . . .	0
DNC 5996 -- Senior Capstone Research <sup>2</sup> . . . . .	3

### Cognate Requirements -- Teaching

BIO 2870 --Anatomy and Physiology. . . . .	5
P E 3580 --Biomechanics . . . . .	3

### Cognate Requirements -- Non-Teaching

Elect TWO of the following	
THR 1010 -- (VP) Introduction to Theatre . . . . .	3
MUH 1340 -- (VP) Music Appreciation: World Music. . . . .	3
MUH 1370 -- (VP) Music Appreciation: Beginnings to the Present . . . . .	3
A H 1000 -- (VP) Introduction to Art. . . . .	4

**Professional Education Sequence:** required for teaching major in dance, K-12 certification:

DNC 3998 -- Assisting in Dance . . . . .	1
DNE 4410 -- Student Teaching and Seminar I. . . . .	5
DNE 4420 -- Student Teaching and Seminar II . . . . .	5
DNE 4810 -- Methods in Modern Dance and Ballet. . . . .	3
DNE 5810 -- Creative Dance for Children . . . . .	3
DNC 5830 -- Field Work in Creative Dance . . . . .	2-8
EDP 3310 -- Educational Psychology . . . . .	3
HEA 2330 or H E 3300	
-- First Aid and CPR . . . . .	3
-- Health of the School Child. . . . .	3
RDG 4430 -- Teaching Reading in Subject Matter Areas . . . . .	3

**Minor in Dance Education:** The dance education minor requires twenty-eight credits to meet Departmental and State Certification requirements for teaching in grades K-12. Required courses include:

DNC 2000 -- (VP) Introduction to Dance . . . . .	4
DNC 2010 --Technique Laboratory I: Part I . . . . .	4
DNC 2210 --Ballet III . . . . .	2
DNC 2310 --(VP) Historical Perspectives of Dance. . . . .	3
DNC 3010 --Technique Laboratory II. . . . .	4
DNC 2500 --Choreography I . . . . .	2
DNC 5610 --Dance Company I . . . . .	1
DNE 4810 --Methods in Modern Dance and Ballet . . . . .	3
DNE 5810 --Creative Dance for Children . . . . .	3

**Post-Degree studies in dance:** Students who have State Teacher Certification in any secondary major may add a Dance Certification K-12 by completing the Dance Education Minor requirements.

**Performance Opportunities:** The Dance Company is a performing group composed of skilled dance students who must qualify through auditions. This group presents concerts, lecture/demonstrations, and performances on campus and in the community, of works choreographed by visiting artists, by faculty, and by exceptionally talented students. All majors must qualify for and be a member of the Company for four semesters.

1. All majors are required to be members of the Dance Company for four semesters (one credit per semester) of DNC 5610.

2. Capstone course to be taken in last twenty-one credits of study.

## Departmental Scholarships

See the section on Scholarships and Financial Aid on page 173. Detailed information on all Department scholarships and awards is available in the department office.

**Academic Achievement Award:** Award open to any full-time student majoring in dance.

**Meredith Ilene Campbell Scholarship:** Award of \$500 open to full-time dance majors. Application deadline December 1.

**Ruth Lovell Murray Scholarship:** Award open to any dance education major. Application deadline: December 1.

**Lisa Nowak Scholarship:** Award available to full-time dance majors, when funding exists.

**Blanch Shafarman Memorial Award in Choreography:** Award of \$200 open to any student in the W.S.U. Dance Company whose choreography is selected for public performance.

**Talent Scholarship:** Award of \$1500 per academic year (fall and winter terms) renewable for four years based on continuance in the dance program; open to any dance major admitted to W.S.U. Application deadline is early December.

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### DANCE (DNC)

#### 1010 Contemporary Dance I. Cr. 2

Basic movement techniques and improvisational experiences in concert dance; films and concert viewing. (T)

#### 1020 Contemporary Dance II. Cr. 2 (Max. 6)

Prereq: DNC 1010 or equiv. Continuation of DNC 1010 on an intermediate level. (T)

#### 1210 Fundamentals of Classic Ballet I. Cr. 2 (Max. 8)

Introduction to the fundamentals of classical ballet; emphasis on vocabulary, theory and practice, including films and concert viewing. (T)

#### 1220 Fundamentals of Classic Ballet II. Cr. 2 (Max. 8)

Prereq: DNC 1210 or equiv. Continuation of DNC 1210. (T)

#### 1410 Afro-Haitian Dance I. Cr. 2

Introduction to dance elements and dances derived from African/African American cultural experience. Emphasis on dances of Haiti, Brazil, and Cuba. (F)

#### 1420 Afro-Haitian Dance II. Cr. 2

Prereq: DNC 1410 or equiv. Continuation of DNC 1410. (W)

#### 2000 (VP) Introduction to Dance. Cr. 4

Global perspective on and definition of dance, through assigned readings, writing, field trips, and laboratory experience. Focus on multicultural diversity, interdependent nature of dance. (T)

#### 2010 Technique Laboratory I: Part I. Cr. 2 (Max. 12)

Prereq: DNC 1020 or equiv. Modern dance technique of increasing difficulty and complexity; experiences in improvisation, problem solving, and compositional studies in dance. (F,W)

#### 2020 Technique Laboratory I: Part II. Cr. 2 (Max. 12)

Prereq: DNC 2010. Continuation of DNC 2010. Modern dance technique of advancing difficulty; further experiences in improvisation,

problem solving and composition; analysis and refinement of technique and performance skills. (W)

#### 2210 Ballet III. Cr. 1 (Max. 16)

Prereq: DNC 1220 or equiv. Continuation of DNC 1220 on a more advanced technical level with emphasis on complex movement phrases and selections from classical repertory. (F,W)

#### 2220 Ballet IV. Cr. 1 (Max. 16)

Prereq: DNC 2210. Continuation of DNC 2210 with emphasis on advanced knowledge of classical ballet vocabulary. (T)

#### 2310 (VP) Historical Perspectives of Dance. Cr. 3

Historical development of dance in the nineteenth and twentieth centuries; educational, ethnic, theatre and classic concert styles and their relationship to the cultural environment. (B)

#### 2320 Traditions of African Dance in the Americas. Cr. 3

Development and integration of dances of enslaved Africans into new world societies. Influence of multiculturalism on black dance; impact of black dance on contemporary society in the Americas. (W)

#### 2400 (FC) Introduction to African Dance. Cr. 3

Exploration of African and African derived dance forms, together with their integrated philosophy, music, art and theatre forms. Lectures, videos, concert attendance and reading assignments to learn and perform dances from selected African societies. (T)

#### 2410 Music and Dance Relationships. Cr. 2

Study of the basic elements common to dance and music including rhythm, dynamics, and form. Examples of music especially composed for dance will be examined along with dance styles of historical periods. (B)

#### 2500 Choreography I. Cr. 2

Prereq: DNC 1020 or equiv. Construction of motifs and dance studies based on music, properties, nonliteral and literal thematic materials. Form and structural concepts. (B)

#### 2610 Jazz I. Cr. 2 (Max. 8)

Introduction to jazz dance technique; emphasis on alignment, movement isolation, rhythmic awareness, basic dance vocabulary, historical development. (F)

#### 3010 Technique Laboratory II. Cr. 2 (Max. 8)

Prereq: DNC 2010 or equiv. Continuation of DNC 2010; modern dance technique at the intermediate level. (F,W)

#### 3180 Dance Kinesiology. Cr. 3

Prereq: DNC 1020 or equiv. Introduction to analysis of dance movement from an anatomical and mechanical point of view. Relationships between neuromuscular repatterning, alignment and technique. (B)

#### 3190 Movement Analysis. Cr. 2

Prereq: DNC 3180. Continuation of DNC 3180. Practical experience in concepts of innovative body therapies. Special attention to problem of dance technique. (I)

#### 3210 Ballet V. Cr. 1 (Max. 16)

Prereq: DNC 2210, 2220, or by audition. Open only to advanced dancers. Technical skill development of classical ballet dancers. (F,W)

#### 3220 Ballet Pointe Technique. Cr. 1

Open only to advanced dancers. Prereq: DNC 3210. Technical skill development on pointe. (F)

#### 3310 Dance Production. Cr. 3

Concentration on selected types of dance production including an examination of purpose and content; technical considerations such as costumes, makeup, lighting and decor; the management of performance-related matters, and the use of technology, computer and video to support production work. (B)

**3410 Jazz II. Cr. 2 (Max. 4)**

Prereq: DNC 2610, consent of instructor. Continuation of DNC 2610 on a more advanced level. (T)

**3500 Choreography II. Cr. 2**

Prereq: DNC 2500. Selection of dance themes, construction of dances, small group studies. Aesthetic considerations, form and elements of performance. (B)

**3998 Assisting in Dance. Cr. 1 (Max. 4)**

Prereq: consent of dance adviser. Assigned field work in assisting under faculty supervision. (F,W)

**4010 Technique Laboratory III. Cr. 1-2 (Max. 16)**

Open only to dance majors; others by audition. Prereq: DNC 2010 or equiv. Continuation of DNC 3010. Modern dance technique, advanced level. (F,W)

**4220 Ballet Variations. Cr. 1**

Prereq: expertise on pointe; admission audition. Open only to advanced dancers. Learning various solo exercises from standard classical repertoire; music by Chopin, Adams, Minkus, Tchaikovsky. (F,W)

**4810 Methods in Modern Dance and Ballet. (DNE 4810) Cr. 3**

Prereq: DNC 1020 and 1220 or equiv. Analysis of instructional methods and materials in modern dance and ballet, including technique, improvisation, composition, curriculum planning and evaluation. (W)

**5000 Performance Tour. Cr. 1 (Max. 8)**

Prereq: DNC 5610 or 6610. Open by audition only. Development and performance of informal concerts for elementary, middle and secondary schools. (W)

**5110 Study in Dance Styles. Cr. 1 (Max. 16)**

Examination of a particular dance style; i.e., historic period, technique, jazz, tap, fad and social dance forms. (T)

**5410 Dance Notation I. Cr. 2**

Background in movement or dance is desirable. Labanotation of dance and movement; survey of other systems. Analysis and recording of movement and dance. (B,W)

**5430 (P E 5440) Physical Education for Elementary School Children I. (DNE 5430) Cr. 3**

Prereq: admission to senior college. Developmental approach to teaching elementary physical education in schools. Beginning movement concepts and fundamental motor skills that are developmentally appropriate for children to participate in games, gymnastics, dance, and fitness activities. Curriculum design and implementation of activities in practicum application. (F)

**5435 (P E 5450) Physical Education for Elementary School Children II. (DNE 5435) Cr. 3**

Prereq: P E 5440. Continuation of P E 5440, focusing on a developmental approach to teaching elementary physical education in schools. Investigation of various teaching methods and styles using movement, themes, fundamental motor skills, games, gymnastics, dance and fitness activities. Implementation of developmentally appropriate activities in practicum application. (W)

**5610 Dance Company I. Cr. 1 (Max. 8)**

Prereq: admission by audition. Coreq: DNC 4010 or 6010. Performing company. Open to students interested in performing and/or choreographing. Four credits required for dance majors. (F,W)

**5710 Workshop in Modern Dance. 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. 1-4 (Max. 12)**

Prereq: DNC 4010 or equiv.; admission by audition. Learning, for performance, of standard modern repertory, dances previously choreo-

graphed by instructor, Labanotated dance, or work of Artist-in-Residence. (F,W)

**5810 Creative Dance for Children. (DNE 5810) (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)

**5820 Creative Dance Movement for the Pre-School Child. (TED 5820) Cr. 3**

Creative dance activities; manipulative, musical, imaginative and kinesthetic approaches to movement. (W)

**5830 Field Work in Creative Dance. (TED 5830) Cr. 2-8**

Prereq: DNC 5810 or consent of instructor. Supervised professional study in field settings. (T)

**5990 Independent Study in Dance. Cr. 1-4 (Max. 12)**

Prereq: major or minor in dance. Independent work in dance under faculty guidance. (T)

**5993 (WI) Writing Intensive Course in Dance. Cr. 0**

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: DNC 3110 or 3310. Offered for S and U grades only. No degree credit. Required of 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 Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. (T)

**5996 Senior Capstone Research. Cr. 3 (Max. 6)**

Prereq: DNC 3500. Group and solo choreography, costume design and construction, notation of selected movement phrases and production of the solo work. (W)

**6010 Technique Laboratory III. Cr. 1 (Max. 8)**

Prereq: DNC 4010 or equiv. Modern Dance technique, advanced level. (F,W)

**6610 Dance Company II. Cr. 1 (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)

**DANCE EDUCATION (DNE)****4410 Student Teaching and Seminar I. Cr. 2-6 (FLD:14)**

Prereq: 2.5 g.p.a. in major; admission to student teaching. Offered for S and U grades only. First experience in student teaching. (F,W)

**4420 Student Teaching and Seminar II. Cr. 2-6 (FLD:14)**

Prereq: 2.5 g.p.a. in major; admission to student teaching; DNE 4410. Offered for S and U grades only. Second experience in student teaching. (F,W)

**4810 (DNC 4810) Methods in Modern Dance and Ballet. Cr. 3**

Prereq: DNC 1020 and DNC 1220 or equiv. Analysis of instructional methods and materials in modern dance and ballet, including technique, improvisation, composition, curriculum planning and evaluation. (W)

**5430 (P E 5440) Physical Education for Elementary School Children I. (DNC 5430) Cr. 3**

Prereq: admission to senior college. Developmental approach to teaching elementary physical education in schools. Beginning movement concepts and fundamental motor skills that are developmentally appropriate for children to participate in games, gymnastics,

dance, and fitness activities. Curriculum design and implementation of activities in practicum application. (F)

**5435 (P E 5450) Physical Education for Elementary School Children II. (DNC 5435) Cr. 3**

Prereq: P E 5440. Continuation of P E 5440, focusing on a developmental approach to teaching elementary physical education in schools. Investigation of various teaching methods and styles using movement, themes, fundamental motor skills, games, gymnastics, dance and fitness activities. Implementation of developmentally appropriate activities in practicum application. (W)

**5810 (DNC 5810) 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)

# FILM STUDIES

Offices: 51 West Warren, 313-577-2978;  
527 Manoogian, 313-577-2943

Co-Directors: Jackie Byars, Cynthia Erb

## Advisory Committee

AFRICANA STUDIES: Melba Boyd, Njia Kai

COMMUNICATION: Jackie Byars, Daniel Marcus, Robert Steele, Laura Wackwitz

ENGLISH: Lesley Brill, Robert Burgoyne, Cynthia Erb, Kirsten Thompson

GERMAN AND SLAVIC STUDIES: Kenneth Brostrom, Mark Ferguson

ROMANCE LANGUAGES: Andrea diTommaso

## Degree Program

### BACHELOR OF ARTS with a major in film studies

Film Studies is an interdepartmental program that offers undergraduate students the opportunity to examine cinema from a variety of perspectives: as a visual and narrative art form, as an important social and cultural force in the twentieth century, as an industry, and as a technologically based communications medium. Introductory film (FLM) courses focus on the historical development of film and provide students with the necessary technical vocabulary to discuss the nature of the film experience. Advanced courses from participating departments (Africana Studies, Communication, English, German and Slavic Studies, and Romance Languages and Literatures) continue historical and aesthetic studies, but they are also concerned with theories of film, particular genres and directorial styles, and the multiple relationships between film and other art forms. Additionally, the study of techniques and skills of film writing and production is also available.

Many students take film studies courses as electives complementary to other majors. Students who major in the program may be preparing for careers as film teachers, film librarians and archivists, film critics, script writers, or workers in film production. Additional study at the graduate level is usually necessary to achieve these goals, and an adviser should be consulted regarding available graduate programs.

The film studies program is administered by an advisory committee composed of specialists in this field from the five departments noted above. Interested students should consult a committee member whose field most closely approximates the student's interests.

## Bachelor of Arts with a Major in Film Studies

**Admission Requirements** for this degree program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29), College degree requirements (see page 176), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15 -46 and 171 - 175, respectively.

**Major Requirements:** Students majoring in film studies must complete a minimum of thirty-six credits, distributed as follows:

CORE COURSES (Fifteen Credits)	credits
FLM 2010 -- (VP) Introduction to Film . . . . .	4
FLM 2020 -- (VP) History of Film . . . . .	3
FLM 4997 -- Senior Assessment Essay . . . . .	1

FLM 5993 -- (WI) Writing Intensive Course in Film Studies . . . . .	0
SPR 1600 -- Intro: Audio-TV-Film Production . . . . .	3
ENG 5040 -- Film Criticism and Theory . . . . .	4

**ELECTIVE COURSES (Twenty Credits)**

AFS 3200 -- The African American Cinematic Experience . . . . .	4
AFS 5800 -- Third World Cinema . . . . .	4
ENG 5050 -- Concepts in Film Studies . . . . .	3-4 (Max. 12)
ENG 5060 -- Styles and Genres in Film . . . . .	4 (Max. 12)
ENG 5070 -- Topics in Film . . . . .	4 (Max. 12)
FLM 3040 -- Major Works of World Cinema . . . . .	4
FLM 3990 -- Directed Study . . . . .	1-3 (Max. 6)
ITA 5150 -- Italian Cinema Since 1942 (FLM 5150) . . . . .	3 (Max. 9)
SLA 3710 -- (VP) Russian & E. Euro. Film (ARM/(POL/RUS 3710) . . . . .	3
SPF 5020 -- Studies in Film History . . . . .	4 (Max. 12)
SPF 5060 -- Documentary and Non-Fiction Film . . . . .	4
SPF 5250 -- Screenwriting . . . . .	3
SPF 5440 -- Film Production . . . . .	4
SPF 5460 -- Motion Picture Animation Techniques . . . . .	3
SPR 5400 -- Techniques of Film/Video Production . . . . .	4
SPR 6680 -- Individual Projects in Radio-Television-Film . . . . .	3 (Max. 6)

**Minor in Film Studies**

Completion of a minor in film studies requires nineteen credits including FLM 2010 and any other selections from either the core or elective courses cited above under the Bachelor of Arts major program.

**UNDERGRADUATE COURSES (FLM)**

The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.

- 2010 (VP) Introduction to Film. (ENG 2450) (SPF 2010) Cr. 4**  
Examination of film techniques and basic methods of film analysis. Material fee as indicated in the Schedule of Classes. (T)
- 2020 (VP) History of Film. (ENG 2460) (SPF 2020) Cr. 3**  
Critical study of the motion picture as a modern visual art; screening and analysis of representative fiction films to illustrate important historical periods and genres. Material fee as indicated in the Schedule of Classes. (T)
- 3040 Major Works of World Cinema. (ENG 3040) Cr. 4**  
Prereq: ENG 2450, FLM 2010, SPF 2010 recommended. Non-anglophone films of major directors viewed and studies; practice in film analysis; introduction to historical/cultural context. Emphasis on Europe and Asia; Latin America, Africa, Australia, and other areas may be included. Material fee as indicated in the Schedule of Classes. (Y)
- 3200 (AFS 3200) The Afro-American Cinematic Experience. Cr. 4**  
Historical and contemporary portrayals of African American people in narrative and documentary film. Emphasis on filmic approaches to race relations, cinematic elaboration of racial stereotypes, and legitimation functions of film. (Y)
- 3990 Directed Study. Cr. 1-3 (Max. 6)**  
Prereq: consent of adviser; completion of 12 credits in film courses from FLM, ENG, or SPF. (T)
- 4997 Senior Assessment Essay. Cr. 1**  
Prereq: senior standing, consent of adviser. Required of film studies majors in term of graduation. Preparation of formal paper demonstrating knowledge of methods of film analysis, film history, and film theory. (T)
- 5040 (ENG 5040) Film Criticism and Theory. Cr. 4**  
Prereq: ENG 2450 or another film course or consent of instructor. 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. (B)

**5050 (ENG 5050) Concepts in Film Studies. Cr. 3-4 (Max. 12)**  
May not be elected more than three times. Specific movements or tendencies in film historiography. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (B)

**5060 (ENG 5060) Styles and Genres in Film. Cr. 4 (Max. 12)**  
Study of significant works within selected genres: the western, the horror film, comedies. Emphasis on styles of particular directors. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (Y)

**5070 (ENG 5070) Topics in Film. Cr. 4 (Max. 12)**  
Topics (such as film and fusion of the arts) to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (Y)

**5150 (ITA 5150) Italian Cinema since 1942. 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)

**5800 (AFS 5800) Third World Cinema. Cr. 4**  
Prereq: upper division or graduate standing. Study of the cinematic traditions and film practices in the Third World with emphasis on anti-colonial and post colonial political cinema. (B)

**5993 (WI) Writing Intensive Course in Film Studies. Cr. 0**  
Prereq: junior standing, consent of instructor, satisfactory completion of English Proficiency Examination; coreq: ENG 5040. 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 designated 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)

# MUSIC

Office: 1321 Old Main; 313-577-1795

Web: <http://www.music.wayne.edu>

e-mail: [music@wayne.edu](mailto:music@wayne.edu)

Chairperson: Dennis J. Tini

Associate Chairperson: James P. Lentini

Graduate Officer: Mary A. Wischusen

Academic Services Officer: Lee Dyament

## Professors

James J. Hartway, Kypros L. Markou, Matthew Michaels, Dennis J. Tini

## Associate Professors

Frances Brockington, James P. Lentini, Doris L. Richards, Mary A. Wischusen

## Assistant Professors

Douglas Bianchi, Karl Braunschweig, Abigail Butler, Christopher Collins, Robert Conway, Norah Duncan, Terese Volk

## Lecturers

Thomas Court, JoAnn Richardson

## Adjunct Professors

Brazeal Dennard, David DiChiera, Neeme Jarvi

## Emeriti Faculty

Harold H. Arnoldi, Lillian J. Cassie, Carol J. Collins, Ray P. Ferguson, Morris Hochberg, Malcolm M. Johns, Bohdan J. Kushnir, Joseph Labuta

## Program Directors

Douglas Bianchi (brass), Frances Brockington (voice), Robert Conway (piano), Norah Duncan (organ/church music), Paul Ganson (woodwinds), James Hartway (theory/composition), James Lentini (music technology), Kypros Markou (strings), Matthew Michaels (jazz studies), Dennis Tini (choral)

## Adjunct Faculty

Geoffrey Applegate (violin, DSO), Gerrie Ball (accompanist), Clement Barone (flute, former DSO), George Benson (jazz saxophone), Gary Blumer (jazz piano), Emmanuelle Boisvert (violin, DSO), Neal Campbell (tuba), Steven Carryer (jazz guitar, ensembles), Marcy Chanteaux (cello, DSO), Keith Claeys (percussion ensemble), Carolyn Coade (viola, DSO), Maurice Davis (jazz trumpet), Earl DeForest (jazz saxophone), Brazeal Dennard (choral), Dorothy Duensing (voice), Lee Dyament (classical guitar), Gordon Finlay (voice), Paul Ganson (bassoon, DSO), Robert Gladstone (bass, DSO), Ed Gooch (trombone), Lana Gore (bayan), Oliver Green (bass clarinet, DSO), Carolyn Grimes (voice), Morris Hochberg (violin, former DSO), John Hughes (violin, DSO), Wesley Jacobs (tuba, DSO), Max Janowsky (bass, DSO), David Jennings (trumpet), Malcolm Johns (choral), Marilyn Jones (music education), Gale Kramer (organ), Joseph Labuta (music education), Oscar LaGasse (tuba, DSO), Gary Leach (jazz bass), Min-Duo Li (piano), Lawrence Liberson (clarinet, DSO), Joseph LoDuca (film music), William Lucas (trumpet, DSO), Pauline Martin (piano), Don Mayberry (jazz bass), Jerry McKenzie (jazz percussion), Glen Mellow (viola, DSO), Russ Miller (jazz ensembles), Stephen Molina (bass, DSO), Ervin Monroe (flute, DSO), Susan Mutter (horn), Larry Nozero (jazz woodwinds), Ted Oien (clarinet, DSO), James Patterson (voice), Dan Pliskow (jazz bass), Moses Pogossian (violin), Ronald Prowse (organ), Richard Rattner (business of music), Brian Roberts (guitar), Richard Robinson (bass), Ernest Rodgers (jazz ensemble), Pat Terry-Ross (harp), James Ryan (jazz percussion), Marcus Schoon (contrabassoon, DSO), Joseph Skrzynski (trombone,

DSO), Pietro Soave (bayan), Joseph Striplin (violin, DSO), Gordon Stump (trumpet), David Taylor (jazz percussion), Larry Teal (saxophone), Kenneth Thompkins (trombone, DSO), April Arabian Tini (vocal jazz), John Trudell (jazz trumpet), Samuel Tundo (percussion, DSO), James Van Valkenburg (viola, DSO), Brian Ventura (oboe, DSO), Eugene Wade (horn, DSO), Corbin Wagner (horn, DSO)

## Degree Programs

*BACHELOR OF ARTS with a major in music*

*BACHELOR OF MUSIC with a concentration in church music, composition, jazz studies, music education, music management, music technology, performance, and theory*

*\*MASTER OF ARTS with a major in music*

*\*MASTER OF MUSIC with a concentration in composition, choral conducting, theory, performance, and music education*

*\*GRADUATE CERTIFICATE in Orchestral Studies*

The music programs at Wayne State offer many of the advantages of studying at a major urban university. As an integral part of the cultural center of Detroit, the University is enriched by the musical activities of other major institutions in the area such as the Detroit Institute of Arts, Orchestra Hall and the Michigan Opera Theatre. Additionally, the close relationship between this department and the Detroit Symphony Orchestra, one of the nation's great orchestras, provides an artistic resource of the highest calibre. Qualified students can find opportunities in performance and arts management with these and other institutions while studying with members of the Detroit Symphony, jazz artists or other distinguished faculty. Music study can also lead to numerous careers in the fields of teaching, religion, business, jazz and commercial music.

**Registration:** All students must meet with a Department of Music adviser before pursuing registration for courses. Enrollment in all MUP courses requires a Music Department adviser's signature.

**Scholarship:** All course credit applicable to any of the following degree programs must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 171-175, respectively.

Music majors pursuing undergraduate degrees must earn the grade of 'C' or better in all music courses required in the music curricula they are pursuing. The grade of 'C-minus' or below is not an acceptable grade for degree credit. If the grade of 'C-minus' or below or a mark of 'W' is received by a music major in any required course in a music curriculum, the student may register for the course one additional time to earn a grade of 'C' or better.

**ENSEMBLE PARTICIPATION:** The Music Department encourages all musically-inclined students to join its ensembles. Participation gives music majors and non-majors alike the opportunity to improve their musical skills and perform in internationally-recognized groups. Conductors audition new students during the first week of classes; the level of skill necessary varies by ensemble; however, most require music literacy.

**BANDS:** Woodwind, brass and percussion players are welcome to join the Concert Band. Wind Symphony members are chosen through competitive auditions. Students from both groups may play in the Marching Band.

**CHORUSES:** Non-music majors are encouraged to register for the Choral Union (the large mixed-voice choir), Men's Glee Club, Vocal Jazz Ensembles, and Women's Chorale. Concert Chorale is the Department's most select vocal ensemble; auditions are especially competitive.

\* For specific requirements, see the Wayne State University Graduate Bulletin.



**JAZZ:** Though music majors are given highest priority for jazz band positions, non-music majors are welcome to audition for ensembles.

**ORCHESTRA:** Positions in the Orchestra are assigned by audition with the Director of the Orchestra.

## BACHELOR OF ARTS with a Major in Music

The Bachelor of Arts curriculum is designed for students who want to develop their musical knowledge and ability while obtaining a broad liberal arts education. It provides students with the academic and musical prerequisites necessary for continuing graduate study in such fields as music theory, musicology and ethnomusicology.

**Admission Requirements** for the Bachelor of Arts program are satisfied by the general requirements for admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for this degree must complete a minimum of 120 credits including satisfaction of the University General Education Requirements (see below and page 29), College degree requirements (see page 176), as well as the Music Core, Performance Ensemble, and Bachelor of Arts curriculum requirements cited below. Students pursuing a Bachelor of Arts degree must also fulfill the foreign language requirement (see page 171). ONLY FIFTY-SIX CREDITS IN MUSIC ARE APPLICABLE TO THIS DEGREE.

**Concert, Recital, and Lecture Attendance:** All music majors must satisfactorily complete four semesters of MUA 2690, General Lectures and Concerts. These should be the first four semesters in which a student is a Music Major.

**General Education Requirements:** The Department requires election of PSY 1020 (Elements of Psychology), and PHY 3100 (Sounds of Music), which may be used to satisfy the University General Education Requirements for a life science (LS) and physical science (PS), respectively. The visual and performing arts (VP) requirement may be satisfied by MUH 1340 (Music Appreciation: World Music), MUH 1350 (Music Appreciation: Popular Music to the Present), or MUH 1370 (Music Appreciation: Beginnings to the Present); if MUH 1370 is elected, it must be taken before MUH 3310 or 3320 (Music History and Literature I and II). The Writing Intensive (WI) Course in Music is MUH 5993.

### MUSIC CORE REQUIREMENTS

1. MUT 1140, 1150, 1160, 1170, 2140, 2150, 2160, 2170, 5997
2. MUH 3320, 3330
3. MUA 1790, 2790, 3790
4. MUA 2690 (four semesters)

*Placement examinations* in music theory (MUT courses) must be taken by all students and are available from the Music Department office. These examinations may be taken ONLY prior to the student's enrollment in theory courses.

### PERFORMANCE ENSEMBLE REQUIREMENTS

All undergraduate music majors must fulfill a minimum of eight semesters of a Major Performance Ensemble. Performance Ensembles for the Bachelor of Arts program are defined as MUA 2800, 2810, 2820, 2840, or 2850 in the student's principal instrument.

All undergraduate music majors who elect eight or more credits in the fall or winter semesters must elect a Performance Ensemble concurrently in that semester.

Students transferring from other institutions must have their transcripts evaluated by the Departmental chairperson for possible advanced credit toward the Performance Ensemble requirement.

### CURRICULUM REQUIREMENTS

1. MUT 2100
2. MUH 3310

3. MUA 3670
4. MUH 1340

## BACHELOR OF MUSIC

The Bachelor of Music degree provides a program for talented students with prior musical experience and skills who seek professional training in music. A wide range of concentrations is available under the program to meet the specialized interests and career plans of serious music students. Depending on the student's qualifications he or she may choose from ten professional areas of concentration: 1) performance; 2) theory; 3) composition; 4) vocal music education; 5) instrumental music education; 6) music management; 7) music theatre; 8) music technology; 9) church music; 10) jazz studies.

**Admission** to this program is contingent upon satisfaction of the general requirements for undergraduate admission to the University (see page 15) as well as upon audition and approval of the divisional director for the specific curriculum of the student's major. Audition dates are scheduled throughout the year and prospective students should contact the Music Office for scheduling information. Entering students must consult the Departmental counseling staff prior to their first registration.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Music must complete 120 to 128 credits including satisfaction of the University General Education Requirements (see below and page 29), College degree requirements (see page 176), as well as the Music Core (see above, under Bachelor of Arts), a Performance Ensemble, and one of the major concentrations cited below.

**Concert, Recital, and Lecture Attendance:** All music majors must satisfactorily complete four semesters of MUA 2690, General Lectures and Concerts. These should be the first four semesters in which a student is a Music Major.

**General Education Requirements:** The Department requires election of PSY 1020 (Elements of Psychology), and PHY 3100 (Sounds of Music), which may be used to satisfy the University General Education Requirements for a life science (LS) and physical science (PS), respectively. The visual and performing arts (VP) requirement may be satisfied by MUH 1340 (Music Appreciation: World Music), MUH 1350 (Music Appreciation: Popular Music to the Present), or MUH 1370 (Music Appreciation: Beginnings to the Present); if MUH 1370 is elected, it must be taken *before* MUH 3310 or 3320 (Music History and Literature I and II). The Writing Intensive (WI) Course in Music is MUH 5993.

### MUSIC CORE REQUIREMENTS

1. MUT 1140, 1150, 1160, 1170, 2140, 2150, 2160, 2170, 5997
2. MUH 3320, 3330
3. MUA 1790, 2790, 3790
4. MUA 2690 (four semesters)

*Placement examinations* in music theory (MUT courses) must be taken by all students and are available from the Music Department office. These examinations may be taken ONLY prior to the student's enrollment in theory courses.

### PERFORMANCE ENSEMBLE

For a general explanation of this requirement see above, under the Bachelor of Arts program. Major performance ensembles include MUA 2800, 2810, 2820, 2840, and 2850. Specific requirements for the various concentrations offered under the Bachelor of Music are as follows:

(a) *Bachelor of Music with a Concentration in Composition:* Major Performance Ensemble of the principal instrument;

(b) *Bachelor of Music with a Concentration in Instrumental Music Education:*

1. Winds or percussion -- MUA 2800
2. Strings -- MUA 2810;

(c) *Bachelor of Music with a Concentration in Vocal Music Education*: eight semesters of MUA 2840 or 2850 (MUA 2830 or 2870 may be substituted for a maximum of four semesters);

(d) *Bachelor of Music with a Concentration in Performance*:

1. Organ -- any Major Performance Ensemble (minimum four semesters of MUA 2840 or 2850)
2. Piano -- any Major Performance Ensemble (minimum four semesters of MUA 2840 or 2850)
3. Voice -- eight semesters of either MUA 2840 or 2850
4. Winds or percussion -- minimum of two semesters of MUA 2810 (except saxophone) and four semesters of MUA 2800
5. Strings -- MUA 2810
6. Classic Guitar -- any Major Performance Ensemble
7. Harp -- any Major Performance Ensemble at the discretion of the Chairperson

(e) *Bachelor of Music with a Concentration in Church Music*: any vocal Performance Ensemble with a minimum of eight semesters (including at least four semesters of mixed vocal ensemble);

(f) *Bachelor of Music with a Concentration in Theory*: Major Performance Ensemble of the principal instrument;

(g) *Bachelor of Music with a Concentration in Music Management*: Performance Ensemble of the principal instrument.

(h) *Jazz Studies majors must fulfill the following specific ensemble requirements*:

1. Eight semesters of MUA 2820 (Note: Small groups (e.g., jazztet) may only fulfill the Performance Ensemble requirement by consent of the Division Director);
2. Recommended elections from MUA 2800, 2810, 2830, 2840, 2850, 2860 or 2870.

*Chamber music ensemble requirements for specific Bachelor of Music curricula*:

(Chamber music ensemble is defined as the appropriate section of MUA 2880. Note: MUA 2880 cannot substitute for the Performance Ensemble requirement.)

1. Bachelor of Music with a Concentration in Performance --
  - (a) Organ (one semester);
  - (b) Piano (four semesters);
  - (c) Winds, percussion, strings (four semesters);
  - (d) Classic Guitar (four semesters);
2. Bachelor of Music with a Concentration in Church Music (one semester);
3. Bachelor of Music with a Concentration in Jazz Studies and Contemporary Media (two semesters).

## -- Bachelor of Music Concentrations

### *Church Music (123 Credits)*

- (a) MUT 2040, 2100;
- (b) MUA 2600, 2610, 2670;
- (c) MUH 3310, 5350;
- (d) Two semesters of MUA 5730;
- (e) Two semesters of MUP 2210;
- (f) Twenty-four credits of MUP 2200;
- (g) Performance on a student recital in the sophomore year; a half recital in the junior year; and a full recital in the senior year.

### *Theory (123 Credits)*

#### *Composition (120 Credits)*

- (a) MUT 2040, 2100, 2120, 3000, 3100, 3110, 5060; MUH 3310, and
  1. For Composition majors -- MUT 4100, 4110; MUA 1730, 1740, 1750, 1760; PHI 3700; MUP 2210
  2. For Theory majors -- Foreign Language Group Requirement

(French or German recommended), PHI 3700; MUT 5040; MUP 2210

(b) Senior projects--

1. For Composition students: presentation of an original composition approved by the Director of the Theory and Composition Division
2. For Theory students: presentation of a lecture coordinated by the Director of the Theory and Composition Division;

(c) MUA 2670, and four semesters of piano in addition to MUA 3790.

### *Instrumental Music Education (128 Credits)*

- (a) Eight semesters of the principal instrument selected from: MUP 2230, 2240, 2250 or 2260 at one credit per semester;
- (b) One semester of MUA 1730; two semesters of MUA 1740; one semester of MUA 1750 and MUA 1760, plus satisfactory proficiency on orchestra instruments as prescribed by the Music Education Division;
- (c) MUA 2670, 2680
- (d) MED 3500, 4540, 4550, 4560, 4570, 5590;
- (e) MUT 3000;
- (f) EDP 3310, RDG 4430;
- (g) MUH 3310.

### *Vocal Music Education (126 Credits)*

- (a) MUP 2210 -- eight semesters at one credit per semester;
- (b) MUP 2220 -- eight semesters at one credit per semester;
- (c) MUA 2670;
- (d) MED 2500, 3500, 4510, 4530, 4560, 4570, 5550, 5590;
- (e) Six credits selected from MUA 1700, 1730, 1740, 1750 or 1760;
- (f) MUH 3310;
- (g) EDP 3310, RDG 4430.

### *Performance (120 credits)*

- (a) MUT 2100;
- (b) MUH 3310 and 5350;
- (c) Twenty-four credits in MUP 2200-2280 in the principal instrument (thirty credits maximum);
- (d) Two semesters of one secondary instrument (violinists elect viola);
- (e) Performance on a student recital in the sophomore year; a half recital in the junior year; and a full recital within the last two semesters;
- (f) Specific additional requirements as follows:
  1. Piano -- MUT 2040, 3000; MUA 2880 (four semesters);
  2. Organ -- MUT 2040; two semesters of MUA 5730; keyboard section of MUA 3790;
  3. Brass, woodwinds, percussion -- MUT 3000; performance ensemble must include a minimum of two semesters of MUA 2810 (except saxophone) and four semesters of MUA 2800; four semesters of MUA 2880 (chamber ensemble);
  4. Voice -- proficiency in two foreign languages other than the native tongue at the discretion of the adviser;
  5. Strings -- eight semesters of MUA 2810 and four semesters of MUA 2880.

(g) Additional music electives as needed and as specified by the program adviser.

### *Jazz Studies (122 Credits)*

- (a) Eight semesters of the principal instrument selected from MUP 5200-5290;
- (b) MUT 2120, 3000, 3100, 5110, 5120, 5130;
- (c) MUH 3360;
- (d) MUA 3670, 5600, 5610, 5630, 5690;
- (e) MUA 2880 (three semesters);
- (f) MUA 2820 (eight semesters);
- (g) Additional music electives, senior recital or project selected with the assistance of the Divisional Director.

## *Music Management (128 Credits)*

*Students may not elect more than twenty-nine credits in the School of Business Administration for this degree.*

- (a) Four semesters of the principal instrument selected from MUP 2200-2280 or MUP 5210-5280;
- (b) MUH 1340 or 1350;
- (c) MUA 2400, 4650, 5600, 5610, 5630, 5700, 5800;
- (d) ENG 3010;
- (e) ECO 2010, 2020;
- (f) ECO 4100 or ISM 3300;
- (g) ISM 2630; ACC 3010;
- (h) MAT 1500;
- (i) MKT 4300;
- (j) MGT 4510 or 4520;
- (k) Electives selected with assistance of the Divisional Director.

## *Music Technology (128 Credits)*

- (a) Four semesters of the principal instrument selected from: MUP 2200-2280 or MUP 5210-5290 at one credit per semester;
- (b) MUA 5600, 5610, 5630, 5640, 5650, 5660;
- (c) CSC 1050,
- (d) EET 2000, 2100, 2720, 3100, 3720
- (e) MAT 1800, 3430;
- (f) MUH 3310;
- (g) Internship (two semesters).

## Music Education Programs

Candidates in music education programs must complete the professional education requirements of the College of Education for secondary certification; see page 102. Candidates in music education programs may elect, in addition to this program, the specific requirements of any other program offered in the Music Department.

## Minor in Music

The Music Department offers a minor in music for undergraduate students majoring in other disciplines. Requirements for the music minor consist of a minimum of twenty-two credits in the following courses:

- (a) Music Theory and Ear Training -- MUT 1140, 1150, 1160, 1170, 2140, and 2150;
- (b) Two Music History courses selected from: MUH 3310, 3320, 3330, and MUH 1340 or 1350;
- (c) Four semesters of a performance ensemble selected from: MUA 2800, 2810, 2820, 2840, and 2850.

## Departmental Financial Aid

See the section on Scholarships and Financial Aid on page 173. Information on all Department scholarships and awards is available in the department office.

*Recipients of the following scholarships are chosen in May by the music faculty and awarded during the fall semester:*

*Sophie Angelescu Scholarship:* In memory of Valter Poole; open to an outstanding music major who plays an orchestral instrument.

*Angelo Cucci Scholarship:* Open to outstanding instrumental music education student; available when funding exists.

*Detroit Symphony Orchestra --Bradlin Scholarship:* Open to any outstanding music major who plays an orchestral instrument; available when funding exists.

*Detroit Symphony Orchestra -- Civic Scholarship:* For an orchestral instrument student; amount varies; available when funding exists.

*Brad Eisenbrey Scholarship:* Preference given to composition student; available when funding exists.

*Joseph Fava Scholarship:* Award to a guitar performance student when funding exists.

*Graduate Scholarship:* Award of \$1000 to outstanding graduate student.

*Kanter Endowed Scholarship:* Open to outstanding music majors.

*Rebecca Katzman Froman Piano Scholarship:* Open to an outstanding piano student.

*Misha Kottler Scholarship:* \$500 award to piano performance major when funding exists.

*Lawrence LaGore Memorial Scholarship:* Awarded to an outstanding piano major.

*Harry M. Langsford Scholarship:* Available, when funding exists, to an outstanding choral or vocal student.

*Robert F. Lawson Memorial Scholarship:* Awarded to an outstanding music major.

*LeFevre Scholarship:* Awards of \$800 open to any music major

*Liberace Scholarship:* Two awards of \$3750 open to full-time music majors in jazz or classical curriculum, when funding exists.

*Loughead-Eldridge Piano Scholarship:* Awarded to an outstanding piano performance major.

*Frank Murch Scholarship:* Awarded to a Bachelor of Arts in music or piano performance.

*Music Management Award:* Open to an outstanding music management major.

*Music Technology Award:* Open to an outstanding music technology student.

*Pantaleo Scholarship:* Award of \$250, open to an outstanding music major.

*Molly Plotkin Memorial Scholarship:* Award of \$500, when funding exists; preference given to music education major.

*President's Endowed Scholarship:* Award of around \$600 annually.

*Presser Foundation Scholarship:* Award of \$3000 open to an outstanding music major completing the junior year.

*Joan Rossi Memorial Scholarship:* Award of \$1000 open to any full-time music major who is an outstanding vocal performer.

*Gill Sirotti Scholarship:* Award of \$250, when funding exists, open to outstanding member of Men's Glee Club.

*Carl and Elinor Thom Harmony House Scholarship:* Awarded to an outstanding music major.

*Vocal Music Education Scholarship:* Award of \$250 open to an outstanding vocal music major.

*The following scholarships are subject to other conditions than those cited above:*

*ASCAP -- Hubbell Scholarship:* Award of \$500, when funding is available, open to an outstanding music student pursuing a degree in composition.

*Dumesnil Scholars:* Award open to any music major; amount depends on funds available.

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### MUSIC EDUCATION (MED)

#### **2500 Piano Skills for the Music Classroom. Cr. 2**

Prereq: MUA 1790, MUA 2790, MUA 3790 or equiv. Open only, by audition, to students in the vocal music education curriculum. Continuation of MUA 3790. Additional practice with functional skills needed in music classroom. Students acquire a repertoire of musical selections commonly used in the educational setting. (W)

#### **3500 Aesthetic and Cultural Foundations of Music Education. Cr. 2**

Historical, philosophical, professional, legal and ethical considerations. (W)

#### **3990 Directed Study. Cr. 1-3 (Max. 6)**

Prereq: consent of adviser. (F,W)

#### **4510 General Music in the Schools. Cr. 3**

Prereq: MED 3500. Methods, materials and techniques for teaching general music in the schools. (F)

#### **4530 Vocal Music in Secondary Schools. Cr. 3**

Prereq: MED 4510. Open only to vocal music education majors. Instructional techniques and materials for secondary school choral and general music courses. Observation of area school vocal programs. (W)

#### **4540 Instrumental Music in the Schools I. Cr. 3**

Prereq: MUA 1730, MUA 1740, MUA 1750, MUA 1760, MED 3500. Teaching techniques, materials and organization of instrumental music in elementary schools. (F)

#### **4550 Instrumental Music in the Schools II. Cr. 3**

Prereq: MED 4540. Teaching techniques, materials and organization of instrumental music in secondary schools. (W)

#### **4560 Practicum in Music Education. Cr. 2**

Prereq: MED 3500. Offered for S and U grades only. Observation and participation in music education programs in area public schools. (F,W)

#### **4570 Student Teaching and Seminar. Cr. 8**

Prereq: 2.5 g.p.a. in major; admission to student teaching. Offered for S and U grades only. Directed teaching in school music. (F,W)

#### **5550 Choral Conducting and Rehearsal Techniques. Cr. 3**

Prereq: MUA 2670 or equiv. Conducting and rehearsal methods and materials for secondary schools. (W)

#### **5560 Secondary School Music Workshop. Cr. 1-3 (Max. 6)**

Group participation in the study of class materials and teaching procedures for secondary music teachers. (Y)

#### **5590 (CL) Computer Applications in Music Teaching. Cr. 2**

Presentation of techniques and strategies for utilizing computer music software programs and MIDI equipment in music instruction. Material fee as announced in Schedule of Classes. (S)

#### **6520 Elementary School Music Workshop. Cr. 1-3 (Max. 6)**

Group participation in the study of class materials and teaching procedures for elementary music teachers. (Y)

#### **6530 Conducting and Operating the School Band. Cr. 2-3 (Max. 6)**

Individual instruction correlated with actual administration and direction of summer youth band. (S)

#### **6540 Instrumental Music Workshop. Cr. 2-3 (Max. 6)**

Current problems, procedures and materials pertaining to development of the instrumental music program in the schools. (S)

#### **6550 College Teaching Preparation in Music. Cr. 2 (Max. 6)**

Prereq: senior or graduate standing; consent of chairperson. Observation of instruction, class assistance and supervised instruction of undergraduate classes. Preparing lectures, quizzes and instructional material. (F,W)

### MUSIC APPLIED (MUA)

#### **1700 Guitar Class. Cr. 2 (Max. 8)**

Prereq: music major; others by consent of instructor. Fundamentals in guitar playing; techniques, hand positions, bar chords, general performance practices. Material fee as announced in Schedule of Classes. (Y)

#### **1710 Piano Class. Cr. 2 (Max. 8)**

Not open to music majors after MUA 1790. Rudiments of rhythmic and staff notation, beginning keyboard technique, hand positions, scales, simple compositions. Material fee as announced in Schedule of Classes. (F,W)

#### **1730 String Class. Cr. 2 (Max. 6)**

Prereq: MUT 1100 or equiv. Techniques and fundamental problems in the playing and teaching of stringed instruments. Material fee as announced in Schedule of Classes. (F,W)

#### **1740 Woodwind Class. Cr. 2 (Max. 6)**

Prereq: MUT 1100 or equiv. Techniques and fundamental problems in the playing and teaching of woodwind instruments. Material fee as announced in Schedule of Classes. (F,W)

#### **1750 Brasswind Class. Cr. 2 (Max. 6)**

Prereq: MUT 1100 or equiv. Techniques and fundamental problems in the playing and teaching of brasswind instruments. Material fee as announced in Schedule of Classes. (F,W)

#### **1760 Percussion Class. Cr. 2**

Prereq: MUT 1100 or equiv. Techniques and fundamental problems in the playing and teaching of percussion instruments. Material fee as announced in Schedule of Classes. (F)

#### **1790 Piano Proficiency: Level I. Cr. 2**

Coreq: MUT 1140. Open only to music majors. Repertoire, scales, sight reading, harmonization, simple transposition. Certification of undergraduate core piano requirement on satisfactory completion of MUA 3790. (F,W)

#### **2400 Introduction to the Music Business. Cr. 2**

Required for students in music management curriculum. General overview of the music profession; concerns of management in the music business. cepts of copyright law; licensing; publishing; song-writing and recording contracts. Research projects and/or readings. (W)

#### **2600 Church Music and Materials I. Cr. 2**

Prereq: MUA 2670 and major in organ or church music. Practical application of material used in churches of various faiths. For choir directors and organists. (B:F)

#### **2610 Church Music and Materials II. Cr. 2**

Prereq: MUA 2600. Continuation of MUA 2600. (B:W)

#### **2690 General Lectures and Concerts. Cr. 0**

Lectures by visiting scholars; recitals by invited guest artists; student and faculty recitals, concerts and convocations. (F,W)

**2720 Voice Class. Cr. 2 (Max. 8)**

Fundamentals in voice training. Correct breathing; tone placement; articulation vocalises. (F,W)

**2790 Piano Proficiency: Level II. Cr. 2**

Prereq: MUA 1790 or equiv.; MUT 1140 or equiv. Open to music majors. Continuation of MUA 1790. (W,S)

**2800 University Bands. Cr. 1**

Prereq: consent of director. Members of the Marching Band may have to participate in special rehearsals before the official opening of the fall semester; members of the Symphony Band are required to perform at the Commencement exercises, and exercises may take place after the official close of the fall or winter semesters. (F,W)

**2810 University Symphony Orchestra. Cr. 1**

Prereq: consent of director. (F,W)

**2820 Jazz Ensembles. Cr. 1**

Prereq: consent of director. (F,W)

**2830 Men's Glee Club. Cr. 1**

Prereq: consent of director. (F,W)

**2840 Choral Union. Cr. 1**

Prereq: consent of director. (F,W)

**2850 Concert Chorale. Cr. 1**

Prereq: consent of director. (F,W)

**2860 (MUA 2860) Opera Workshop. (THR 2860) Cr. 1 (Max. 8)**

Prereq: consent of director. (F,W)

**2870 Women's Chorale. Cr. 1**

Prereq: consent of director. (F,W)

**2880 Chamber Music and Special Ensembles. Cr. 1**

All forms including: Collegium Musicum, jazz improvisation, percussion ensemble, trios and quartets, and wind ensemble. (F,W)

**3670 Conducting Techniques I. Cr. 2**

Prereq: MUT 2160, MUT 2170 or equiv. Rudiments of conducting; special attention to baton techniques. (F)

**3680 Conducting Techniques II. Cr. 2**

Prereq: MUA 2670. Continuation of MUA 2670. Score reading and rehearsal techniques. (W)

**3790 Piano Proficiency: Level III. Cr. 2**

Prereq: MUA 2790 or equiv.; MUT 1160 or equiv. Open only to music majors. Continuation of MUA 2790. Satisfactory completion of MUA 3790 leads to fulfillment of the undergraduate core piano proficiency requirement and to certification. (F,W)

**4650 Directed Study: Internships. Cr. 1-3 (Max. 6)**

Prereq: music major; others by consent of instructor. Directly supervised professional experience in the music and creative arts industries and related fields (marketing, publicity, public relations). (T)

**5600 Business of Music I. Cr. 2**

Marketing of music; basic concepts of copyright law; licensing; publishing; songwriting and recording contracts. (F)

**5610 (CL) Introduction to Music Technology. Cr. 3**

Prereq: consent of instructor. Offered for undergraduate credit only. Introduction to role of technology in the field of music, including discussion of computers, software, synthesizers, MIDI, and digital recording. Students gain experience through assignments involving electronic instruments and recording gear. Material fee as indicated in the Schedule of Classes. (F)

**5630 Introduction to Recording Techniques. Cr. 3**

Prereq: MUA 5610. Introduction to recording equipment and techniques, including microphones, mixers, monitors, power supply, signal processing, multi-track tape recorders, overdubbing, session

procedures, and mixing down. Students are required to complete a final recording project. Material fee as announced in Schedule of Classes. (W)

**5640 Electronic Music Synthesis I. Cr. 3**

Prereq: MUA 5610. Introduction to analog synthesizer programming, equipment, and techniques. Students required to design sounds for use in a final project. Material fee as announced in Schedule of Classes. (F)

**5650 Electronic Music Synthesis II. Cr. 3**

Prereq: MUA 5640. Digital synthesis methods including software-based, FM and other synthesis types. Assignments leading to a final project. Material fee as announced in Schedule of Classes. (W)

**5660 Recording Workshop. Cr. 1**

Prereq: music technology major or consent of instructor. Experience with recording studio equipment and operation through assigned projects. Assignments include in-studio and on-site recordings. Material fee as announced in Schedule of Classes. (F)

**5690 Stage Band Direction. Cr. 1 (Max. 3)**

Prereq: MUA 2670. Techniques of big-band direction in a jazz medium. (F,W)

**5700 Business of Music II. Cr. 2**

Prereq: MUA 5600, or equivalent with consent of instructor. The relationship of music professionals to unions and guilds; "team" concepts (agents, managers, attorneys, etc.); tax issues; business contracts; managing the career development of the music professional. (W)

**5730 Harpsichord Class. Cr. 2 (Max. 8)**

Prereq: MUA 3790 or equiv. (F,W)

**5790 Piano Accompanying. Cr. 2**

Techniques of accompanying at the piano; analysis of styles, performance practices, and historical comparisons. Graduate students assigned special project and research paper. (F)

**5800 Topics in Music Management. Cr. 2**

Prereq: consent of instructor. Scope and structure of the music industry on the local, national, and international levels, including artist management, live concert production and touring, recording film/video/TV, marketing, communications, publishing, and industry associations. Technology and the music industry, management projects in selected areas of the industry. Material fee as announced in Schedule of Classes. (W)

**MUSIC HISTORY (MUH)****1340 (VP) Music Appreciation: World Music. Cr. 3**

Introduction to the musical styles of Africa, Asia, and South America. (F,W)

**1350 (VP) Music Appreciation: Popular Music to the Present. Cr. 3**

Survey of popular styles in Western music. Concentration on relationships between past and contemporary popular music. Political, economic, social, and cultural influences. (W)

**1370 (VP) Music Appreciation: Beginnings to the Present. Cr. 3**

No credit for music majors if taken after MUH 3320. Survey of Western music from its beginnings to the present. Developing musical understanding and critical listening skills by focusing on major composers and styles, and by concentrating on social, political and cultural influences. (F)

**2320 History of Opera. Cr. 3**

Survey of opera, its history, development and literature. (B)

**2330 History of Oratorio. Cr. 3**

Prereq: MUH 2320. Survey of oratorio, its history, development and literature. (B)

**3310 Music History and Literature I. Cr. 3**

Prereq: sophomore standing and MUT 1160 or equiv.; music major. Antiquity to 1600. Survey of the most important developments in western music history from antiquity to the end of the Renaissance. Concentration on major composers and styles, as well as on significant historical, philosophical, artistic and cultural influences on music. (F)

**3320 Music History and Literature II. Cr. 3**

Prereq: MUT 1160 or equiv.; MUH 3310 or equiv. except for jazz studies majors. Baroque and Classical (1600-1800). Survey of important developments in western music history from 1600 to 1800. Concentration on major composers and styles, as well as on significant historical, philosophical, artistic and cultural influences on music. (W)

**3330 Music History and Literature III. Cr. 3**

Prereq: MUT 1160 or equiv.; MUH 3310 (except jazz studies majors) and MUH 3320, or equiv. Romantic to the present time. Survey of important developments in western music history from 1800 to the present time. Concentration on major composers and styles, as well as on significant historical, philosophical, artistic and cultural influences on music. (F)

**3360 History of Jazz I. (MUH 5360) Cr. 3**

Open only to undergraduate students. Survey of major developments in jazz from its beginnings to the present. (F)

**3390 History of Jazz II: 1950 to the Present. (MUH 5390) Cr. 3**

Continuation of MUH 3360. (W)

**5300 Music Research. Cr. 3**

Prereq: graduate standing in music or consent of instructor. Music bibliography and research techniques. (F)

**5340 Survey of World Music. Cr. 3**

Prereq: upper division or graduate standing. Musical expressions of five or six non-European cultures enroute 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. Survey of solo and chamber repertoire from the Renaissance to the present, for students' major performance areas. (Y)

**5360 (MUH 3360) History of Jazz I. Cr. 3**

Open only to post-bachelor and graduate students. Survey of major developments in jazz from its beginnings to the present. (F)

**5370 Diction and Song Literature I. Cr. 3**

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**

Prereq: MUH 5370. Singers' diction in German, Hebrew, Russian and English; methodologies, solo and chamber repertoire in these languages. (B)

**5390 (MUH 3390) History of Jazz II. Cr. 3**

Prereq: MUH 5360. Continuation of MUH 5360. (Y)

**5600 Survey of Music History. Cr. 3**

Open only to senior level and graduate students. General overview of the development of ideas in music history from ancient times to the present. (F)

**5993 (WI) Writing Intensive Course in Music. Cr. 0**

Prereq: MUT 2160,; junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: MUH

3320 or MUT 5997. 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 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. (F)

**6300 Music Criticism. Cr. 3**

Prereq: upper division or graduate standing. Basics of music criticism and practical experience in writing criticism for publication. (Y)

**6310 Studies in Afro-American Music. Cr. 3**

Contributions of Afro-Americans to the development of music in the United States. (Y)

**6320 Advanced History of Opera. Cr. 3**

Prereq: graduate standing, MUH 5300. Survey of opera, its history, development and literature; research paper required. (B)

**6330 Advanced History of Oratorio. Cr. 3**

Prereq: graduate standing; MUH 5300. Survey of oratorio, its history, development and literature; research paper required. (B)

**MUSIC PRIVATE INSTRUCTION (MUP)**

**The following courses (22xx series)** are for students who wish to study voice or an instrument in a principal and/or secondary capacity. One course per semester is the usual election for the MUP 22xx series. Election of two courses concurrently in the MUP 22xx series must be a requirement of the student's curriculum to be permitted and requires consent of a music counselor and written consent of the Department Chairperson. A jury examination is required each semester for all students electing these courses.

**LIMITATION:** Open only to students with less than ten semesters of private performance course work including transfer credit.

**ELECTION FOR THREE CREDITS:** Open only to students in a performance curriculum or a combined curriculum of performance and music education, or theory, or composition, or music management. Not open to jazz studies majors.

**PREREQUISITES:** Major standing in a B.M. curriculum for which the MUP course is required; written consent Department Chairperson; and audition for first election.

**COREQUISITE:** Additional credits in any subject equal to eight credits, including MUP election. Performance ensembles in the MUA 28xx series are required by the student's curriculum.

**FEES:** Special fees payable at the time of registration are assessed for these courses and are indicated in the Schedule of Classes.

**2200 Organ. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in B.M. curriculum who elect 8 credits or more. (F,W)

**2210 Piano. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in a B.M. curriculum who elect 8 credits or more. (F,W)

**2220 Voice. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in a B.M. curriculum electing 8 credits or more. (F,W)

**2230 Stringed Instruments. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in a B.M. curriculum electing 8 credits or more. (F,W)

**2240 Woodwind Instruments. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

**2250 Brasswind Instruments. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

**2260 Percussion Instruments. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in B.M. curriculum electing 8 credit hours or more. (F,W)

**2270 Harp. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

**2280 Classic Guitar. Cr. 1-3**

Prereq: written consent of music adviser and department chair; coreq: MUA 28X performance ensemble as required by curriculum. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

**3290 Bayan. Cr. 1-3**

Prereq: major standing in B.M. curriculum for which MUP course is required; audition for first election; written consent of music adviser and department chair. Open only to students with less than 10 semesters in private performance course work including transfer credit. (F,W)

**The following courses (52xx series)** are for applied study in jazz. One course per semester is the usual election for the MUP 52xx series; however, some students may elect MUP 5210 and 5220 concurrently, in which case they must be authorized for the vocal jazz curriculum by the Director of the Jazz Division, have consent of a music counselor, and have written consent of the Department Chairperson. A jury examination is required each semester for all students electing one of these courses.

**LIMITATION:** Open only to students with less than ten semesters of private performance course work including transfer credit. Not open to students majoring in music in any B.A., B.S., M.A., or M.S. curriculum.

**PREREQUISITES:** Departmental approval for the jazz curriculum, written consent of Department Chairperson, and audition for first election.

**COREQUISITE:** MUA 2820.

**FEES:** Special fees are assessed for these courses and are indicated in the Schedule of Classes.

**5210 Jazz Piano. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Only open, by audition, to music majors in jazz studies. (F,W)

**5220 Jazz Voice. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Only open, by audition, to jazz studies majors. (F,W)

**5230 Jazz Strings. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Only open, by audition, to music majors in jazz studies. (F,W)

**5240 Jazz Woodwinds. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Only open, by audition, to music majors in jazz studies. (F,W)

**5250 Jazz Brasswinds. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Only open, by audition, to music majors in jazz studies. (F,W)

**5260 Jazz Percussion. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Only open, by audition, to music majors in jazz studies. (F,W)

**5280 Jazz Guitar. Cr. 1**

Prereq: written consent of music adviser and department chair; coreq: MUA 2820. Open only, by audition, to music majors in jazz studies. (F,W)

**MUSIC THEORY (MUT)****1100 Elementary Music Theory. Cr. 3**

No degree credit for music majors. Terminology and standard notation, including intervals, triads, scales, rhythm, correlated ear training, and general musicianship. (F,W)

**1140 Theory I. Cr. 3**

Prereq: MUT 1100 or satisfactory equiv. by examination. Prior knowledge of scales, clefs, and key signatures. Triads, intervals, principles of SATB part-writing, voice leading and melody harmonization, including all diatonic triads, dominant and super tonic seventh chords, inversions, and nonharmonic tones. (F,W)

**1150 Ear Training I. Cr. 1**

An introduction to sight singing and the basics of solfeggio. Beginning with stepwise diatonic movement and proceeding to all melodic intervals and modulation to closely related keys. Simple and compound meters and syncopation are also included. (F,W)

**1160 Theory II. Cr. 3**

Prereq: MUT 1140. All seventh chord types, altered chords (tonicizing chords, modal mixing), and modulation. Binary design and correlated analysis. (W,S)

**1170 Ear Training II. Cr. 1**

Prereq: MUT 1150. A continuation of MUT 1150. Sight-singing chromatic melodies, modal melodies, less common meter signatures and more complex rhythmic problems. (W,S)

**2040 Keyboard Harmony. Cr. 1**

Prereq: MUA 3790. Harmonic progressions applied to keyboard; figured bass; harmonization of soprano or bass; modulation transposition and score reading. (Y)

**2100 Counterpoint. Cr. 2**

Prereq: MUT 2140. Counterpoint of the Baroque period with emphasis on the style of J. S. Bach. (F)

**2120 Jazz Theory and Harmony. Cr. 3**

Prereq: MUT 1160. Harmonic, rhythmic and melodic concepts used in jazz including basic chord nomenclature, non-tertian sonorities and advanced improvisation. (W)

**2140 Theory III. Cr. 3**

Prereq: MUT 1160. Nineteenth century trends including chromatic harmony, species counterpoint, voice leading, structure and tonal organization. (F)

**2150 Ear Training III. Cr. 1**

Prereq: MUT 1170. Melodic dictation, simple and compound time, syncopation, interval and scale recognition and error detection. (F)

**2160 Theory IV. Cr. 3**

Prereq: MUT 2140. Twentieth century music; impressionistic techniques. Mainstream compositional devices of melody, harmony and rhythm; serial music, electronic music, aleatoric music, contemporary notation. (W)

**2170 Ear Training IV. Cr. 1**

Prereq: MUT 2150. Harmonic dictation, four-part dictation including recognition of common chord progressions, cadences, non-harmonic tones, chord color and seventh chords. (W)

**3000 Orchestration. Cr. 2**

Prereq: MUT 2160. Practical course in arranging music for orchestra, including study of transposition, arrangements from a piano score; general treatment of range, relationship, timbre, balance of orchestral instruments. (F)

**3100 Composition I. Cr. 2**

Prereq: MUT 2160. Introduction to creative writing. Creative properties of melodic line in relation to rhythm, tonality, cadence and form; aesthetic considerations. Writing for unaccompanied instruments. (F)

**3110 Composition II. Cr. 2**

Prereq: MUT 3100. Continuation of MUT 3100. Emphasis on creative aspects of rhythm, cadence, tonal polarity, concepts of consonance and dissonance within framework of larger texture. (W)

**4100 Composition III. Cr. 2**

Prereq: MUT 3110 and 4060. Creative writing in twentieth-century idioms. Aesthetic, stylistic and formal problems in composition employing contemporary techniques. (F)

**4110 Composition IV. Cr. 2**

Prereq: MUT 4100. Continuation of MUT 4100. (W)

**5040 History of Music Theory. Cr. 3**

Prereq: junior standing. Theoretical writings from Plato to Rameau to Schenker, in historical contexts. (I)

**5060 Advanced Orchestration. Cr. 3**

Prereq: MUT 3000. 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. 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. 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 3000, 5120. Arranging pieces with concentration on orchestrating large jazz ensembles. (F)

**5600 Survey of Music Theory. Cr. 3**

Open only to senior level and graduate students. General overview of the development of harmony, voice-leading, and form. (F)

**5997 Analytic Technique. Cr. 4**

Prereq: MUT 2140, 2150; MUH 3320, MUH 3330. Capstone course for Music Department. Structural analysis of tonal music in historical perspective. (W)



# THEATRE

Office: 3225 Old Main; 313-577-3508

Chairperson and Director, University Theatres: Blair Anderson

## Professors

N. Joseph Calarco, Robert T. Hazzard (Emeritus), Lazar Kaushansky, Leonard Leone (Distinguished Professor Emeritus), David J. Magidson, Nira Pullin, Anthony B. Schmitt, Thomas H. Schraeder, Russell E. Smith (Emeritus), James Thomas

## Associate Professors

Blair Anderson, Edward G. Smith, John Woodland

## Assistant Professors

Cynthia Blaise, Jerry Cleveland

## Lecturers

Mary Copenhagen, Fred Florkowski, Lavinia Moyer

## Theatre Support Staff

Lanny Birdsell, Michael Donohue

## Degree Programs

*BACHELOR OF ARTS with a major in theatre*

*BACHELOR OF FINE ARTS with a major in theatre*

*\*MASTER OF ARTS with a major in theatre*

*\*MASTER OF FINE ARTS with a major in theatre and specializations in acting, scenery design, costume design, lighting design, theatre management, and stage management*

*\*DOCTOR OF PHILOSOPHY with a major in theatre*

The primary aim of the Theatre Department is pre-professional training in theatre arts. Undergraduate majors may prepare for careers in acting and design/technology, and related fields. The Department sponsors a large number of production activities and practicum experiences including the Bonstelle Theatre, Studio Theatre Director's Series, and Student Stage. Participation in these activities is available to all University students.

## Bachelor of Arts With a Major in Theatre

**Admission requirements** for the program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates must complete a minimum of 120 credits in course work, including satisfaction of the University General Education Requirements (see page 29), College degree requirements (see page 176), and the major requirements cited below. A minimum of forty-five credits in theatre course work is required, as shown in the following curricular tables, completed with a grade of 'C' or above. Students must also fulfill the foreign language requirement (see page 171). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 171-175, respectively. For complete departmental requirements regarding curriculum, plan of work, and productive participation, see the Undergraduate Curriculum Guide, available in the Theatre Department Office.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

**Major Requirements:** Students pursuing the degree Bachelor of Arts with a major in theatre must complete a minimum of forty-five credits, distributed as follows:

### GENERAL STUDIES/HISTORY (Twelve Credits):

THR 1010 -- (VP) Introduction to the Theatre . . . . .	3
THR 1020 -- Play Analysis . . . . .	3
THR 5100 -- Theatre History I . . . . .	3
Plus one of the following electives:	
THR 1030 -- (VP) Black Theatre: An Introduction . . . . .	3
THR 5210 -- Theatre History II . . . . .	3
THR 5230 -- Pioneers of the Modern Theatre . . . . .	3
THR 5190 -- Costume History for Theatre . . . . .	3

### PERFORMANCE/PRODUCTION (Fifteen Credits):

THR 1040 -- Acting I (Improvisation) . . . . .	3
THR 1050 -- Acting II (Technique and Process) . . . . .	3
THR 2080 -- Theatre Laboratory (once each for THR 1040 & 1050) . . . . .	4
THR 4997 -- Theatre Capstone Experience . . . . .	3
Plus one of the following electives:	
THR 2110 -- Voice Lab I . . . . .	2
THR 2010 -- Stage Movement I . . . . .	2
THR 3050 -- Principles of Makeup . . . . .	2
THR 3110 -- Principles of Theatre Management . . . . .	3
THR 5050 -- Play Direction I . . . . .	3

### DRAMATIC LITERATURE (Nine Credits):

THR 5120 -- Development of Drama I . . . . .	3
Plus two of the following electives:	
THR 5220 -- Black Dramatic Literature . . . . .	3
THR 5230 -- Pioneers of the Modern Theatre . . . . .	3
THR 5250 -- Playwriting . . . . .	3
THR 6120 -- Development of Drama II . . . . .	3

### DESIGN/TECHNICAL THEATRE (Nine Credits):

THR 2130 -- Stagecraft . . . . .	3
THR 5030 -- Introduction to Design . . . . .	3
Plus one of the following electives:	
THR 5190 -- Costume History for Theatre . . . . .	3
THR 5010 -- Theatre Costuming I . . . . .	3
THR 5080 -- Stage Design . . . . .	3

## Bachelor of Fine Arts With a Major in Theatre

This major is an intensive pre-professional curriculum that must be followed in consultation with a B.F.A. adviser in theatre. The program is designed to provide a broad understanding and an opportunity for full experience in the theatre arts through a curriculum of pre-professional training. The B.F.A. program is divided into two curricula: the performance curriculum, emphasizing acting; and the production curriculum, concentrating upon design and technical theatre.

**Admission requirements** for the program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**Matriculation:** Classes for theatre students begin immediately in the freshman year. The B.F.A. core courses listed below must be taken in the freshman and sophomore years, as prerequisites to either the concentration in acting, or in design/technology. Consult with departmental B.F.A. advisors before program is begun, and for required sequences of course election.

**DEGREE REQUIREMENTS:** Candidates must complete a minimum of 120 credits including the General Education Requirements (see page 29), College degree requirements (see page 176), and the major requirements cited below. For complete departmental requirements regarding curriculum, plan of work, and productive participation, see the Undergraduate Curriculum Guide, available in the Theatre Department Office. All course work must be completed in accordance with the regulations of the University and the College

governing undergraduate scholarship and degrees; see pages 15-46 and 171-175, respectively.

A minimum of sixty credits must be elected in theatre course work. It is recommended that the student complete the General Education Requirements as soon as possible. B.F.A. students are assigned a faculty adviser upon admission to the program.

### CORE COURSES COMMON TO BOTH B.F.A. PROGRAMS

Play Analysis	THR 1020
Acting I	THR 1040
Theatre Laboratory	THR 2080
Stagecraft	THR 2130
Principles of Makeup	THR 3050
Capstone Experience (taken in last 21 credits in program)	THR 4997
Introduction to Theatre Design	THR 5030
Play Direction I or Principles of Theatre Management <sup>1</sup>	THR 5050 or THR 3110
Development of Drama II <sup>2</sup> or Theatre History I <sup>2</sup>	THR 6120 or THR 5100
Black Dramatic Literature or Pioneers of Modern Theatre	THR 5220 or THR 5230
(WI) Writing intensive Course in Theatre	THR 5993

### ACTING: B.F.A. REQUIREMENTS

Acting II	THR 1050
Acting III	THR 2030
Acting IV	THR 2040
Acting V	THR 3010
Acting VI	THR 3030
Stage Movement I	THR 2010
Stage Movement II	THR 2020
Stage Movement III	THR 3020
Stage Movement IV	THR 3040
WSU Touring Theatre (optional)	THR 3070
Voice Lab I	THR 2110
Voice Lab II	THR 2170
Voice Lab III	THR 3080
Voice Lab IV	THR 3090

### DESIGN/TECHNOLOGY: B.F.A. REQUIREMENTS

Drawing I	ADR 1050
Theatre Costuming I	THR 5010
Stage Lighting	THR 5070
Stage Design	THR 5080
ELECTIVES: (choose 16 credits from the following (a maximum of 6 credits may be earned in courses outside the Theatre Department):	
Theatre Costuming II	THR 5020
Advanced Stage Design	THR 5090
Introduction to Scene Painting	THR 5140
Advanced Scene Painting	THR 5150
Advanced Stage Lighting Design	THR 5300
Textiles I	AFA 2410
Fashion Design: Tailoring	AFA 5420
Fashion Design: Flat Pattern	AFA 5440
Fashion Design: Draping	AFA 5450
Drawing II	ADR 1060

## Minor in Theatre

The minor is designed to be an overview of theatre arts and crafts for those with an avocational interest in theatre or those who may wish to develop valuable competencies for educational situations. It offers a general familiarity with various aspects of theatre and also creates an opportunity for a minor emphasis in either acting, directing, or design.

1. Senior Standing only.

2. This course is an approved corequisite for THR 5993 (WI).

## REQUIRED CORE COURSES

Play Analysis	THR 1020
Acting I	THR 1040
Acting II	THR 1050
Stagecraft	THR 2130
Theatre History I	THR 5100
Theatre History II	THR 5210

## ELECTIVES

One of the following:

Stage Lighting	THR 5070
Theatre Costuming I	THR 5010
Introduction to Design for the Theatre	THR 5030

One of the following:

Acting III	THR 2030
Play Direction I I (Prereq: THR 5030)	THR 5050
Development of Drama I	THR 5120

## Departmental Financial Aid

See the section on Scholarships and Financial Aid on page 173. Detailed information on all Department scholarships and awards is available in the department office.

*The Blakely-Molson Scholarship Fund:* Monetary award open to any senior in the theatre program.

*Francis Delfo Scholarship:* Awarded to any theatre major of Albanian descent.

*The Tracey Lupo Memorial Scholarship:* Monetary award open to any full-time undergraduate student with preference given to female entering the junior year.

*National Costumes Association Memorial Endowment Fund:* Monetary awards open to any student majoring in theatre with concentration in costuming.

*Russell McLaughlin Memorial Scholarship Fund:* Monetary award open to any undergraduate student in the theatre program.

*Talent Scholarship:* Awards of \$700 per academic year (fall and winter terms) renewable for four years based on participation in the theatre program; open to any high school senior admitted to Wayne State.

*Lily Tomlin Endowment Fund:* Monetary awards open to any undergraduate in the theatre program.

*Leonard and Mary Zudick Theatre Endowed Scholarship Fund:* Monetary awards open to any student in the theatre program.

## UNDERGRADUATE COURSES (THR)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### 1010 (VP) Introduction to the Theatre. Cr. 3

Historical, critical and cultural aspects of theatre and drama discussed relative to play attendance. (T)

### 1020 Play Analysis. Cr. 3

Reading and structural analysis of plays. Selected nineteenth and twentieth century plays. (W)

### 1030 (VP) Black Theatre: An Introduction. Cr. 3

Origins, development, and current trends with production techniques and problems related to the special area of the drama. (T)

- 1040 Acting I. Cr. 3**  
An introduction to improvisation and the process of acting. (Y)
- 1050 Acting II. Cr. 3**  
Prereq: THR 1040. Continuation of THR 1040. (Y)
- 2010 Stage Movement I. Cr. 2**  
Required of B.F.A. acting majors. Recommended for all second year acting students. Introduction to the principles, practices, and exercises in body technique and stage movement. Material fee as indicated in the Schedule of Classes. (F)
- 2020 Stage Movement II. Cr. 2**  
Prereq: THR 2010. Required of B.F.A. acting majors. Recommended for all second year acting students. Continuation of THR 2010. Emphasis on character movement. Material fee as indicated in the Schedule of Classes. (W)
- 2030 Acting III. Cr. 3**  
Open only to B.F. A. acting majors. Study and exercise in the fundamentals of the actor's craft. Emphasis on the development of the actor's inner resources as applied to dramatic action, and consideration of basic stage techniques. (F)
- 2040 Acting IV. Cr. 3**  
Prereq: THR 2030. Further development of the techniques covered in THR 2030 and basic principles of character building. Emphasis on the development of a role through script, exercises and scene work. (W)
- 2080 Theatre Laboratory. Cr. 1-4 (Max. 8, B.F.A. technical students; max. 3, B.A. students)**  
Supervised laboratory in technical and managerial facets of theatre in production. (T)
- 2110 Voice Laboratory I. Cr. 2**  
Introduction to vocal production. Emphasis on relaxation, breathing techniques, and the production of vocal sounds. (F)
- 2130 Stagecraft. Cr. 3**  
Prereq: THR 1010 or 1030 recommended. Principles of scenic construction and painting. Types and utilization of stage scenery. Laboratory projects coordinated with University Theatre productions. (T)
- 2140 Production Laboratory. Cr. 1 (Max. 6)**  
Participation in University theatre productions as actors, designers, technicians, publicist, assistant director, choreographer, or other approved capacity. (T)
- 2160 Technical Theatre Problems. Cr. 2 (Max. 6)**  
Prereq: sophomore standing. Open only to B.F.A. technical theatre majors. Participation in theatre productions as stage manager or assistant stage manager. (T)
- 2170 Voice Lab II. Cr. 2**  
Prereq: THR 2110. Continuation of vocal production work and an introduction to consonant sounds. (Y)
- 2180 Stage Management. Cr. 3**  
Prereq: consent of adviser. Study of activities except acting that take place on stage or backstage during a technical performance and during rehearsal period. (T)
- 2860 (MUA 2860) Opera Workshop. Cr. 1 (Max. 8)**  
Prereq: consent of director. (I)
- 3010 Acting V. Cr. 3 (Max. 6)**  
Prereq: THR 2040. Required of all B.F.A. acting majors. May be repeated as elective with consent of instructor. Theories and methods of acting verse drama. (F)
- 3020 Stage Movement III. Cr. 2**  
Prereq: THR 2020. Required of B.F.A. acting majors. Styles of stage movement: Commedia, Moliere, Restoration. Emphasis on period department, manners, and dance forms. Material fee as indicated in the Schedule of Classes. (F)
- 3030 Acting VI. Cr. 3 (Max. 6)**  
Prereq: THR 3010. Required of all B.F.A. acting majors. May be repeated as elective with consent of instructor. Acting classic and modern theatrical styles of comedy. Emphasis on American musical theatre. (W)
- 3040 Stage Movement IV. Cr. 2**  
Prereq: THR 3020. Required of B.F.A. acting majors. Styles of stage movement: Shakespeare. Emphasis on Renaissance department, manners, and dance forms. Material fee as indicated in the Schedule of Classes. (W)
- 3050 Principles of Makeup. Cr. 2**  
Fundamentals of theatre makeup. Laboratory projects coordinated with University Theatre productions. (T)
- 3070 WSU Touring Theatre. Cr. 1-2 (Max. 4)**  
Admission by audition only. (T)
- 3080 Voice Lab III. Cr. 2**  
Prereq: THR 2170. Continuation of vocal and articulation work and an introduction to rhythm and tempo in the speaking voice. (W)
- 3090 Voice Lab IV. Cr. 2**  
Prereq: THR 3080. Continuation of vocal articulation and vocal music techniques; harmonizing them in performance. (Y)
- 3110 Principles of Theatre Management. Cr. 3**  
Introduction to the principles and practices of theatre management. Season selection, advertising, budgeting, marketing and fundraising are among the areas to be covered. (Y)
- 3990 Directed Study. Cr. 1-4 (Max. 4)**  
Prereq: theatre major with 16 credits in the Department. (T)
- 4997 Theatre Capstone Experience. Cr. 3**  
Prereq: final semester senior standing; prior consent of project adviser and undergraduate supervisor. Final exit project required for graduating seniors. (W)
- 5010 Theatre Costuming I. Cr. 3**  
Prereq: THR 1010 or 1030 recommended. Introduction to costume design and construction. Laboratory projects coordinated with University Theatre productions. Material fee as indicated in the Schedule of Classes. (F)
- 5020 Theatre Costuming II. Cr. 3**  
Prereq: THR 5010. Advanced costume design projects concentrating on the expression of character through design principles. Further development of drawing and rendering skills. (W)
- 5030 Introduction to Design for the Theatre. Cr. 3**  
Prereq: THR 2130 recommended. Methods and materials laboratory course. Practical exercises. Prerequisite to stage, costume or lighting design; techniques of costume, lighting design; rendering, drafting, perspective, color, and design. (F)
- 5050 Play Direction I. Cr. 3**  
Prereq: THR 3050. Principles and theories of stage movement, blocking, casting, rehearsing. Students required to direct scenes and one-act plays for class presentation. (F)
- 5070 Stage Lighting. Cr. 3**  
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. (F)

**5080 Stage Design. Cr. 3 (Max. 6)**

Prereq: THR 5030. 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. (I)

**5090 Advanced Stage Design. Cr. 3 (Max. 6)**

Prereq: THR 5080. Laboratory theory course in stylistic characteristics of modern stage designs. Advanced problems in scenic design. (I)

**5100 Theatre History I. Cr. 3**

Required of all B.F.A. majors. 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)

**5120 Development of the Drama I: Greek to Eighteenth Century. Cr. 3**

Plays from the Greek through the eighteenth century, including Shakespeare; relation of drama to an era and its theatre. (F)

**5130 (ENG 5890) Writing for Theatre. Cr. 3 (Max. 6)**

Prereq: ENG 3830 or consent of instructor. Advanced study, in a workshop setting, of dramatic structure and writing for the theatre, terminating in the writing of an original stage play. (I)

**5140 Introduction to Scene Painting. Cr. 3**

Prereq: THR 2130. Laboratory 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 the Schedule of Classes. (I)

**5150 Advanced Scene Painting. Cr. 3**

Prereq: THR 5140. Laboratory and demonstration course for the design or technical theatre student. Materials, techniques, styles of scene painting. Material fee as indicated in the Schedule of Classes. (I)

**5170 Modern Acting Styles and Theories. Cr. 3**

Prereq: three undergraduate courses in acting or equivalent experience. Advanced lecture and performance course to develop the process of analysis, creation, and performance of dramatic characters as required by today's film, television and theatre disciplines. (S)

**5190 Costume History for the Theatre. Cr. 3**

Prereq: THR 5010. Survey of historical trends and patterns in the development of costume as related to various periods and genres of theatre. (I)

**5210 Theatre History II. Cr. 3**

Prereq: THR 5100 or consent of instructor. Continuation of THR 5100. From English and continental eighteenth century to contemporary European and American theatres. Material fee as indicated in the Schedule of Classes. (W)

**5220 Black Dramatic Literature. (AFS 5220) Cr. 3**

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. (Y)

**5230 Pioneers of the Modern Theatre. Cr. 3**

Prereq: upper division standing. Stanislavski, Meyerholdt, Artaud, Gordon Craig, Brecht; lectures and creative projects. (B)

**5250 Playwriting. Cr. 3**

Introduction to the craft of writing for the stage. Students required to write a full-length dramatic script. (B)

**5300 Advanced Stage Lighting Design. Cr. 3**

Prereq: THR 5070; graduate standing or consent of instructor. Examination of situations and responsibilities encountered in professional

lighting design. Project work based on large-scale, complex requirements. Material fee as indicated in the Schedule of Classes. (I)

**5500 Special Topics in Theatre. Cr. 1-3 (Max. 6)**

Specialized studies in theatre performance, history, criticism, management, design, and technology. Topics to be announced in Schedule of Classes. (T)

**5993 (WI) Writing Intensive Course in Theatre. Cr. 0**

Prereq: junior standing, consent of instructor, satisfactory completion of English Proficiency Examination; coreq: THR 5100, 5120, or 6120. 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 designated 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)

**6010 Studio I. Cr. 1-3**

Prereq: graduate standing. Open only to members of the Hilberry Acting Company and M.A., M.F.A., and Ph.D. candidates in management. 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)

**6020 Studio II. Cr. 1-3**

Prereq: THR 6010. Open only to members of Hilberry Acting Company and M.A., M.F.A., and Ph.D. candidates in management. Continuation of THR 6010. (W)

**6030 Creative Dramatics for Children. Cr. 3**

Creative dramatics and formal playmaking for and by children. (I)

**6040 Children's Theatre Play Production. Cr. 3**

Prereq: THR 6030 recommended. Theory and practice of organization, selection, direction, production of plays for children's audiences in schools, churches and communities. (I)

**6050 Voice and Speech for the Stage I. Cr. 1**

Open only to Hilberry company members. Introduction to American standard speech using Edith Skinner's technique; introduction to FitzMaurice vocal technique. (F)

**6060 Costume Design for the Theatre. Cr. 3 (Max. 6)**

Advanced phases of costume design and construction. Source material for historical and national costumes. (I)

**6070 Theatrical Movement and Dance Styles I. Cr. 1**

Open only to Hilberry company members. Pilates Method of body conditioning; learning and perfecting movements of the body at beginning and intermediate levels. (F)

**6080 Advanced Stage and Film Makeup. Cr. 2**

Prereq: THR 3050. Continuation of basic principles applied in THR 3050; emphasis on new makeup materials; experimentation with prosthesis and design for problem makeup. Material fee as indicated in the Schedule of Classes. (I)

**6090 Professional Lighting Design I. Cr. 3**

Prereq: THR 5300 or consent of instructor. 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. (Y)

**6100 Voice and Speech for the Stage II. Cr. 1**

Prereq: THR 6050. Open only to Hilberry company members. Continuing instruction in Skinner and FitzMaurice/Linklater. (W)

**6110 Theatrical Movement and Dance Styles II. Cr. 1**

Prereq: THR 6070. Open only to Hilberry company members. Continuation of THR607. Advanced level. (W)

**6120 Development of the Drama II: Nineteenth Century to Modern. Cr. 3**

Plays and theories of the theatre from the nineteenth century to modern times; relation of drama to an era and its theatre. (W)

**6190 Professional Lighting Design II. Cr. 3**

Prereq: THR 5300 or consent of instructor. Continuation of THR 6090. 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. (B:W)



# LAW SCHOOL

DEAN: Joan Mahoney

# The Study of Law at Wayne State University

## History and Goals of the Law School

Wayne State University Law School has been a source of lawyers for Michigan and the rest of the nation for more than seventy years. A group of public-spirited lawyers led by Judge Allan Campbell, in cooperation with the Board of Education of the City of Detroit, established the new law school in 1927 as part of the Colleges of the City of Detroit. The Law School and other colleges grew and flourished and were subsequently renamed Wayne University. In 1956, the University joined the University of Michigan and Michigan State University as one of the State's three major public universities, and was renamed Wayne State University.

Wayne State University is an institution dedicated to excellence in education and research. The focus of the Juris Doctor (J.D.) program is preparation of lawyers for the wide variety of professional opportunities available with law firms, corporations, public interest groups, government, and many law-related fields. The rich and varied educational program not only teaches the legal rules by which our business and personal affairs are governed in a complex society, but also instills an appreciation of the larger role of the legal profession as it shapes society's values and institutions. The program stresses experiences designed to develop the skill of written expression, and to provide oral advocacy training in trial and appellate settings. In addition to the traditional classroom component, the Law School offers the opportunity to enrich legal education with real-life legal experience. Students are encouraged to take advantage of the special opportunities available in the Detroit metropolitan area for internships with judges, prosecutors' and defenders' offices, and public interest law practices.

The Law School's faculty is actively involved in scholarly research. Professors at Wayne State University Law School make significant contributions to the understanding of issues in environmental law, taxation, criminal procedure, constitutional law, urban law and many other fields. Their books and articles contribute to the depth and quality of classroom teaching. It is the interaction of teaching and research which creates an especially stimulating environment for the law student.

The Law School takes great pride in its diversity. The full-time faculty includes individuals experienced in local, state and federal government, others who have served as judicial clerks for federal judges, a number with backgrounds in private practice, and others who are well known public interest advocates. They combine excellent academic credentials with practical experience. The faculty is committed to classroom teaching excellence and to advancing the state of professional knowledge through scholarship. The Law School is fortunate to be able to recruit excellent part-time faculty from the Detroit metropolitan area. Respected judges and practitioners bring valuable and specialized professional perspectives to the adjunct faculty.

## Accreditation

Wayne State University Law School is accredited by both of the major national accrediting agencies for legal education: the American Bar Association and the Association of American Law Schools.

## National Recognition

The Law School has a Chapter of the Order of the Coif, the national honorary society dedicated to the highest standards of legal scholarship. Membership is limited to the top ten percent of each graduating class, elected by the faculty.

## Law School Setting

Wayne State University is located in the heart of the University/Cultural Center area about four miles from downtown Detroit. Within a few blocks of the Law School are the Detroit Public Library, the Detroit Institute of Arts, the International Institute, the Detroit Historical Museum, the Detroit Science Center, and the Museum of African American History. South of the main campus is the Detroit Medical Center and the Wayne State University Medical School. State and federal courts and offices are concentrated in the downtown area.

The Law School is located on the main campus adjacent to the Ferry and Gullen Malls, convenient to the major University library complex and the University's Hilberly Theatre, which houses one of the most distinguished graduate theatre repertory companies in the United States. The Law School complex includes the classroom building, the Law Library, and a three-story expansion which opened in fall 2000. The expansion houses all student services offices, law publications suites and faculty offices, and features a 250-seat auditorium. The classroom building has five auditoriums with terraced seating designed to enhance the educational experience. There is also a lounge area for informal conversation between classes.

## Arthur Neef Law Library

Wayne State University's Law Library is the second largest in Michigan, and twenty-first largest in the United States. It is a major resource for faculty and students of the Law School, and for members of the local and state bar, representatives of state and federal agencies, and alumni. A modern computer laboratory provides the setting for training of students in computerized legal research. A complete description of the library, its facilities and collections, may be found on page 60.

## 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 taxation, labor law, and corporate and finance law which requires as prerequisite the J.D. or its equivalent.

### *JURIS DOCTOR*

### *MASTER OF LAWS*

### *MASTER OF LAWS in Corporate and Finance Law*

### *MASTER OF LAWS in Labor Law*

### *MASTER OF LAWS in Taxation*



# JURIS DOCTOR (J.D.) PROGRAM

## First Year Day Program

The first-year day program is a full-time two-semester program which begins only in the fall. Students must take all required first-year courses. The fall term curriculum consists of Contracts, Civil Procedure, Torts, Criminal Law, and Legal Writing and Research, for a total of fifteen credits. In the winter term, students complete the second semester of Contracts, Civil Procedure, and Legal Writing and Research as well as Property and an elective for a total of fourteen or fifteen credits. Students in the day program are strongly discouraged from employment of any type during the first year.

## Evening Program

The Law School offers a part-time program which enables students to complete their J.D. requirements in four to six years. The first-year evening curriculum is mandatory and consists of two semesters of Civil Procedure, Contracts, and Legal Writing and Research. In the second year of the evening program, students take Property, Torts, Criminal Law, and Constitutional Law I, and may choose additional electives. Most evening classes are held from 6:10 to 8:10 p.m., Monday through Thursday. To provide a wider selection for evening students, several classes are also offered from 4:00 to 6:00 p.m., Monday through Friday. Class size is generally smaller in evening courses than in day classes.

## Combined Day/Evening Program

The combined day/evening program is designed to meet the needs of students who wish to complete law school in three years, but who prefer to take as many classes as possible in the evening. The program may be elected by any applicant.

In the combined day/evening program, first-year students must take Civil Procedure, Contracts, and Legal Writing and Research in the evening, and Property or Torts during the day. (Students who wish may take both Property and Torts and an elective during the day of the first year.) Criminal Law will be taken in the evening of the second semester of the second year.

Students in the combined program who complete all six courses open to them will have twenty-seven credits at the end of their first year, only three credits short of the thirty credits completed by full-time day students. These three credits can be readily made up during the summer or in subsequent academic years, allowing students in the combined day/evening program to complete the degree in three years if they so choose.

## Legal Writing and Research

The Law School is noted for its excellent legal writing and research program, which is conducted by five full-time lecturers, one of whom serves as director of the program. The textbook and related materials, developed by current and former instructors at the Law School, are used by many other law schools around the country.

A major part of the first-year curriculum is Legal Writing and Research, taught in small sections. The two-semester course begins with a mandatory orientation program. Following orientation, students meet with their instructors in weekly class sessions and in frequent individual conferences. In the fall term, class time is primarily devoted to the development of writing, organization, and case analysis skills. Students learn to use library materials by researching a legal problem in small groups.

In the winter term, instructors teach oral and written appellate advocacy skills. Students draft an appellate brief relying on a comprehen-

sive trial court record, and deliver an appellate oral argument before a three-judge panel of practicing attorneys.

## Upperclass Program

After completing the required first-year day or combined day/evening curriculum, or the first- and second-year evening curriculum, students may choose among an extensive listing of elective courses and seminars, including interdisciplinary courses covering a broad range of subjects.

Students may elect courses in the day or evening or a combination of day and evening courses. It is not uncommon for evening students to elect day classes, and for day students to elect evening classes. Upperclass students may change from one program to the other as their schedules require, and may elect courses in the eight-week summer term to accelerate or to accommodate individual needs.

## Degree Requirements

The requirements for the Juris Doctor degree are:

1. A bachelor's or equivalent degree upon admission.
2. Completion of a minimum of eighty-six semester credits, with an overall grade point average of 2.0 ('C') or better for all credits completed.
3. Completion (with a final grade of at least 'D') of each of the following courses: Contracts, Property, Civil Procedure, Criminal Law, Torts, Constitutional Law I, and Professional Responsibility. Additionally, Legal Research and Writing must be completed with a final grade of at least a Low Pass.
4. Three years in residence must be completed. Students earn years in residence at the rate of .05 residence years for each semester credit completed. A student may not earn more than one-half year in residence for a fall or winter term in which ten or more credits are completed, and not more than one-quarter year in residence for a summer term in which five or more credits are completed.
5. The final year of study must be completed in residence at the Wayne State University Law School.
6. Students who enter as full-time students must complete the degree requirements within five years of the date they enter. Students who enter as part-time students must complete the degree requirements within six years of the date they enter.

## Academic Regulations

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.

## SPECIAL CURRICULAR PROGRAMS

### Internships

Upperclass students have the opportunity to earn academic credit while interning on a part-time basis for distinguished judges or a variety of governmental and non-profit agencies in the Detroit area. With the consent of both the dean and the faculty, students may also arrange for special public interest internships outside the Detroit metropolitan area. The internship program provides a unique opportunity for students to gain practical experience while concurrently pursuing their classroom studies.

### Intellectual Property Law Institute (IPLI)

The IPLI was created in 1987 by the State Bar of Michigan and the law faculties of Wayne State University, the University of Detroit Mercy, and the University of Windsor, Ontario. The IPLI offers an exceptional, rich curriculum for law students and lawyers, comprised

of courses and seminars in intellectual property law in patent, copyright, trademark, computer and related technology, communications media, and entertainment law. Law students who enroll in IPLI courses pay tuition to their home institution, and credit for courses taken at other institutions is transferred to the home institution.

## International Programs

The Law School offers many courses in the area of international law. It also sponsors several international study and exchange programs: The Freeman Fellowship, for study at the Hague Academy of International Law (Netherlands); Wayne State University—Utrecht (Netherlands) law faculty and student exchange program; and the Wayne State University Law School—University of Warwick (England) Law School student exchange program.

## Center for Legal Studies

The Center for Legal Studies seeks to foster the development of a community of scholars in several disciplines who are devoted to interdisciplinary legal scholarship, and to provide opportunities for undergraduate, graduate, and Law School students to engage in the interdisciplinary study of law and law-related subjects.

## COMBINED LAW AND GRADUATE STUDIES

Law School students may pursue a master's degree in a field other than law concurrently with their legal education. Upon completion of their first year of law study, students may apply to the Law School for *permission* to take a combined degree program and to the appropriate school or college of the University for *admission* as a master's candidate. If admitted, students may divide their time between the Law School and the concurrent program of study, devoting sufficient time to each to meet the academic and residence requirements of both schools. This program will require a minimum of four years of study at the University.

Students who are not interested in a master's degree, but who are interested in taking graduate level courses related to their legal training in other schools and colleges of the University may receive credit toward their law degree for the satisfactory completion of such work. The student must first secure the approval of the Dean to register for such courses. For detailed information on graduate courses and programs in the University, consult the other school and college sections of this bulletin.

**Combined Degree Programs:** The Law School offers the following joint degree programs: J.D./M.A., History; J.D./M.A., Political Science; J.D./M.A.D.R.; and J.D./M.B.A. See the respective departmental sections in the College of Liberal Arts section and the School of Business Administration section of this bulletin for further details.

## Bar Examinations

Students who contemplate practicing law in states other than Michigan should consult Bar examiners of those states at the earliest opportunity with reference to the requirements of such states. In several states, prospective candidates are required to notify the Bar examiners at the beginning of their law study of their intention of taking the examination upon graduation.

Information regarding the Michigan Bar examination can be obtained by writing to The State Bar of Michigan Committee on Character and Fitness, 306 Townsend, Lansing, MI 48933-2083.

Although the curriculum of the School is not primarily designed for preparing students to pass the various state bar examinations, substantially all of the subject matter of the examinations is covered adequately in the regular courses. However, the objective of the School is the development of an understanding of the theory of the law, its application, and the techniques of practice — in other words, to prepare a student for the practice of law.

# ADMISSION POLICIES and PROCEDURES

## Preparation for Law Study

The Law School has no requirements with respect to the content of pre-legal education, but its 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 prelaw preparation in the *Official Guide to U.S. Law Schools*, published by the Law School Admission Council, are excellent. This guide contains material on the legal profession and the study of law, and information on each American Bar Association (ABA) accredited law school. It may be ordered from the Law School Admission Services, and is available in most bookstores and libraries. Prospective students are welcome to come into the Law School Admissions Office, during the regular office hours, to look at the Official Guide and other law school reference materials.

## Admission Policy

An applicant for admission to the Wayne State University Law School J.D. program must have a bachelor's degree from a regionally accredited college or university. (Prior to registration, each admitted student must arrange for the Law School to receive an official transcript from the degree-granting institution, evidencing the grant of the degree.) Each applicant must also take the Law School Admission Test (LSAT) and register with the Law School Data Assembly Service (LSDAS).

It is the goal of the Law School's Admissions Committee to ensure that the entering class is composed of the most highly qualified applicants. The Committee believes that, initially, the educational process during law school and the legal profession are best served by an admissions process that results in the selection of a diverse and talented student body.

The Committee considers the following factors in reaching admissions decisions: (1) the applicant's academic achievement and potential, as shown by the LSAT score and undergraduate grade point average; (2) any special features of the applicant's academic record which may have had an impact on his or her grade point average such as the age of the undergraduate grades or any marked improvement in grades shown in the later years of college; (3) other relevant personal qualities and characteristics of significance such as cultural/ethnic background, socio/economic and educational disadvantage, work and volunteer experience, leadership qualities, commitment to community service and communication skills. Applicants are urged to discuss these factors in their personal statement which is required as part of the application process. An individual writing a letter of recommendation for an applicant should address such factors also.

**Reconsideration:** An applicant may request reconsideration of an adverse admission decision by writing a letter to the Assistant Dean for Recruitment and Admissions stating the specific reasons why reconsideration is thought to be merited. The application will be then reviewed and reconsidered by the Admissions Committee. In the past, applicants who have successfully petitioned for reconsideration are those who have submitted updated information such as new test scores or additional grades.

**Deferred Admission:** The Law School does not defer admissions. An admittee who withdraws from the class must submit a new application and fee for the subsequent 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 signifi-

cant health care concerns may be permitted to take a slightly reduced course load. The applicant must submit a written request prior to registration to the Assistant Dean for Recruitment and Admissions setting forth the personal circumstances justifying the request for admission as a reduced-load student.

**Visit to the Law School:** Prospective applicants are encouraged to visit and tour the Law School and University campus, attend a first-year class, participate in informal discussions with students about law school, and consult with a member of the Admissions Office staff about admission policies, procedures and other concerns.

## Application Procedure

There is a great deal of competition for the entering class of the Law School. The Law School received more than 1000 applications for the 2000-2001 academic year, and fewer than one-third of the applicants were offered admission. The median undergraduate grade point average of the 2000-2001 entering class was 3.25 and the median LSAT score was 154. Applicants for admission to the first-year class are admitted to the fall term only.

**Application Instructions for Admission to the First-Year Class:** Applications for admission are accepted October 1 through March 15. Applicants are encouraged to apply early, as the Law School has a rolling admissions process.

The applicant's file will be ready for consideration when the Admissions Office has received the following:

(1) The Law School Application for Admission signed and dated by the applicant, with all required information on the application and the attached cards.

(2) The non-refundable application fee, submitted with the application, of \$20 for U.S. citizens or permanent residents, and \$30 for non-U.S. citizens. Checks or money orders should be made payable to Wayne State University. Checks drawn on Canadian or other foreign banks should carry the notation 'Payable in U.S. Funds Plus Service Charge.' Applicants should not send cash.

(3) A brief personal statement designed to call the attention of the Admissions Committee to any experiences, interests, unusual circumstances, or any other information which the applicant believes would help the Committee evaluate his or her potential for success at the Law School. The Law School does not grant requests for personal interviews, so it is important for the applicant to include any special circumstances in his or her personal statement.

(4) The LSDAS Report, sent by LSDAS, which will include the applicant's LSAT score(s), copies of transcripts from all of the U.S. undergraduate schools the applicant has attended, and an analysis and summary of the transcripts. (The applicant must direct each U.S. undergraduate school attended to send a transcript to LSDAS. If the applicant's transcripts are not sent directly to LSDAS, LSDAS will not complete its report and the application will be incomplete.)

An applicant with a degree from an educational institution outside the United States must also submit a notarized copy of the undergraduate transcript, translated into English. An applicant who earned his or her bachelor's or equivalent degree from a college or university outside the United States, Canada or Puerto Rico, may not be eligible to subscribe to LSDAS and should refer to the Law Services Information Book or contact LSDAS for advice.

(5) A letter of recommendation from an individual, such as a college professor or department chairperson, who can comment on the applicant's intellectual abilities and academic performance. An applicant who has been out of school for a number of years may substitute a letter of recommendation from an employer. Letters of recommendation should be sent directly to Law Services by the recommender. Only one letter of recommendation is required, but the Admissions Office will review up to two letters.

**Admissions Decisions:** Applicants with high index scores are administratively admitted and applicants with very low scores may be

administratively denied admission. Applicants who are neither administratively admitted nor denied are placed in the discretionary pool. The Admissions Committee reviews applications from the discretionary pool and decides whether to admit, deny or wait list. Although a rolling admissions process is generally employed, discretionary admit decisions are the most difficult and usually are made later in the admission year. The Admissions Committee is composed of Law School faculty members assisted by administrative staff. The administrative staff provides information, recommendations and other assistance to the faculty members who vote on the individual applications.

**Transfer Student:** A transfer applicant must have completed all of the first-year day or evening courses required by his or her ABA-accredited law school. Applicants must have superior law school academic credentials to be offered admission. 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 consideration when the Admissions Office has received all of the following: (1) The Law School Application for Admission; (2) An official transcript sent directly from the applicant's law school including the final grades recorded for all law school courses completed (a photocopy will not be accepted); (3) A letter of good standing from the dean of the applicant's law school; (4) A copy of the applicant's LSDAS Report; (5) An official transcript sent directly from the applicant's degree-granting undergraduate school.

**Guest Student for Fall and/or Winter Term(s):** The transfer applicant requirements and procedures outlined above apply to a law student who wishes to enroll at the Wayne State University Law School for one or two terms as a guest student and who intends to transfer credit back to his or her 'home' law school. In the case of a guest student, the letter of good standing should also include a statement granting permission for the applicant to attend the Wayne State University Law School for the semester(s) indicated, and agreement to transfer credits earned at the Law School, and any other requirements or limitations.

**Guest Student for Summer Term:** A student from another ABA-accredited law school may take one or two summer courses at the Wayne State University Law School, provided the student is in good standing and receives permission from his or her 'home' law school. Application should be made on the Law School Summer Guest Application available from the Admissions Office.

## LAW SCHOOL DIRECTORY

Admission — J.D. Program .....	577-3937
Financial Aid .....	577-5142
Records and Registration, Law School .....	577-3978
Academic Services .....	577-3993

*Web:* Please visit our website at: <http://www.law.wayne.edu>

Letters should be addressed to the appropriate department and building at Wayne State University, Detroit, Michigan 48202. The telephone area code is 313.



# COLLEGE OF LIBERAL ARTS

DEAN: Lawrence A. Scaff

# Foreword

The College of Liberal Arts conducts instruction and research in a wide variety of disciplines and serves the academic interests of a diverse student population. Courses and degree programs are offered in social sciences, humanistic studies, and foreign languages.

The bachelor's degree programs provide instruction in the basic areas of learning and offer opportunity to focus on fields of special interest. All programs emphasize communication, both written and spoken, and the use of precise and thoughtful language. Students are stimulated to think and read critically and to become familiar with the tools of research so that learning may be a lifelong process. Intellectual growth is encouraged by developing in students the necessary independence, resourcefulness and judgment in early studies so that advanced courses may be selected with confidence.

Most fields of study in the College offer students both theoretical and practical training. In fields of special interest, a solid knowledge of underlying principles may thus be strengthened by practical training and experience.

The College of Liberal Arts also serves students whose academic interests extend over several departments. Interdisciplinary programs such as American Studies, Linguistics, and Women's Studies offer varied individualized curricula.

The undergraduate programs of the College of Liberal Arts are strengthened by the graduate programs which lead to the master's and doctor's degrees in various disciplines. Professors in the College teach both graduates and undergraduates; research projects may involve both graduates and undergraduates; some specialized classes are available to both graduate students and those undergraduates enrolled in the upper division. This opportunity for association with graduate students and research personnel enriches the experience of many undergraduate students.

In the College of Liberal Arts, students are provided with the skills, knowledge, and understanding on which to build professional and personal development in today's rapidly changing world.

## DEGREE PROGRAMS

*BACHELOR OF APPLIED STUDIES with a major in sociology*

*BACHELOR OF ARTS with majors in:*

Africana Studies	History
American Studies	Italian
Anthropology	Linguistics
Art History	Near Eastern Languages
Classics	Near Eastern Studies
Economics	Philosophy
English	Political Science
Film Studies	Russian
French Studies	Slavic Languages
Geography	Sociology
German	Spanish

*BACHELOR OF ARTS HONORS with majors in:*

Anthropology Honors	Near Eastern Languages Honors
Classics Honors	Honors
Economics Honors	Near Eastern Studies Honors
English Honors	Philosophy Honors
French Studies Honors	Political Science Honors
Geography Honors	Russian Honors
German Honors	Slavic Honors
History Honors	Sociology Honors
Italian Honors	Spanish Honors

*SPECIAL BACHELOR'S DEGREES in*

Criminal Justice (Bachelor of Science in Criminal Justice)
Public Affairs (Bachelor of Public Affairs)

*SPECIAL BACHELOR'S HONORS DEGREES*

Bachelor of Science in Criminal Justice Honors
Bachelor of Public Affairs Honors

*\*MASTER OF ARTS with majors in*

Anthropology	History
Art History	Italian
Classics	Linguistics
Comparative Literature	Near Eastern Languages
East European Studies	Philosophy
Economics	Political Science
English	Sociology
French	Spanish
German	

*\*MASTER OF PUBLIC ADMINISTRATION with majors in*

Criminal Justice	Public Administration
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*\*MASTER OF SCIENCE with a major in Criminal Justice*

*\*DOCTOR OF PHILOSOPHY with majors in*

Anthropology	Modern Languages
Economics	Philosophy
English	Political Science
History	Sociology

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## COLLEGE DIRECTORY

### Dean:

Lawrence A. Scaff . . . . . 2226 Faculty/Administration Bldg.; 577-2522

### Associate Dean:

Janet Hankin . . . . . 2226 Faculty/Administration Bldg.; 577-2517

Donald Spinelli . . . . . 2226 Faculty/Administration Bldg.; 577-8895

### Service Areas

Graduate Office . . . . . 2226 Faculty/Administration Bldg.; 577-3117  
Major/Curriculum Office . . . . . 2226 Faculty/Administration Bldg.; 577-3117

College Grade Change Coordinator . . . . . 2226 Faculty/Administration Bldg.; 577-8001

Undergraduate Degree Certification . . . . . 577-3117

Educational Adjustment Committee . . . . . 2226 Faculty/Administration Bldg.; 577-8001

### Departmental Offices/Programs

African-American Film Institute . . . . . 51 W. Warren; 577-2321

Africana Studies . . . . . Room 4011, 51 W. Warren; 577-2321

American Studies . . . . . Room 2214, 51 W. Warren; 577-3067

Anthropology . . . . . 137 Manoogian; 577-2935

Canadian Studies Program . . . . . 225 State Hall; 577-0541

Classics, Greek, and Latin . . . . . 431 Manoogian; 577-3032

Comparative Literature Program . . . . . Room 1200, 51 W. Warren; 577-2452

Composition Program . . . . . 51 W. Warren; 577-2453

Criminal Justice . . . . . 2305 Faculty/Administration Bldg.; 577-2705

Economics . . . . . 2074 Faculty/Administration Bldg.; 577-3345

English . . . . . Room 1200, 51 W. Warren; 577-2450

English Language Institute . . . . . 351 Manoogian; 577-2729

Film Studies Program . . . . . Room 1232, 51 W. Warren; 577-2943

Foreign Language Laboratory . . . . . 385 Manoogian; 577-3022

Geography and Urban Planning . . . . . 225 State Hall; 577-2701

German and Slavic Studies . . . . . 443 Manoogian; 577-3024

History . . . . . 3094 Faculty/Administration Bldg.; 577-2525

Honors Program . . . . . 2311 Faculty/Administration Bldg.; 577-3050

Humanities Program . . . . . Room 4228, 51 W. Warren; 577-3035

International Studies Program . . . . . 355 Manoogian; 577-8072

Junior Year in Germany Program . . . . . 471 Manoogian; 577-4605

Legal Studies Program . . . . . 3081 Faculty/Administration Bldg.; 577-3947

Linguistics Program . . . . . Room 4010, 51 W. Warren; 577-8642

Near Eastern and Asian Studies . . . . . 437 Manoogian; 577-3015

P.A.C.T. . . . . 71 E. Ferry; 577-3519

Philosophy . . . . . Room 353, 51 W. Warren; 577-2474

Political Science . . . . . 2040 Faculty/Administration Bldg.; 577-2630

Public Affairs Program . . . . . 2040 Faculty/Administration Bldg.; 577-2630

Romance Languages & Literatures . . . . . 487 Manoogian; 577-3002

Sociology . . . . . 2228 Faculty/Administration Bldg.; 577-2930

Women's Studies Program . . . . . Room 2242, 51 W. Warren; 577-6331

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

Mailing address for all offices:

(Department Name), College of Liberal Arts, Wayne State University,  
Detroit, Michigan 48202

# BACHELOR'S DEGREE REQUIREMENTS

## Credits

Candidates for the degrees Bachelor of Arts, Bachelor of Applied Studies, or any Special Degree must complete at least 120 credits. Certain curricula may require additional credits above this minimum. (See 'Restrictions on Credit', below.) At least fifteen credits must be earned in courses numbered 3000 or above.

**Grade Point Average:** All students are required to maintain an overall grade point average of 'C' (2.0) for all degree work elected. See 'Grade Point Average,' page 45.

## GENERAL EDUCATION REQUIREMENTS

University-wide general education requirements and College-wide group requirements are designed to enhance students' basic skills and to promote intellectual breadth. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth.

As of Fall, 1991, all entering undergraduate students must satisfy both University General Education Requirements (see page 29) and College of Liberal Arts Group Requirements (see below). Students who first enrolled prior to Fall 1991 should consult with their advisers regarding University General Education Requirements and College Group Requirements. While these two sets of requirements substantially overlap and complement each other, College Group Requirements, in several respects, supplement and modify the University program by requiring additional course work or restricting the use of certain specific courses.

## Competency Requirements

The College of Liberal Arts requires the establishment of the same academic skills competencies as are set forth in the University General Education Program (see page 29).

## Group Requirements

Group Requirements for students in the College of Liberal Arts overlap considerably with those of the University General Education Program (see page 31). However, they are not identical, and students must make sure that their course elections satisfy both sets of requirements.

In order to achieve breadth of educational experience, both the University and the College enforce the policy that no two courses offered in satisfaction of the Group Requirements may be chosen from within the same Subject Area code.

The following are statements of important differences between the University General Education Program and the College Group Requirements.

- 1) The College requires three courses in the natural sciences - one more than is required by the University.
- 2) The College requires two courses in the social sciences (SS) one more than is required by the University.
- 3) The College requires an additional course in the humanities under the heading of Civilizations and Societies (see below).
- 4) The College requires three courses in a foreign language. Foreign language competency is not a part of the University General Education Requirements.

In each category the Group Requirement must be satisfied by election from an approved list of courses. Courses not on the lists will not be accepted as fulfilling the requirement. The basic list for University General Education courses may be found on page 31. The following list of Group Requirements cite only exceptions to the University lists. Since changes may occur after the publication of this Bulletin, please consult University Advising for the up-to-date list of approved courses.

**AMERICAN SOCIETY AND INSTITUTIONS (AI):** The College list is the same as the University list, except that the College list does not include AGS 3420 and GSS 1510. One course is required.

**FOREIGN CULTURE (FC):** Students may satisfy the University General Education Requirement in Foreign Culture by successfully completing a three course sequence (through 2010 or 2110) in a single foreign language.

**FOREIGN LANGUAGE:** All students in the College of Liberal Arts must successfully demonstrate language proficiency equivalent to the three-course basic sequence in a single foreign language. Proficiency is proven by completing courses numbered 1010 (or 1100 and 1110), 1020, and 2010 in one of the following subject area codes: ARB, ARM, CHI, FRE, GER, GRK, HEB, ITA, JPN, LAT, POL, RUS, SPA, SWA, and UKR; as well as GRK 1110, 1120, and 2110. Those students continuing in the study of a foreign language begun in high school or at another college will be placed at the appropriate level in the sequence, as determined by means of qualifying examinations or interviews administered by the various language departments of the University. Students must complete the sequence to demonstrate proficiency. The College Foreign Language Group Requirement will be considered satisfied by those students whose test scores place them beyond the intermediate (third course) level.

*Bilingual Students:* The College Foreign Language Group Requirement will be considered satisfied for students who were born in and completed their secondary education in a country whose language is not English. However, no credit (through course work or by examination) will be granted for elementary or intermediate level courses in that language. Bilingual students who satisfy the Foreign Language Group Requirement in this manner will simultaneously fulfill the University General Education Requirement in Foreign Culture.

**HISTORICAL STUDIES (HS):** The College list is the same as the University list, except that the College list does not include GIS 3160. One course is required.

**LIFE SCIENCE (LS):** The College of Liberal Arts requires one course from the following shortened list to satisfy its Group Requirement in Life Sciences: ANT 2110; BIO 1030, 1050, 1510; HON 4220; PSY 1010, 1020.

**PHILOSOPHY AND LETTERS:** The College list is the same as the University list, except that the College list does not include GUH 2710. One course is required.

**PHYSICAL SCIENCE (PS):** The College of Liberal Arts requires one course from the following shortened list to satisfy its Group Requirement in Physical Science: CHM 1000, 1020, 1220, 1225, 1410; HON 4230; PHY 1020, 1040, 1070, 2130, 2170, 3100.

**THIRD COURSE IN NATURAL SCIENCE (LS, PS):** A third course in the Natural Science area is required. It cannot be chosen from the same department as either of the other two courses with which the student fulfills the Physical Science or Life Science requirement. All courses on the University list for Life Science or Physical Science are acceptable except GST 2310 and 2420. Also, students may elect NFS 2210 as the third course in Natural Science (a course which is not on the University General Education list).

**SOCIAL SCIENCE (SS):** The College list is the same as the University list, except that the College list does not include AGS 3480 and GSS 2710. Two courses (taken from different departments) are required.

**VISUAL AND PERFORMING ARTS (VP):** The College list is the same as the University list, except that the College list does not include GUH 2730. One course is required.

## CIVILIZATIONS AND SOCIETIES:

This College Group Requirement is not part of the University General Education Requirements. Students must complete one course from the following (cross listed versions of these course are indicated in parentheses): AFS 2010; A S 2010; ARM (or GER, POL, RUS, SLA, UKR) 3410, ARM (or POL, RUS, SLA, UKR) 3710; CBS 2100 (SPA 2400), 2110 (SPA 2500); CLA 2000; ENG 2600, 3600; FRE 2710, 2720; GER 2710, 2720; GRK 3710; ITA 2710, 2720; N E 2000, 2010; POL 2710; RUS 3510.

*Note:* The Junior Year in Germany experience also meets the Civilizations and Societies requirement.

**UGE 1000**, (GE) Information Power, as specified in the University General Education Program (see page 32).

**UNIVERSITY REQUIREMENT IN AMERICAN GOVERNMENT** for students enrolled prior to Fall Term 1987: See General University Information, page 33.

## Curriculum Requirements

A curriculum usually designates a general area of interest or eventual professional choice. By choosing the General Curriculum, students indicate only an intention to take a degree in one of the departments of the College or that their final academic goal has not as yet been determined. Since educational interests may change during a college career, curricula may be altered at any time by consulting an academic adviser.

Some curricula outline specific programs of study. Others are governed only by the group requirements, future major requirements, and recommendations. Group, curricular, and major requirements may be modified from time to time during a student's course of study, and students should periodically consult with appropriate advisers. Descriptions of the various curricula will be found in the Undergraduate Curricula section below; see pages 228- 229.

## Major Requirements

A major is a program of concentrated study in a department or area (often a program) within the College. Specific course requirements for majors are listed in this bulletin under each of the departments or areas of the College. Students may declare majors at any time but generally select areas of concentration during their sophomore year and formally declare majors by the beginning of their junior year. Students must complete all courses in their majors with an overall average of 'C' (2.0).

**Declaration of Major:** To declare a major, students should consult a departmental adviser well in advance of making a formal declaration, since the acceptance of a declared major is subject to the advice and consent of the department concerned. Declaration of Major forms are available in the University Advising Center, 2 East, Helen Newberry Joy Student Services Center. A 2.00 cumulative g.p.a. is required to declare a major. At the time of formal declaration, the student must present to the department a current transcript and a Degree Audit from University Advising, obtain the signature of the department chairperson or designated representative on the Declaration form, and file it in the Liberal Arts Major and Curriculum Office, 2226 Faculty/Administration Building. All courses elected or changed by the student after the declaration of a major should be approved by the department adviser.

The major must include at least twenty credits in one subject, exclusive of introductory courses and inclusive of some advanced work. No more than forty-six credits in the major subject (including introductory courses) may be counted toward a degree.

Within the above limits, each major program has specific requirements which may be modified from time to time; it is, therefore, each student's responsibility to keep informed of the current requirements in his/her major department.

For interdepartmental or field majors, the rule regarding minimum credits required in one subject is waived.



For majors which require intensive study in a particular subject, more than forty-six credits are allowed.

The major completed is part of the degree designation on the diploma.

**Double Major:** Students wishing to declare double majors must obtain approval from the chairpersons or delegated representatives of each department or intended major program. For students to graduate with double majors, the major requirements in both areas of concentration must be fulfilled. Students must complete all courses in both majors with an over-all grade point average of 'C' (2.0). Both majors are designated on the diploma.

Students enrolled in colleges and schools other than the College of Liberal Arts and who wish to graduate with a double major, one component of which is in a Liberal Arts curriculum, must satisfy *all* College of Liberal Arts Group Requirements, as well as the major requirements of the department involved. (See also 'Combined Degrees,' and 'Concurrent Degrees,' below.)

## Minor Fields

The College of Liberal Arts offers the option of a minor. Students may choose to fulfill a minor but are not required to do so. In general, minors require eighteen to twenty-one credits. Courses which bear limitations prohibiting their election for major credit may not be elected for minor credit.

Students enrolled in colleges and schools other than the College of Liberal Arts and who wish to declare a minor in a Liberal Arts curriculum, may do so by satisfying the minor requirements of the curriculum involved. They need *not* satisfy the Group Requirements of the College of Liberal Arts.

Students are strongly encouraged to consult with departmental advisers for course selections. The notation of the minor will appear on the transcript but not on the diploma. Declaration of the minor will be made by the student only when filing for graduation.

## Curricula and Co-Majors

*(Taken in conjunction with another major which leads to a Bachelor's Degree)*

International Studies                      Urban Studies  
Peace and Conflict Studies              Women's Studies

## Combined Degrees and Second Degrees

A Combined Degree (B.A.) is granted by the College of Liberal Arts in cooperation with approved schools of Dentistry, Medicine, and Law, which do not require a bachelor's degree for admission. Candidates for Combined Degrees must complete ninety credits in the College of Liberal Arts, all University requirements, all College requirements, make reasonable progress (as determined by the major department) toward completing a major, and complete satisfactorily the first year's work in an approved professional school. Students who fail to pass any course ordinarily required during the first year of professional work forfeit the right to a Combined Degree. Such cases may be reopened only after the student completes the second year of professional work.

Students who have received a Liberal Arts degree from Wayne State University or any other accredited institution may obtain a second bachelor's degree in another academic area by registering in the appropriate undergraduate College. Graduates of Wayne State University who have earned degrees from the College of Liberal Arts may be ranked as undergraduates by declaring new majors and indicating a desire to earn a second undergraduate degree. Graduates of other Wayne State University schools or colleges must transfer to the College of Liberal Arts. A student from another institution must be admitted to the College by the University Admissions Office.

In order to be granted second degrees, students must complete a minimum of thirty credits beyond the first degree in the College and satisfy all College, and major requirements. *Generally, no second*

*degree will be granted in the academic area in which the first degree was earned.*

## Concurrent Degrees and Double Majors

Students who have satisfied all requirements for two different major programs leading to degrees offered by the College and who have accumulated 150 or more degree credits may apply for both degrees simultaneously. However, students intending to earn concurrent degrees are required to obtain permission from the Office of the Dean prior to the accumulation of 120 degree credits. A more usual procedure for students satisfying the requirements of two different major programs is to declare a double major and graduate with one degree, in which case as few as 120 degree credits may be required. (See also 'Major Requirements,' and 'Combined Degrees,' above.)

## Restrictions on Credit

**Repeated Subjects:** Degree credit will not be granted for course work in which credit has already been granted. (Students who wish to repeat a course in which they did not receive credit originally must file a repeat form at the time of registration.) Similar courses may have different names dependent upon the college and the semester in which a course is offered. Students are advised not to offer repeated work as credit toward a degree.

**Maximum Credits in One Subject:** Students may not count toward a degree more than forty-six credits in any one subject except for special curricula which specify additional courses in the curriculum outline.

**Over-Age Credits:** Students attempting to complete majors after a protracted interruption in their education, or those attending the University on a part-time basis over an extended period of time, may find that some early course work is outdated. In such cases, a department may require refresher work or a demonstration that the student is prepared for advanced courses in the department.

**Restrictions on Transfer Credit: --Two-Year Colleges:** No more than sixty-four semester credits may be applied toward graduation from two-year colleges.

-- *Weekend College (College of Lifelong Learning):* No more than sixteen credits, which may include six credits of Independent Study, may be transferred from Weekend College.

-- *Labor School:* A maximum of ten hours of elective credit may be granted students who have been certified as having completed the Labor School curriculum, have a letter of recommendation from the Director, and have earned sixty credits with a grade point average of at least 2.0.

**Restricted Courses:** Degree credit for restricted courses is given only within the approved limits specified below.

**Professional Courses:** Students may elect a maximum of sixteen credits as cognate work from elected courses offered for degree credit by the several professional schools and colleges within the University. Eight of these credits may be elected with the approval of an academic adviser prior to the declaration of a major, and eight additional credits may be chosen with the approval of the major department. Where academic advisers have approved fewer than eight credits, the major department may approve credit up to the sixteen maximum credits allowed. In curricula which specifically require professional courses in excess of the maximum, additional credits may be elected.

**Specialized Courses:** Unless a curriculum specifies otherwise, the maximum amount of degree credit which may be earned in certain specialized areas is limited as follows:

	<i>maximum degree credit</i>
Areas	
Dance (approved courses) . . . . .	16
Health . . . . .	8
Applied Music (including the limitation stated in the paragraph below)	

Physical Education (activity) . . . . . 4

**A total of not more than four credits** from the following list of courses may be counted toward a degree unless a curriculum specifically requires more extensive elections:

MUA 2800 . . . . .	University Bands
MUA 2810 . . . . .	University Symphony Orchestra
MUA 2820 . . . . .	Jazz Ensemble
MUA 2830 . . . . .	Men's Glee Club
MUA 2840 . . . . .	Choral Union
MUA 2850 . . . . .	Concert Chorale
MUA 2870 . . . . .	Women's Chorale
MUA 2880 . . . . .	Chamber Music and Special Ensembles
SPR 2670 . . . . .	Radio-Television-Film Laboratory
SPC 2240 . . . . .	Forensics Practicum

**Combined Degrees:** Courses taken in the first year of professional school may be applied toward the required fifteen credits in advanced courses.

## Residence

To qualify for a baccalaureate degree in the College of Liberal Arts, a minimum of thirty credits must be earned in the College. The last thirty credits applicable to the degree, not including credit by special examination, must be completed in an undergraduate college or school of Wayne State University. Credit by special examination may not be counted as residence credit, but such credit, if earned during a semester in which the student is registered, will not be considered an interruption of residence.

In special circumstances, senior residence may be interrupted with the approval of the student's major department and the Educational Adjustment Committee; however, when the candidate has fewer than the minimum thirty credits of residence in the College of Liberal Arts, no such exceptions are permitted.

For the Combined Degree, the residence requirement must be completed in the College of Liberal Arts at Wayne State University prior to admission to the professional school.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information Section of this bulletin, beginning on page 15. The following additions and amendments apply to the College of Liberal Arts.*

## Attendance

Regularity in attendance and performance is necessary for success in college work. Attendance requirements will be announced by instructors at the beginning of each course.

## Normal Program Load

The requirements for graduation are based upon an average program of fifteen credits per semester for eight semesters. A normal load should not exceed eighteen credits.

Because two hours of outside preparation are normally expected for each class hour, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy. A few hours of employment a week may be safely added by capable students.

## Extra Credits

Extra credits are credits taken in excess of the normal load of eighteen credits. Students with 3.0 (or above) grade point averages may take more than eighteen credits when their proposed programs carry the written approval of the adviser and the Dean.

## Retention of Records

Term papers and examinations shall either be returned to students or retained by the instructor for a minimum of six months. Thereafter they may be destroyed. Instructors shall retain grade books for at least five years following the end of a term, and instructors who leave the institution shall give grade books for courses conducted during the past five years to their department chairperson. Five years after the end of a course, grade books may be returned to the instructor or destroyed by the department.

## Honors Program

Students in the College are eligible to take honors courses if they have a cumulative grade point average of 3.0 or above. For a description of the Honors Program and a list of classes, see page 276.

## 'AGRADE' -- Accelerated Graduate Enrollment

Some departments of the College permit academically superior majors to petition for admission into the College's 'A GRADE' program. 'A GRADE' procedures enable qualified seniors in the College of Liberal Arts to enroll simultaneously in the undergraduate and graduate programs of the College and apply a maximum of fifteen credits towards both a bachelor's and master's degree in the major field. Students electing 'A GRADE' programs may expect to complete the bachelor's and master's degrees in five years of full-time study.

An 'A GRADE' applicant may petition the Graduate Committee of the major department for acceptance into the program no earlier than the semester in which ninety credits are completed. Applicants must have an overall grade point average at the 'Cum Laude' level (approximately 3.4) and not less than a 3.6 grade point average in the major courses already completed. If the student's petition is accepted, the student's faculty adviser shall develop a graduate Plan

of Work, specifying the 'A GRADE' courses to be included in subsequent semesters.

For more details about the 'A GRADE' program, contact the chairperson of the major department, or the Graduate Office of the College of Liberal Arts (577-3117).

## Phi Beta Kappa

Phi Beta Kappa, the nation's oldest honor society, was founded at the College of William and Mary in Virginia on December 5, 1776. The one hundred and fifty-sixth chapter of the society, Gamma of Michigan, was installed at Wayne State University on January 16, 1953 under a charter granted to the College of Liberal Arts by the United Chapters of Phi Beta Kappa. Membership in the chapter is restricted to its charter members and to those members of the junior and senior classes of the College of Liberal Arts who have been elected to membership by the chapter and who have formally accepted election and participated in initiation ceremonies of this or some other cooperating chapter. In addition, all members of the University staff who have been elected to membership by other chapters of Phi Beta Kappa automatically become affiliated members of the local chapter for the duration of their stay at the University.

Election to membership is restricted to students with at least two academic years of residence in the College of Liberal Arts, and is based not only on high scholarship and integrity, but also on breadth and depth of program. Students who wish further information are urged to consult with the secretary of the chapter concerning requirements for membership.

## Graduation with Academic Distinction

Candidates eligible for the bachelor's degree may receive a special citation placed on their diplomas under the following circumstances: The designations of *Summa Cum Laude*, *Magna Cum Laude*, and *Cum Laude* will be conferred upon graduating students whose cumulative grade point averages at Wayne State University fall within approximately the upper five per cent, the next five per cent, and the next ten per cent of the senior class, respectively. The grade points used to identify the lower limits for each designation will be based upon the grade points attained by seniors at these percentile levels during the preceding academic year. Only students who have earned sixty or more credits at Wayne State University are eligible to graduate with one of the above distinction citations.

## Dean's List

The Dean's List of academically superior students is compiled each fall and winter term based on the following criteria: a 3.6 grade point average for students registered for full-time programs of twelve credits or more which contribute to the grade point base; a 4.0 grade point average for students registered for between six and eleven credits. Students who receive marks of 'I' or 'W' or 'X' and grades of 'N' or 'U' are not eligible. (For explanation of these marks and grades, see page 44.)

## Academic Probation

**Low Grade Point Average:** If a student's work averages below 2.0, the student will be placed on academic probation. The student will be required to obtain permission from the University Advising Center before registering. Such permission will be granted only after an interview during which the student and adviser identify previous causes of failure and formulate a plan for future academic success.

**Registration:** A student on academic probation must have a 'hold' released each term before he or she registers. To obtain this release, the student *must* see an academic adviser in the University Advising Center. *This hold will not be released after the last day of the final registration for the term for which the student plans to register.* The hold cannot be released at the advising station in the Student Center during final registration.

**Restriction:** While on academic probation, a student may not represent the College in student activities.

**Removal of Academic Probation:** Academic probation will be removed at the end of any term in which the student achieves an over-all average of 'C' (2.0) or better for all degree work taken at the University.

## Exclusion

**Low Grade Point Average:** Students on academic probation shall be given two subsequent terms for enrollment on probationary status. At the conclusion of the two terms, a student who has not achieved a cumulative g.p.a. of at least 2.0 shall be excluded from the University. A student excluded from the University may not apply for reinstatement for one calendar year. Such an exclusion will be reviewed by the Probation Committee and the Dean upon the request of the student.

**Reinstatement:** After one year of exclusion, the student may apply for reinstatement in the College. The decision to reinstate will be based upon evidence presented by the student that circumstances have changed during the year and that the probability of success has increased. The reinstatement application must be returned to the University Advising Center at least two weeks prior to the first day of any registration period.

**Cheating and Plagiarism:** The principle of honesty is recognized as fundamental to a scholarly community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. The instructor has the responsibility of notifying the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Acts of dishonesty may lead to suspension or exclusion. Information on procedures is available in the Office of the Dean.

## Academic Advising

**Freshmen and sophomores** are required to consult departmental advisers each time they register. A staff of academic advisers is available in the University Advising Center, 2 East, Helen Newberry Joy Student Services Center to answer general academic questions. Students should confer with advisers on all questions concerning degree requirements, academic regulations, course elections, and programs of study. It is of primary importance that students talk with an adviser when they are having difficulties in their academic work. Students may choose either to see a specific adviser or any available adviser. First-year and sophomore students in some of the special curricula are required to consult departmental advisers or advisers in other colleges.

**Juniors and seniors** are assigned to advisers in their major departments, and their course elections in the last two years are arranged in consultation with these departmental advisers.

## Scholarships and Financial Aid

See Office of Scholarships and Financial Aid (page 20), and individual departmental sections below. The following scholarships are open to all liberal arts students:

**Liberal Arts Scholarship and Award:** Awards of varying amounts available to currently-enrolled liberal arts majors with a minimum 2.0 g.p.a. Contact the Dean's Office.

**Perry Feigenson Scholarship Fund:** Awarded to any full-time undergraduate major in liberal arts who demonstrates financial need and maintains a minimum 3.0 g.p.a. Application deadline is April 30; contact the Office of Scholarships and Financial Aid.

# UNDERGRADUATE CURRICULA

Students are encouraged to request a curriculum guide for any of the following programs and to consult with an academic adviser in the University Advising Center. For programs that conclude in the College of Liberal Arts, students must declare a major not later than the beginning of their junior year.

## GENERAL CURRICULUM

The General Curriculum leads to the degree of Bachelor of Arts or one of several special bachelor's degrees. Although it is designed for students who plan to elect a major in a department or area which does not require a special curriculum, it is an ideal choice for entering students who have not yet decided on a plan of study.

In this curriculum, a wide choice of courses is permitted. The elections suggested below for the first two years are planned to fulfill the University General Education Requirements and the College Group Requirements, but students may vary these elections arranging a program for each semester of three to fifteen credits. The courses elected during the last two years are arranged in consultation with a major adviser.

### Suggested Elections

<b>First Year</b>	<i>credits</i>
American Society and Institutions . . . . .	0-3
Foreign Language . . . . .	4-8
Humanities . . . . .	3-7
Natural Science . . . . .	3-7
Social Science . . . . .	3-7
(GE) Information Power (UGE 1000) . . . . .	1
Competencies/Electives . . . . .	0-6
<b>Second Year</b>	
American Society and Institutions . . . . .	0-3
Foreign Language . . . . .	4-8
Historical Studies . . . . .	0-4
Humanities . . . . .	3-7
Natural Science . . . . .	3-7
Social Science . . . . .	3-7
Competencies/Electives . . . . .	0-8

## PRE-PROFESSIONAL CURRICULA

Admission to pre-professional curricula implies only that students have selected professional goals. It does not necessarily mean that students will be accepted by the corresponding professional school or college.

### Pre-Business Administration

-- See page 65.

### Pre-Dentistry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the basic sciences listed below lead to the bachelor's degree and qualify students for consideration by most schools of dentistry.

	<i>credits</i>
Biology or Zoology with laboratory . . . . .	12-16
Chemistry: Inorganic, including qualitative analysis, & lab . . . . .	9-11
Chemistry: Organic with laboratory . . . . .	8-10
English . . . . .	8-12
Physics with laboratory . . . . .	8-10

Recommended electives include psychology, sociology, biochemistry, embryology, and statistics. Because different schools of dentistry may require credits in some or all of these subjects, students are advised to become familiar with Admission Requirements of U.S. and Canadian Dental Schools, a brochure which may be ordered from the American Association of Dental Schools, 1625 Massachusetts Avenue N.W., Washington, D.C., 20036.

### Pre-Education

-- See pages 101 and 229.

### Pre-Engineering

-- See pages 127 - 132.

### Pre-Law

-- See page 218.

Since the requirements for admission to law schools vary from school to school, students should become familiar with the requirements of the school they plan to enter.

**For admission to Wayne State University's Law School**, applicants should have a bachelor's degree from an accredited college with a strong grade point average. Although no specific courses are required, the faculty of the Law School recommends a strong background in English, with emphasis on grammar and composition, and in the social sciences. Within these fields, the choice of courses should be made in consultation with an academic adviser in the University Advising Center. The following is a suggested list of courses: Classics 3100; Economics 2010, 2020; four courses in English; History 1050, 2040, 2050, 5160, 5170; Philosophy 1010, 1850; Political Science 1010, 3040, 5110; Psychology 1010; Sociology 2000, 3820. An introductory course in accounting is also recommended. For students interested in the practice of law in commercial, corporate, and tax fields, the business administration curriculum may provide a good background.

**Law School Admission Test:** Each applicant for admission is required to take the Law School Admission Test given by the Educational Testing Service, Princeton, New Jersey. This test is given five times a year in Detroit and at one hundred or more other examination centers located throughout the country. Application blanks and additional information may be obtained from the Testing and Evaluation Office, 698 Student Center.

### Pre-Medicine and Pre-Osteopathic Medicine

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the basic sciences listed below lead to the bachelor's degree and qualify a student for consideration by most schools of medicine and osteopathic medicine.

	<i>credits</i>
Biology or Zoology with laboratory . . . . .	12-16
Inorganic Chemistry (including qualitative analysis) & lab . . . . .	9-11
Organic Chemistry with laboratory . . . . .	8-10
Physics with laboratory . . . . .	8-10
English . . . . .	8-12

Recommended electives include psychology, sociology, biochemistry, embryology, and statistics. Because different schools of medicine may require credits in some or all of these subjects, students are advised to become familiar with *Medical School Admission Requirements*, a brochure which may be ordered from the Association of American Medical Colleges, 2450 N Street, N.W., Washington, D.C., 20037-1126. The admission requirements of specific schools of osteopathic medicine are available from the American Association of Colleges of Osteopathic Medicine, 6110 Executive Blvd., Suite 405, Rockville, Maryland 20852-3991.

Wayne State University's School of Medicine encourages students to fulfill degree requirements by selecting courses which will contribute

significantly to a broad cultural background and by choosing a major in which one is interested. The Committee on Admissions is influenced by the scholarly approach to education, not by the area in which one concentrates.

### Pre-Clinical Laboratory Science

-- See page 375.

### -- Cytotechnology Concentration

-- See page 377 .

### Pre-Mortuary Science

-- See page 384 .

### Pre-Nursing

-- See page 345.

### Pre-Occupational Therapy

-- See page 389 .

### Pre-Optometry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the courses listed below lead to the bachelor's degree and qualify a student for consideration by most schools of optometry. Although some schools will accept students who have completed only two years of undergraduate work, preference is given to those who have earned the bachelor's degree.

*credits*

Biology, including microbiology, with laboratory . . . . .	12-16
Inorganic chemistry with laboratory . . . . .	8-10
Physics with laboratory . . . . .	8-10
Mathematics:	
Algebra and Trigonometry . . . . .	3-4
Calculus . . . . .	6-8
English . . . . .	6-8
Psychology . . . . .	3
Statistics . . . . .	3

Recommended electives include biochemistry and social sciences. Information about specific schools is available from the Association of Schools and Colleges of Optometry, 6220 Executive Blvd., Suite 690, Rockville, Maryland 20852.

### Pre-Pathologist Assistant

-- See page 385.

### Pre-Pharmacy

-- See page 359.

### Pre-Physical Therapy

-- See page 393.

### Pre-Radiation Therapy Technology

-- See page 337.

### Pre-Social Work

-- See page 458.

### Pre-Veterinary Medicine

Satisfactory completion of University General Education requirements, College Group Requirements, a major field, and the courses listed below lead to the bachelor's degree and qualify a student for

consideration by the College of Veterinary Medicine at Michigan State University.

*credits*

BIO 1500 --Basic Life Diversity . . . . .	4
BIO 1510 -- (LS) Basic Life Mechanisms. . . . .	4
CHM 1220 -- (PS)Chemical Structure, Bonding & Reactivity . . . . .	4
CHM 1230 --Chemical Principles in the Laboratory. . . . .	1
CHM 1240 -- Principles of General/Organic Chemistry . . . . .	4
CHM 1250 -- General/Organic Chemistry Lab. . . . .	1
CHM 2220 -- Organic Chemistry . . . . .	3
CHM 2230 -- Preparative Organic Chemistry Lab . . . . .	2
CHM 2280 -- Chemical/Analytical Principles . . . . .	3
CHM 2290 -- Chemical/Analytical Principles Laboratory. . . . .	2
CHM 5600 or CHM 6620	
-- Survey of Biochemistry . . . . .	3
-- Metabolism. . . . .	3
MAT 1800 -- Elementary Functions . . . . .	4
PHY 2130/2131 or PHY 2170/2171	
-- (PS) General Physics/General Physics Lab. . . . .	4
-- (PS) General Physics/General Physics Lab. . . . .	5
PHY 2140/2141 or PHY 2180/2181	
-- General Physics/General Physics Lab . . . . .	4
-- General Physics/General Physics Lab . . . . .	5
English (ENG) . . . . .	6-8

Other requirements in social sciences and humanities may be satisfied by meeting the Liberal Arts Group Requirements. Recommended electives include: comparative vertebrate zoology, microbiology, statistics, and psychology.

## TEACHER PREPARATION CURRICULA

Since most students preparing to teach in one of the fields listed below will register in the College of Liberal Arts for their freshman and sophomore years and transfer to the College of Education at the beginning of their junior year, during the first two years they will see the academic advisers in the University Advising Center for general counseling. Application for entrance to the College of Education should be made after completing fifty-three credits with a minimum 2.5 cumulative grade point average and after having achieved a passing score on the University English Proficiency Examination. Students should also have satisfied the University's mathematics competency requirement and passed the state Basic Skills Test.

### Combined Curriculum for Secondary Teaching

*This curriculum leads to a bachelor's degree and a Michigan Secondary Provisional Certificate.*

The Combined Curriculum for Secondary Teaching is offered in selected majors in cooperation with the College of Education and prepares students for teaching major and minor subjects in the secondary school. In this curriculum, students take the first two years of work in the College of Liberal Arts. Courses in the third and fourth years are taken concurrently in Education and Liberal Arts. In electing courses during the first two years, students should acquire a broad general education while simultaneously electing courses that may be required by their future major department.

Students interested in this program should consult an academic adviser at the University Advising Center who will supply a curriculum outline and provide guidance. Students are encouraged to consult an undergraduate adviser in the department of their respective majors as soon as possible. They may also see the Division of Academic Services, Room 469, College of Education, at any time during the first two years for consultation on professional programs they may be planning to pursue.

**Degree in the College of Liberal Arts:** Students remain registered in the College of Liberal Arts and elect departmental majors by the beginning of their junior year. Students then apply to the College of Education for official admission to the combined curriculum for sec-

ondary teaching and must be approved by the College of Education as candidates for teacher certification. During their junior and senior years, student program requests will be signed by both a College of Liberal Arts major adviser and by the appropriate adviser in the College of Education.

**Degree in the College of Education:** Students apply for admission to the College of Education after completing fifty-three credits in course work, transfer to that College at the beginning of the junior year, and follow the degree requirements of the College of Education.

## K-12 Majors

Students wishing to major in *Art Education* should see an adviser in Room 163, Community Arts Building.

Students wishing to major in *Physical Education* should see an adviser in Room 264, Matthaehi Building.

Students wishing to major in *Music Education* should consult an adviser in Room 105, Schaver Music Building.

## Secondary Teaching

-- See page 104.

Students planning to teach English, foreign language, mathematics, science, social studies or speech on the secondary level should complete in their first two years the following pre-professional course requirements:

*University General Education Requirements:* see pages 29 - 39.

*College of Education general requirements:* PSY 1010, HEA 2310 (or equivalent).

*English Speech Group:* four courses, including ENG 1020, a 2000-level English course, SPB 1010 and an English or speech elective.

*Social Studies Group:* four courses from anthropology, economics, geography, history, political science, or sociology, including the American Society and Institutions requirement.

*Science/Psychology Group:* three courses, one from each of the following areas: life science; physical science; and Psychology 1010.

*Mathematics Competency:* See General Education Requirements, page 29.

Pre-secondary students should also be electing courses in their proposed teaching major and minor. Major/minor worksheets may be obtained from the University Advising Center, or in Room 489, Education Building.

## Career and Technical Education

-- See page 110.

## Elementary Teaching

-- See page 101.

Pre-elementary majors should include the following requirements in their first two years' work:

*University General Education Requirements:* see pages 29 - 39.

College of Education general requirements: PSY 1010, HEA 2310 (or equivalent), and MAT 1110 and 1120.

*English/Speech Group:* ENG 1020, intermediate composition and SPB 1010.

*Social Studies Group:* four courses: P S 1010 or 1030, PSY 1010, GPH 1100 and HIS 2040 or 2050.

*Science Group:* three courses, including at least one course from the life sciences and one course from the physical sciences. One of the three courses must include a laboratory section.

Pre-elementary students should also elect courses in their proposed teaching majors and minors. Major/minor worksheets may be

obtained from the University Advising Center, or in Room 469, Education Building.

## Special Education

-- See page 108.

The curriculum in special education prepares teachers for work with the mentally impaired in elementary schools, residential institutions and diagnostic-clinical centers.

In the first two years of work, students should take courses to establish a twenty-four credit minor and complete the following general education requirements:

*University General Education Requirements:* see pages 29 - 39.

*College of Education general requirements:* PSY 1010, HEA 2330, MAT 1110, or MAE 5050.

*Special Education requirements:* BIO 1510 and 2870 and SED 6000 with grades of 'C' or better are required of all students prior to admission to the College of Education.

SED 6000, with the topic Critical Epochs and Child Development (Prerequisite: BIO 2870), is to be taken in the spring semester prior to admission to the College of Education.

*English/Speech Group:* ENG 1020, a 2000-level English course and SPB 1010.

A *Planned (non-teaching) minor* must be completed prior to admission to Education. Required courses include: ANT 2100, BIO 2870, P S 1010, PSY 2300, SOC 2000, ELE 3200, and SED 6000.

Students can obtain major/minor worksheets for Special Education in the University Advising Center, 2 East, Helen Newberry Joy Student Services Building.

# STUDY ABROAD

## AFRICAN TRAVEL-STUDY PROGRAMS

### Ghana and South Africa

*Program Office:* Department of Africana Studies; 577-2321  
*Coordinator:* Eboe Hutchful

The Department of Africana Studies sponsors a summer term (four weeks on site) travel-study experience in the African countries of Ghana and South Africa. This program involves formal registration for graduate or undergraduate credit in Africana Directed Study (AFS 6990.) This course is taught by a W.S.U. faculty member as well as faculty members of the The Institute of African Studies at the University of Ghana, at Legon, Ghana, and the University of the Western Cape, at Cape Town, South Africa.

The Institute of African Studies was established in 1961 as an interdisciplinary center for scholarship, teaching and research in African history, culture and religion. It offers both undergraduate and graduate instruction by its own faculty and collaborates with the social science departments of the University of Ghana. Located eight miles from Accra and in the shadow of the Aburi Hills, the University of Ghana is a large tranquil campus of original and striking architectural design and is justly considered one of the most beautiful university campuses in Africa. It is a residential university, organized around a hall system, and combines an active academic and social life.

The University of the Western Cape is one of the historically black universities in South Africa, located in the suburb of Constantia, just outside of Cape Town. The University has attracted prominent scholars from all over the continent, and is particularly strong in Africanist social sciences. Like Ghana, South Africa has a glorious history of indigenous culture, state formation, and resistance to European penetration; however, the country came to world attention primarily as a result of the bitter experience of apartheid. Many aspects of South Africa's segregationist history and anti-apartheid struggle evoke the civil rights struggle in the United States. Since 1994, South Africa has been involved in a unique and fragile experiment of racial equality and reconciliation, democracy and economic development.

The objectives of this travel-study program are to introduce students to broad questions of historical continuity and discontinuity, adaptation and readaptation, and syntheses that have characterized African cultures. Particular attention is given to normative values and religious views, economic and political systems, educational and health care systems, and family and community solidarities in the past and present. The program seeks to illuminate the fundamental and broad diversity in African lives as they are structured through traditional cultures, colonial impacts, nationality, gender, and socio-economic differentiation. It is designed to give students a sense of the successes and setbacks and ongoing challenges of African nationhood, and of Africa's relations with the United States and the rest of the world. On a personal basis the goals of the program are:

- 1) To provide intimate first-hand experience of African life styles and values systems.
- 2) To encourage among students an appreciation for cultural diversity through exposure to major foreign cultures.
- 3) To expose African-American students to the African roots of African-American identity, culture and tradition.
- 4) To equip students with conceptual and intellectual tools to analyze the complexity of cultural and political institutions in Africa.
- 5) To engage students in critical thinking and field observation in the social sciences.

### Benin

*Program Office:* Department of Anthropology; 577-2953  
*Coordinator:* Guerin C. Montilus

The Department of Anthropology sponsors a biennial interdisciplinary summer study program in collaboration with the National University

of Benin in Cotonou, Republic of Benin, West Africa. Founded in 1984, this program provides first-hand experience of African life styles and value systems through lectures by African instructors and interviews with Benin residents. Depending on student interest, attention is paid to African realities such as geography, history, religion, economy, politics, migration, family and kinship, education and health care systems. This broad range of topics is reflected in the kinds of formal registration available for the program, that is, students may use this travel-study experience as the basis of instruction for a number of different W.S.U. courses offered by other departments and colleges within the University. Both graduate and undergraduate credits are optional and non-credit participants are welcome.

## CARIBBEAN TRAVEL-STUDY PROGRAM

Cuba and Haiti

*Program Office:* Department of Anthropology; 577-2953  
*Coordinator:* Guerin C. Montilus

The Caribbean study trip is an interdisciplinary study program sponsored by the Anthropology Department and hosted by the School of Preventive Medicine of the University of Santiago of Cuba and/or the Historical Ethnological Museum of the State University of Haiti, Port-au-Prince, Haiti. Both of these programs offer travel-study experiences which focus on Caribbean realities such as health care, educational systems, geography, history, religion, economy, politics, art, population, migration, family and kinship. The study trip provides first-hand experience of Caribbean life styles and value systems through lectures by Caribbean scholars and field trips guided by Caribbean instructors as well as personal interviews with Caribbean residents. Both graduate and undergraduate credits are optional and non-credit participants are welcome.

## JUNIOR YEAR IN GERMANY

### Munich Program

*Office:* 471/473 Manoogian Hall; 577-4605; Fax: 577-3266  
E-mail: [jym@wayne.edu](mailto:jym@wayne.edu)  
<http://www.langlab.wayne.edu/JuniorYear/JrYrHome.html>

*Program Director:* Mark Ferguson

Not just for German majors, the Junior Year in Germany program is a unique study abroad experience open to students of any major at Wayne State University. Students will earn W.S.U. credit for one academic year towards their degree while spending the year in Germany enrolled at the University of Munich. This program has a national reputation for excellence, and enrolls students from a wide variety of colleges and universities across the country. By spending an entire year abroad, fully integrated into the academic program of a German university and experiencing first-hand everyday life of another society and culture, Junior Year participants acquire valuable linguistic skills and intercultural experiences, giving them distinct advantages in the pursuit of many career goals.

*Life in Munich:* Munich is a large, fascinating and culturally enriching city. It is renowned for a centuries-long cultivation of the arts, as well as its significant place in Germany's prominent global business community. The city boasts two prestigious opera houses and four symphony orchestras, as well as an array of theaters from the Kammerspielhaus which features classical works, to the Munchener Folkstheater which stages contemporary productions -- all of which are available at reduced student rates. Additionally, there are numerous museums and art galleries featuring some of the finest collections in the world and making this location one of special interest for study in the arts.

**ADMISSION REQUIREMENTS:** The basic requirements for admission to the Program are: 1) Junior (completion of 60 credits), senior, or graduate standing at Wayne State (students from other universities are eligible with analogous standing at their institution); 2) Two years of college German with a 'B' average; 3) An overall 3.0 g.p.a., or better.

**ORIENTATION:** The program begins with an orientation period that combines intensive language instruction with an introduction to the German university system to prepare students for their studies at the university. Orientation also includes a variety of activities designed to introduce students to various facets of everyday life in their new surroundings.

**LIVING ARRANGEMENTS IN GERMANY:** Students are housed in the German university dormitories alongside their German counterparts which encourages maximum immersion in the language and culture. All rooms are single with cooking and common-room facilities. The program offices are centrally located near the University in the city center, where a full-time Resident Director and support staff are available to assist and guide students throughout the year.

**COURSES and TUTORIALS:** Students who study in Munich may take the following types of courses (all coursework is in German):

- 1) Courses offered by the Program exclusively for Junior Year students. These courses are fully described in the Program brochure available from the W.S.U. Junior Year Program Office (see above).
- 2) Courses offered by the German university for which the Program provides a tutor who meets with students once a week for out-of-class tutorials.
- 3) Courses offered by the German university without Program sponsored tutorials.

Students may take courses in almost any discipline at the German universities if they meet course prerequisites and have the necessary language skills.

**INTERSHIPS and WORK OPPORTUNITIES:** The Junior Year in Munich can provide opportunities for professional experience and business related internships. In the past, JYM students have held internships with local news journals, publishing houses and several major international firms. The Program also offers the JYM/ISA Consult Pratikum, an internship arrangement with the Dresden branch of ISA Consult, a consulting firm providing research and consultancy services for governmental authorities, public industries, and a wide range of businesses in the private sector throughout Germany. For students interested in Foreign Service, opportunities exist to work with several organizations such as the U.S. Consulate in Munich. Students may also be able to find part-time work in Germany.

#### **SCHOLARSHIPS and LOANS:**

*German-American Cultural Center Scholarship:* Award of \$500-\$1,000 open to W.S.U. students accepted to the Junior Year Program.

*Junior Year in Germany Scholarship:* Awards of \$500-\$2,000 open to students accepted to the Junior Year in Germany Program with outstanding achievement and demonstrated financial need.

*Max Kade Foundation Scholarship:* Awards of \$500-\$2,000 open to students accepted in the Junior Year in Germany Program with outstanding academic achievement and demonstrated financial need.

Wayne State University students holding Presidential Scholarships or Michigan Competitive Scholarships may use these for Program tuition as well as any Federal grants and loans.

## **MODERN GREEK IN THESSALONIKE**

*Program Office:* Department of Classics, Greek, and Latin;  
577-3032

*Coordinator:* Kathleen McNamee

Since 1972 the Ministry of Culture of the Republic of Greece has made available annual scholarships to support study abroad experiences for students of Modern Greek language and literature at Wayne State University. The scholarships are intended to enable a student to improve his/her knowledge of Greece, its people, and their way of life through study at the international summer school of the Institute for Balkan Studies in the month of August. The course includes three hours of intensive study of modern Greek (at the intermediate or advanced level) each day and two hours of study each

day of the history, literature and philosophy, art and archaeology of Greece from ancient to modern times. Successful completion of these courses earns a special certificate for the student who is expected to submit a written report reflecting his/her experiences and accomplishments at the Balkan Institute. The report will be due one month after return from Greece.

#### **ELIGIBILITY:**

- 1) Applicants must have a basic speaking, reading, and writing knowledge of modern Greek.
- 2) Applicants must be currently enrolled at Wayne State University at the time of application and have successfully completed a minimum of three semesters of full-time credit. Applicants must have taken at least one course in modern Greek at W.S.U., but need not be currently enrolled in a modern Greek course.
- 3) Citizens of Greece are not eligible, nor are previous recipients of the scholarship.

#### **APPLICATION:**

1) Applicants must complete an application form obtainable from the secretary of the Department of Classics, Greek and Latin, 431 Manoogian Hall. For consideration for the immediately subsequent summer, applications are due in the departmental office by 5:00 p.m. of the second Monday of March. Late applications will not be considered.

2) Applicants must submit with their forms a 250 - 500 word essay (in English) describing the particular advantages this experience would bring to the student.

#### **CRITERIA of SELECTION:**

- 1) Excellence of scholarship in general at the university level and especially in modern Greek.
- 2) Evaluation of the essay.
- 3) Preference will be given to applicants who have not visited Greece as an adult and to those who are not of Greek descent.



# AFRICANA STUDIES

Office: Fourth Floor, 51 West Warren; 577-2321

Web: <http://www.cla.wayne.edu/africanastudies>

Chairperson: Melba J. Boyd

## Professor

Eboe Hutchful, Perry Mars

## Associate Professor

Melba J. Boyd

## Assistant Professors

Beth Bates, Tracy Fisher

## Lecturer

Todd Duncan

## Adjunct Professors

Michael Goldfield, Kathryn Lindberg, Guerin Montilius

## Degree Program

### *BACHELOR OF ARTS in Africana Studies*

Africana Studies is the systematic study of the historical, cultural, intellectual and social development of people of African descent, the societies of which they are a part, and their contribution to world civilization. Its principal geographic domains are the United States, the Caribbean, Latin America, the African continent, and increasingly western Europe where large communities reside. The field features a diversity of approaches, intellectual and practical interests, and draws upon the humanistic, social and behavioral sciences into its interdisciplinary framework.

The major in Africana Studies prepares students for a wide range of professional and career opportunities. Majors can continue to graduate (including doctoral level) studies in the humanities, social and behavioral sciences, or pursue professional programs in law, medicine, business, and journalism. Graduates who enter the job market are prepared for careers in human services and public health, education, public relations, community development, urban planning; and more generally for jobs in the public sector, in central cities and urban institutions, or jobs that involve cultural or intergroup relations as well as international affairs. In the context of metropolitan Detroit, Africana Studies graduates will be better prepared to deal with the complexity and diversity of the city's political and demographic realities as they assume important roles of leadership.

## Bachelor of Arts with a Major in Africana Studies

**Admission Requirements:** See the general requirements for undergraduate admission to the University, page 15.

**DEGREE REQUIREMENTS:** Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29) and the College of Liberal Arts Group Requirements (see page 223), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223 -227, respectively.

**Major Requirements:** Majors must complete at least thirty-six credits in a prescribed course of study, including:

1. Two introductory courses: AFS 1010 and AFS 2210 (seven credits).

2. Completion of study in an approved area of concentration (twenty-four credits).

3. Field Work (AFS 5991) and/or Directed Study (AFS 6990) (five to eight credits).

## Areas of Concentration

**Cultural Studies and the Arts (twenty-four credits):** This concentration is designed for students who are interested in exploring the relations between cultural expression/production and the social experience of Black life.

1. Three courses from: AFS 2010, AFS 3050, AFS 3160, AFS (FLM) 3200, AFS (GIS) 5130, AFS 5350.

2. Three courses from: AFS (SOC) 2600, AFS 3180, AFS 3250, AFS 3360, AFS 3420 (P S 3820), AFS (SPR) 4240, AFS (W S) 5110, AFS (W S) 5300, AFS 5310, AFS (FLM) 5800, AFS 5860.

3. Two cognates from: ENG (AFS) 2390, AFS 5480; MUH 3360, 6310; SPC (AFS) 5040; A H 3800, ANT (AFS) 5260.

**Development and Public Policy (twenty-four credits):** This concentration emphasizes historical, political and policy dimensions of the economic and social development of Black communities.

1. Three courses from: HIS (AFS) 3140 or HIS (AFS) 3150; AFS 3160, AFS 3180, AFS 3250, AFS 3360, AFS 3420 (P S 3820), AFS 5480, AFS 5600, AFS 6600 (ULM 7260).

2. Three courses from: AFS 2500, AFS 2600, AFS 3860, AFS (W S) 5110, AFS (GIS) 5130, AFS (HIS) 5320, AFS (SOC) 5580, AFS (PSY) 5700, AFS 5860.

3. Two cognates from: ANT 3110, 3520, 6230; GEG 6150, 6350; GIS (AFS) 3610; HIS 3996, 5730; P S (AFS) 4780, P S (AFS) 5030, P S (AFS) 5740, P S 6050 (AFS 6100); SOC (AFS) 5570, SOC 7320; S W 6510.

## Minor in Africana Studies

Students majoring in other fields can minor in Africana Studies. The minor consists of six courses in this department. These must include AFS 1010 and two of the following: AFS 2010, 2210, 3180, 3420. Students wishing to minor in Africana Studies are encouraged to visit the departmental office for information and counseling. A minor may be declared when filing for graduation.

## Internships

Internships are available in which students gain experience through placements in settings similar to those in which they will later be seeking professional roles. These include: community service agencies, community-based self-development organizations, public and private institutions, Black alternative organizations and other appropriate settings. Some students may also do practicums directly with the Department of Africana Studies, assisting in research, community relations, and in the organization, coordination and conduct of community extension and education service programs. The objective of this mode of study is to offer students the opportunity to synthesize diverse ideas, theories and methodologies with important and practical real world imperatives.

## Dudley Randall Scholarship Endowment

### Fund and

### Coleman A. Young Scholarship Endowment Fund

Only Africana Studies majors are eligible for scholarship awards under these endowed funds. Majors eligible for awards must maintain a minimum g.p.a. of 3.0 in the Department, exhibit qualities of leadership and/or significant service to community development. Recipients are selected by an awards committee, and the amount of the award depends on the funds available.

## Summer Study Abroad

Supervised by the College of Lifelong Learning, this travel program periodically visits Africa and/or the Caribbean. Through an integrated field/classroom/seminar experience, students are challenged to grow intellectually, as well as to increase their self-awareness and sensitivity to other cultures. For more information, consult the department adviser.

## African Language

Students may satisfy the Foreign Culture (FC) General Education Requirement by successfully completing the three-course sequence in Swahili offered by this department. (See 'Courses of Instruction' section, below.)

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

## Africana Studies (AFS)

### 1010 Introduction to Africana Studies. Cr. 3

An interdisciplinary approach to exploring several broad issues, topics, theories, concepts and perspectives which describe and explain the experiences of persons of African descent in America, the Continent, and the diaspora. (T)

### 2010 African American Culture: Historical and Aesthetic Roots. Cr. 4

Core requirement for Africana Studies majors. Examination of the historical, traditional and aesthetic bases of a variety of cultural forms -- language, literature, music -- of the Black experience. (T)

### 2210 (SS) Black Social and Political Thought. Cr. 4

Core requirement for Africana Studies majors. Survey of the Black intellectual and political tradition from the United States, the Caribbean and Africa. (T)

### 2390 (ENG 2390) (IC) Introduction to African-American Literature: Literature and Writing. Cr. 4

Prereq: ENG 1020 or equiv. Introduction to major themes and some major writers of African-American literature, emphasizing modern works. Reading and writing about representative poetry, fiction, essays, and plays. (T)

### 2500 (GPH 2500) Geography of Africa. Cr. 4

Geography of modern Africa: regions, countries, peoples. Physical environment, resource potential, population groups, migrations, economics, development, political systems and conflicts. (I)

### 2600 Race and Racism in America. (SOC 2600) Cr. 3

Examination of the nature and practice of racism in American society from its historical foundations to its contemporary institutional forms. (B)

### 3050 Cultural Perspectives in African American Literature. Cr. 3

African American literary aesthetic as grounded in its musical origins and as reflected in various philosophical influences. (F,W)

### 3140 (HIS 3140) The Black Experience in America I: 1619-1865. Cr. 3-4

African origins of the American black; transition from freedom to slavery; status of the black under slavery. (F)

### 3150 (HIS 3150) The Black Experience in America II: 1865 to the Present. Cr. 3-4

The black in national life since emancipation. (W)

### 3160 Black Urban History. (HIS 3160) Cr. 4

Historical experience of African Americans in urban areas; impact of their communities on urban development from 1860 to contemporary times. (B)

### 3170 (HIS 3170) Ethnicity and Race in American Life. (AFS 6170) (HIS 6170) 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)

### 3180 Black Social Movements. Cr. 4

Prereq: AFS 2210 recommended. Survey of mass or popular Black movements with emphasis on their political and cultural impact, historical continuity and organization. (Y)

### 3200 The African-American Film Experience (FLM 3200) Cr. 4

Historical and contemporary portrayals of African American people in narrative and documentary film. Emphasis on filmic approaches to race relations, cinematic elaboration of racial stereotypes, and legitimization functions of film. (Y)

### 3250 (FC) Politics and Culture in Anglophone Caribbean. Cr. 3

Survey of political, economic and cultural life of the Caribbean. Relationship of the Caribbean to U.S. and world political and cultural developments. Interdisciplinary approach: historical, comparative, thematic issues. (Y)

### 3360 (Black Workers in American History. (HIS 3360) Cr. 4

Survey course. Slave and free workers during antebellum period; skill trades, sharecropping, menial labor, coal mining during Reconstruction; labor struggles and job discrimination in the twentieth century. (F,W)

### 3420 Pan Africanism: Politics of the Black Diaspora. (P S 3820) Cr. 4

Interplay of Pan Africanism as a cultural and socio-political movement in world politics from its origins as a concept to organizing practice worldwide. (Y)

### 3610 (GIS 3610) (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans. Cr. 4

Prereq: upper division standing. Humanistic aspects, history, socio-cultural institutions of African cultures; theory and methods, comparative perspectives. (Y)

### 3750 (A H 3750) African American Art. Cr. 3

Prereq: one 1000-level Art History course. Introduction to African American art from the colonial period to the present, with emphasis on the U.S. and some attention to South and Central America and the Caribbean. (Y)

### 3860 Race, Class and the Criminal Justice System. (SOC 3860) Cr. 3

Prereq: upper division standing or criminal justice majors or minors. Survey of race and class in the criminal justice system: police, courts, jails and prisons. Socio-economic environment of offenders, and effects of criminal justice process on their ability to function positively within that environment. (T)

### 4240 African Americans in Broadcasting. (SPR 4240) Cr. 4

Historical overview of African Americans in radio and television with emphasis on three areas of study: news and documentary; entertainment and advertising; and ownership, employment and access. (Y)

### 4750 (N E 4750) Colonization and Decolonization in North Africa: The Example of Algeria. Cr. 3

European (French) colonization in North Africa with emphasis on Algeria. Theoretical principles of nineteenth century colonization; emergence of national liberation movements. Socio-economic impact of colonization on Algeria through the 1990s. (Y)

**4780 (P S 4780) Contemporary African Politics. Cr. 4**

Nature of African politics; impact of African politics on international relations. (B)

**5030 (P S 5030) African American Politics. Cr. 4**

Nature and texture of black politics; various perspectives on politics by blacks; the impact of blacks on American politics. (Y)

**5040 (SPC 5040) Diversity in Interpersonal Communication. (S E 5370) Cr. 3**

Issues and topics related to the study of communication behaviors and patterns in the black community. Topics focus on specific cultural, rhetorical and sociological aspects of life in African American communities. (Y)

**5110 Black Women in America. (W S 5110) Cr. 3**

Social, cultural, artistic and economic development of Black women in America; topics include: racism, sexism, marriage, motherhood, feminism, and the welfare system. (Y)

**5130 The Black Family. (GIS 5130) Cr. 4**

Prereq: upper division undergraduate standing. Survey and analysis of historical and social forces relative to the study of the Black family. (Y)

**5220 (THR 5220) Black Dramatic Literature. Cr. 3**

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. (Y)

**5260 (ANT 5260) The African Religious Experience: A Triple Heritage. (GIS 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. (B)

**5300 African American Women's Literature. (W S 5300) Cr. 3**

Prereq: upper division or graduate standing. History of African American women writers from the colonial period to the present. Emphasis on the aesthetic, cultural, and political dimensions of African American literary texts and the problematics of an African American 'canon'. (Y)

**5310 Special Topics in Africana Studies. Cr. 3-4**

Topics to be announced in Schedule of Classes; topics may include: Caribbean politics, African development, male-female relationships, Negritude. (T)

**5320 Black Labor History. (HIS 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. (I)

**5350 African American Religious History and Practice. (ANT 5350) (GIS 5350) Cr. 4**

Prereq: upper division or graduate standing. Historical role and function of religion among African Americans from slavery to the current period. Analysis of religion as the mainstay of African American survival and its contribution to African American identity. (B)

**5480 African Americans in the U.S. Political Economy. Cr. 4**

Interdisciplinary and case study approach to African American social and economic development. Social stratification in Black communities; growth of Black middle class; racial discrimination in national economy, income disparities between whites and Blacks; and growth of urban Black underclass. (Y)

**5570 (SOC 5570) Race Relations in Urban Society. 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. (I)

**5580 Law and the African American Experience. (SOC 5580) Cr. 4**

Prereq: upper division or graduate standing. In-depth examination of the African American experience with law in the U.S.; historical development of the U.S. Constitution; legal barriers to equality and the influence of race on the law; use of law as a political instrument; participation of blacks in the legal process; comparisons with other countries. (B)

**5600 The African American Community and Public Policy. Cr. 4**

Core requirement for Africana Studies majors. Public policy formation, issues and implementation as determinants of development in the Black community: education, equal opportunity, social institutions, law and criminal justice. (F)

**5700 The Psychology of African Americans. (PSY 5700) Cr. 4**

Prereq: upper division standing. Methodological approaches to and theories of Black behavior and personality development. Topics include: race and pathology, life-span and psycho-sexual development, personality formation, social and environmental stress and adaptation. (B)

**5740 (P S 5740) Ethnicity: The Politics of Conflict and Cooperation. (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)

**5800 Third World Cinema. (FLM 5800) Cr. 4**

Prereq: upper division or graduate standing. Study of the cinematic traditions and film practices in the Third World with emphasis on anti-colonial and post colonial political cinema. (B)

**5860 Education and African Americans. Cr. 4**

Survey of dominant educational trends which have impacted and been influenced by the African American experience in the United States. (B)

**5991 Field Work in the Black Community. Cr. 3-8**

Prereq: written consent of instructor. Open only to majors. Field placement in community-based, human services, and civic organizations and governmental agencies. (Y)

**6100 (ULM 6100) Class, Race, and Politics in America. (HIS 5110) (P S 6050) (SOC 7330) (U P 7030) Cr. 3**

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

**6170 (HIS 3170) Studies in Ethnicity and Race in American Life. (AFS 3170) (HIS 6170) 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)

**6510 (S W 6510) Social Work and the Black Community. Cr. 2**

An examination of the variety of points of view and trends within the black community as a background for social work assessment and intervention. (Y)

**6600 (ULM 7260) Urban Poverty and Racial Segregation.  
(ANT 7260) (P S 7260) (SOC 7350) (U P 7260) 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. (Y)

**6990 Directed Study. Cr. 3-8**

Prereq: written consent of instructor. Open only to majors and graduate students. Reading and research projects. (Y)

## Swahili (SWA)

**1010 Elementary Swahili I. Cr. 4**

Training in pronunciation, aural comprehension, oral and written expression. Supervised laboratory period for part of class preparation. Material fee as indicated in the Schedule of Classes. (F)

**1020 Elementary Swahili II. Cr. 4**

Prereq: SWA 1010 or consent of instructor. Continuation of SWA 1010. Material fee as indicated in the Schedule of Classes. (W)

**2010 (FC) Intermediate Swahili. Cr. 4**

Prereq: SWA 1020 or consent of instructor. Conversational Swahili and grammar review; reading of Swahili literature. Continuation of SWA 1020. Material fee as indicated in the Schedule of Classes. (S)

# AMERICAN STUDIES

Office: 51 West Warren, Room 2001; 577-3469

Web: <http://www.americanstudies.wayne.edu>

Director: Jerry Herron

## Advisory Committee

*Anthropology:* Guerin Montilus

*Art and Art History:* Marian Jackson

*Chicano-Boricua Studies:* Jose Cuello

*English:* Robert Aguirre, Todd Duncan, Cynthia Erb, Henry Golemba, Gwen Gorzelsky, William Harris, Jerry Herron, Janet Langlois, Michael Liebler, Kathyne Lindberg, Sheila Lloyd, Ross J. Pudaloff, Kirsten Thompson, Renata Wasserman, Barrett Watten

*German and Slavic Studies:* Alfred Cobbs, Donald Haase

*History:* Marc Kruman, Alan Raucher, Stanley Shapiro, Sandra VanBurkleo

*Lifelong Learning:* Francis Shor

*Philosophy:* William D. Stine

*Political Science:* Philip R. Abbott

## Degree Program

*BACHELOR OF ARTS with a major in American studies*

American Studies is an interdepartmental program administered by an advisory committee composed of specialists on American culture, offering undergraduates an opportunity for a flexible and diversified major. By enrolling in a core of required courses and by choosing electives among the humanities and social sciences, majors concentrate on the study of the nature and development of American society and culture. Depending on individual interests, electives may be chosen from the departments of Africana Studies, Anthropology, Art History, Economics, English, Geography, History, Humanities, Philosophy, Political Science, Sociology, and some interdisciplinary programs, such as Chicano-Boricua Studies and Urban Studies. Interested students should consult the director or those committee members whose fields most closely approximate their own interests.

**Admission Requirements:** See the general requirements for undergraduate admission to the University, page 15.

**DEGREE REQUIREMENTS:** Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29) and the College of Liberal Arts Group Requirements (see page 223), as well as the major requirements cited below. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

**Major Requirements:** Major concentration in American studies consists of at least forty-three credits: a minimum of twenty-five credits in required courses, and eighteen credits in electives (at 3000 level or above), distributed as follows:

*American Studies:* at least six credits, including A S 2010 and 5010 or A S 5997.

*English:* at least nine credits, selected from among ENG 3140 and 5400 through 5490.

*History:* at least ten credits, including HIS 2040, 2050, and 5190.

*Electives:* Eighteen credits in course work pertaining to American culture and institutions in at least three departments. Selection of these courses, which may also meet the Liberal Arts College Group Requirements, must be made in consultation with the director of American Studies.

*Writing Intensive (WI) Requirement:* In American studies, this consists of election of a course in an appropriate department numbered 5993, together with an oral examination, to be arranged in consultation with the Director of American Studies.

## Minor in American Studies

The minor in American studies requires eighteen credits in course-work, distributed as follows:

### a. American Studies Core:

A S 2010 -- Introduction to American Culture . . . . .	3-4
A S 5010 -- Topics in American Studies . . . . .	3-4
A S 5997 -- Seminar in American Studies. . . . .	3-4

b. *Electives:* In addition, in consultation with the Director of American Studies, students must take sufficient elective credits (at 3000 level or above) to total eighteen credits. Electives for the minor will be drawn from courses in the cooperating departments and programs.

## UNDERGRADUATE COURSES (A S)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 2010 Introduction to American Culture. Cr. 3-4

Conflicts and changes in American values, ideas, heroes, and national self-definition introduced through the study of literature, art, films, and other cultural expression. (T)

### 5010 Topics in American Studies. Cr. 3-4 (Max. 12)

Inquiry into the values of American civilization as revealed in a wide variety of evidence from the beginnings of the American experience to the present, with a view to understanding the distinctive characteristics of the American peoples. (Y)

### 5997 Seminar in American Studies. Cr. 3-4 (Max. 8)

Reading, discussion, and individual research oriented toward a common theme or problem in the study of American culture. Topics to be announced in Schedule of Classes. (I)

# ANTHROPOLOGY

Office: 137 Manoogian; 577-2935

Chairperson: Marietta L. Baba

Web: <http://www.cla.wayne.edu/anthro/index.html>

### Professors

Barbara C. Aswad (Emerita), Marietta L. Baba, Bernice A. Kaplan (Emerita), Guerin Montilus, Bernard Ortiz de Montellano (Emeritus)

### Associate Professors

Allen W. Batteau, Gordon L. Grosscup (Emeritus), Mark Luborsky, Andrea Sankar, Frances Trix

### Assistant Professors

Tamara L. Bray, Sherylyn Briller, Lisa Gurr, Barry Lyons

### Lecturers

David A. Barondess, Maria Swora

### Adjunct Professors

Morris Goodman, Gabriel W. Lasker (Emeritus), Eugene Perrin, Mark L. Weiss

### Adjunct Associate Professors

Elizabeth Briody, Dorothy Nelson

## Degree Programs

*BACHELOR OF ARTS with a major in anthropology*

*\*MASTER OF ARTS with a major in anthropology*

*\*MASTER OF ARTS with a major in anthropology and a concentration in applied medical anthropology*

*\*DOCTOR OF PHILOSOPHY with a major in anthropology and specializations in cultural anthropology, archaeology, medical anthropology, physical anthropology, urban anthropology, applied anthropology, business anthropology, and industrial and organizational anthropology*

Anthropology is a comparative social science which seeks to uncover principles that govern human social and cultural behavior. Anthropology also seeks to understand and interpret human thoughts, feeling, and behavior within the context of different cultural systems. The discipline is divided into the fields of cultural, physical, linguistic, archaeology, and applied anthropology. Wayne State's department offers a broad-based Bachelor of Arts in anthropology.

Undergraduate training in anthropology is designed for various groups of students: (1) those desiring scientific knowledge of the social and cultural determinants of behavior; (2) those preparing to enter a public service profession such as librarianship, social work, nursing, medicine, education, or law; (3) those preparing for employment in historical or natural science museums; (4) those preparing to serve the business and/or industrial community as a specialist in cross-cultural analysis or management consulting; (5) those seeking to enter the field of cultural resource management; (6) those expecting to work with the general public and, therefore, requiring a broad grasp of the nature of society, group behavior and social change; (7) those looking forward to teaching anthropology or another of the social or behavioral sciences; (8) those preparing for a career in another country, in international studies, or in foreign affairs; (9) those planning to pursue careers in law enforcement, police science, or criminal justice; and (10) those who desire to pursue graduate studies in anthropology.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Arts with a Major in Anthropology

The Department offers the Bachelor of Arts degree with a major in anthropology, for which the following admission and degree requirements apply.

**Admission requirements** for this degree program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29) and the College of Liberal Arts Group Requirements (see page 223), as well as the departmental major requirements cited below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

**Major Requirements:** Students majoring in anthropology are required to elect a minimum of thirty credits in anthropology, including Anthropology 2100, 2110, 3100, 3200, 5210 (or an acceptable alternative), 5310, 5380, and 5996. In addition, at least one culture area course must be completed (e.g., 3520, 3540, 3550, 6290, or an acceptable alternative). A minimum of fifteen credits must be taken in residence. The capstone course must be taken in residence.

**Limitations:** Students may not elect more than forty-five credits in course work within the Department.

**Cognate Requirements:** Choices of cognate courses should be discussed with faculty in the Department of Anthropology.

**Honors Program for Majors:** see description of Honors Program, below.

## Honors Program

This program is open to students pursuing a bachelor's degree with a major in anthropology who maintain an overall cumulative grade point average of at least 3.3 and a similar g.p.a. in anthropology courses. Honors majors must demonstrate the ability to do original work by writing an honors thesis during their senior year. The anthropology honors program leads to a degree designation 'With Honors in Anthropology'. Students in the Honors Program must satisfy the following requirements:

1. All requirements for a major in anthropology;
2. Overall g.p.a. of 3.3 or above;
3. Anthropology g.p.a. of 3.3 or above;
4. A minimum of three and a maximum of six thesis credits in anthropology (ANT 4999);
5. An approved honors thesis;
6. One 4000-level honors seminar (HON 4200-4280) offered by the Liberal Arts Honors Program.
7. A total of twelve honors-designated credits including ANT 4999, the 4000-level Honors Program seminar, and other honors credits earned in Honors Program courses or in Honors sections of courses offered by other departments.

For further information about honors credits available each semester, see the Liberal Arts section of the University Schedule of Classes under 'Honors Program'; or contact the Director of the Honors Program. For additional information on the Honors Program in Anthropology, contact the Departmental Honors Adviser.

## Combined Degree

Students pursuing a degree at an approved school of dentistry, medicine, or law may obtain a combined degree with anthropology; see page 225.

## Minor Study in Anthropology

The election of a minor in anthropology is appropriate for students in a variety of disciplines who wish to add a comparative, bio-cultural or cross-cultural perspective on the study of human beings to their area of specialization. The minor requires a minimum of eighteen credits in anthropology courses including ANT 2100 (offered for three or four credits); one of the following: ANT 2110, 3100, 3200 (or an acceptable alternative); as well as two of the following: ANT 5210, 5310, 5380, or 5996. Students must take an additional six credits in anthropology elective courses. Total credits, other than Anthropology 2100, must equal at least fifteen for all students (including transfer students).

In order for students to gain maximum benefit from their minor in conjunction with their major, it is strongly recommended that they consult with an adviser in the department before electing courses. A list of elective anthropology courses recommended for combination with a variety of majors is available from the Department.

## 'AGRADE' Program

The 'AGRADE' (Accelerated Graduate Enrollment) Program enables qualified seniors in the College of Liberal Arts to enroll simultaneously in the undergraduate and graduate programs of the College. For more details about the 'AGRADE' Program, contact the Undergraduate Director and the Graduate Director of the Department of Anthropology (577-2935), and the Graduate Officer of the College of Liberal Arts.

## UNDERGRADUATE COURSES (ANT)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 2100 (SS) Introduction to Anthropology. Cr. 3-4

Required for majors. Biological evolution, human variability, prehistoric humans and early cultures, ethnography, language and cultural growth, applied anthropology. (T)

### 2110 (LS) Introduction to Physical Anthropology. Cr. 3

Required for majors. Role of hereditary and environmental factors, human genetics, meaning of "race" and racial classifications, fossil records, non-human primate behavior and evolution. (T)

### 2500 Archaeology of the Great Lakes. Cr. 4

Introduction to Native cultures and archaeology of Michigan and the Great Lakes region, from the first peopling of the region through early historic times; changing patterns of adaptation to the ecology of the Great Lakes region; focus on ancient technologies and material culture, social organization, settlement patterns, economic strategies, and political formations. (B)

### 3100 Cultures of the World. Cr. 3-4

Required for majors. Only students in Honors Program may register for four credits. Human societies exhibit tremendous variation. How and why do we differ? What do these differences mean in today's world. Explore, contrast, compare, understand cultures like those of the Amazon rain forest, China, Japan, Alaska, India, Central America, and urban America. View their lifestyles, politics, kinship, economics, religions through readings, discussion, film. (T)

### 3110 Detroit Area Minorities: Arabs, Hispanics, and African Americans. Cr. 3-4

Offered for four credits to Liberal Arts Honors students only. Arab, African American, and Hispanic minorities from the perspective of history, social organization, and cultural background. Topics include: family roles, community structure, migration, religious beliefs, education, health problems. (T)

**3150 (FC) Anthropology of Business. Cr. 3-4**

Differences between American culture/business practice and the culture/business practice of other countries: assumptions, world view and family structure, organization and language. (T)

**3200 (HS) Lost Cities and Ancient Civilizations. Cr. 3**

Required for majors. Early civilizations that developed in different parts of the world in comparative perspective. Hypotheses to explain rise and fall of civilizations, in context of ancient cultures. Basics of archaeology: how facts are formed; meaning of 'civilization'. How understanding of the past shapes understanding of the present. Geared toward the non-major. (Y)

**3210 African Prehistory. Cr. 3**

Prereq: ANT 2100, 2300, or consent of instructor. Survey of the archaeological and fossil record of human development in Africa, from faint traces over 300 million years old through the transition to food production, settled life, and civilizations. (B)

**3220 The Inca and their Ancestors. Cr. 3**

Prereq: ANT 2100, 3200, or consent of instructor. Introduction to pre-columbian civilizations of South America. Archaeological and ethno-historical data on ancient cultures; foundations of Inca civilization; major cultures from different regions and periods. (B)

**3520 (FC) Understanding Africa: Past, Present and Future. Cr. 3**

In-depth knowledge of Africa through the study of its physiography, prehistory and history, social institutions, and social changes within a global context. (T)

**3530 Native Americans. Cr. 3**

Survey of Native American cultures north of Mexico in historical and comparative perspective; contemporary Native American issues. (I)

**3540 (FC) Cultures and Societies of Latin America. Cr. 3**

Cultural variation within Latin America; continuities and changes in the transition from indigenous and Meztizo societies to the urban, industrial, national contexts. (I)

**3550 (FC) Arab Society in Transition. (N E 3550) Cr. 3**

Distinctive social and cultural institutions and processes of change in the Arab Middle East. Regional variations: background and discussion of current political and economic systems and their relationship to international systems. (I)

**3600 Topics in Anthropology. Cr. 3**

Prereq: ANT 2100. Selected topics or emerging fields in any of the four anthropology subfields (cultural; physical; archaeology; linguistics). Topics to be announced in Schedule of Classes. (I)

**3990 Directed Study. Cr. 2-6 (Max. 6)**

Prereq: 16 credits in anthropology with grades of A or B; consent of instructor. (T)

**4999 Honors Research and Thesis. Cr. 3-6**

Prereq: senior standing; 3.3 h.p.a.; 3.3 h.p.a. in anthropology. Open only to majors in anthropology. Research and thesis to be completed under the direction of a faculty member whose expertise includes the student's area of interest. Adviser and a second reader will read the completed thesis. (T)

**5060 Urban Anthropology. (SOC 5540) Cr. 3**

Prereq: ANT 2100 or consent of instructor. 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 consent of instructor. 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. (I)

**5170 Political Anthropology. Cr. 3**

Prereq: ANT 2100 or 5200 or SOC 2010 or consent of instructor. 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 Introduction to Forensic Science. Cr. 3**

Prereq: CRJ 1010 or ANT 2110 or consent of instructor. 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. (B)

**5200 The Ethnography. Cr. 3**

Prereq: ANT 2100 or SOC 2010 or consent of instructor. Social and cultural anthropological thought and practice, grounded in ethnographic study of contemporary human cultures and societies; people such as nomads, villagers, city dwellers, in their own space and time. Classical and contemporary ethnographies; analysis of theoretical approaches to study of culture, social relations, and social organization; ethnographies in historical and comparative perspectives; nature of ethnographic representation and knowledge. (Y)

**5210 Anthropological Methods. Cr. 3**

Prereq: ANT 2100 or consent of instructor. Required for majors. Undergraduate majors in anthropology are introduced to basic methods. Students engage in a research experience supervised by the instructor, write a field journal, and complete a final exam. Participant observation, field notes, interviewing skills. (Y)

**5240 Cross Cultural Study of Gender. Cr. 3**

Prereq: ANT 2100 or consent of instructor. 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) (GIS 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. (B)

**5270 Introduction to Archaeology. Cr. 3**

ANT 2100 or 3200. For advanced anthropology 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. (Y)

**5280 Field Work in Archaeology of the New World. Cr. 5 (Max. 10)**

Prereq: 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. (F)

**5310 Language and Culture. (LIN 5310) Cr. 3**

Required for majors. Prereq: ANT 2100 or 5200 or SOC 2010 or consent of instructor. Explore the rich interconnections of language and culture in distant and local communities, in contexts where languages are declining or developing anew, and in life cycle and ordinary contexts of daily life. Students are also expected to explore their own language and cultural backgrounds and those to which they are drawn. (F)

**5320 Language and Societies. (LIN 5320) Cr. 3**

Prereq: ANT 2100 or 5200 or SOC 2010 or consent of instructor. Contemporary linguistic anthropologists see language as a form of social action. How has this understanding of language in society evolved? Read classic works of linguistic anthropology and contemporary studies in this growing field. Engage in research in language in society. (W)

**5350 (AFS 5350) African American Religious History and Practice. (GIS 5350) Cr. 4**

Prereq: upper division or graduate standing. Historical role and function of religion among African Americans from slavery to the current period. Analysis of religion as the mainstay of African American survival and its contribution to African American identity. (B)

**5370 Magic, Religion and Science. Cr. 3**

Prereq: ANT 2100 or 5200 or SOC 2010 or consent of instructor. The nature and variety of religious belief and practice; theoretical interpretations. (B)

**5380 History of Anthropology. Cr. 3**

Prereq: ANT 2100 or 5200 or SOC 2010 or consent of instructor. History of ideas and explanatory theories in anthropology; continuities and disjunctures in British, French, American, German, Belgian, Russian, and Third World anthropologies. (Y)

**5400 Anthropology of Health and Illness. Cr. 3**

Prereq: ANT 2100 or consent of instructor. 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, bio-cultural approaches to healing and treatment, international health and epidemiology. (Y)

**5410 Anthropology of Age. Cr. 3**

Prereq: ANT 2100 or consent of instructor. 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. (Y)

**5420 Community Health Ethnography. Cr. 3**

Field placement in a health service agency. Students provide volunteer assistance to an agency while conducting participant observation research exercises. Utilization of field experience to learn about urban health issues and research methodology. (B)

**5510 Precolombian Mesoamerican Cultures. (CBS 3510) Cr. 3**

Prereq: ANT 2100 or consent of instructor. Survey of the history and characteristics of cultures in Mesoamerica prior to colonization, from the Maya and Olmec to the Aztec. (I)

**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. (B)

**5991 Directed Study: W.S.U. - Salford Exchange. Cr. 3-9**

Prereq: consent of undergraduate adviser. Open only to students admitted to Salford Exchange Program. Credit earned through approved upper division coursework at the University of Salford, England, as part of WSU-Salford Exchange Program. (F,W)

**5993 (WI) Writing Intensive Course in Anthropology. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: ANT 5310, 5320, or 5996 taught by full-time faculty member. 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. Within first three weeks of enrollment in corequisite course, student must notify instructor of enrollment in ANT 5993. (T)

**5996 Capstone Seminar in Anthropology. Cr. 3**

Prereq: upper division or graduate standing. Review and integrate central practices and theories in anthropology through discussion of the four major subfields and applied areas of anthropology. Special attention will be given to new developments in the different fields. Required for undergraduate majors; recommended for new graduate

students without extensive background in anthropology; also open to those outside anthropology who desire a thorough view of research areas and theoretical perspectives in anthropology. (Y)

**6080 (ENG 5600) Studies in Folklore. Cr. 3**

Prereq: ENG 2280 or ENG 3600 or ENG 4650 or ANT 2100 or consent of instructor. Use of folklore in literature; field work; analysis of collected oral literature; study of separate genres of oral literature and analysis of parallel texts. Topics to be announced in Schedule of Classes. (I)

**6230 Cultures of Sub-Saharan Africa. Cr. 3**

Prereq: ANT 2100 or SOC 2010 or consent of instructor. Sub-Saharan African cultures and societies; emphasis on both complex and simple political systems. (I)

**6290 Culture Area Studies. Cr. 3 (Max. 9)**

Prereq: ANT 2100 or 5200 or SOC 2010 or consent of instructor. 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)

**6300 Anthropological Theory I. Cr. 3**

Required for first year graduate students. Examination of some major debates in anthropology in historical and contemporary perspective; continuities and breakthroughs. (Y)

**6310 Anthropological Theory II. Cr. 3**

Prereq: ANT 6300. Required for first-year graduate students. Continuation of ANT 6300. (Y)

**6360 (HIS 7860) Oral History: A Methodology for Research. (LIS 7770) Cr. 3**

Oral history as a methodology for research. Interviewing procedures and techniques of indexing, transcribing, and analyzing historical content of oral history interviews. (I)

**6370 Symbolic Anthropology. Cr. 3**

Human ability to create symbols to communicate. Oral tradition and myth; utopia and uchronia and the imaginary construction of the world; art and the eschatological discourse. (Y)

**6390 Contemporary Theory in Anthropology. Cr. 3**

Prereq: ANT 6380 or 24 credits in anthropology or consent of instructor. Analytical framework in use and developments in theory since 1940; the comparative method in the social sciences. Contemporary anthropological problems. (W)

**6420 Economic Anthropology. Cr. 3**

Prereq: ANT 6300 or 6310 or 5200. 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)

**6450 Culture, Health Policy and AIDS. Cr. 3**

Prereq: ANT 2100 or consent of instructor. Interface of cultural, scientific and political factors in the formation of health policy. Focus on specific health problem (e.g., AIDS, aging); analysis of social construction of the problem, and political and medical aspects. (Y)

**6500 North American Prehistory. Cr. 3**

Prereq: ANT 2100; 5270 recommended. Survey of prehistoric cultures of North America from late Pleistocene to Euro-American contact. Topics include: peopling of New World; native cultures and histories; regional adaptations (Arctic, Puebloan, Great Basin, Woodland; Moundbuilders). (I)

**6510 The Inca and their Ancestors. Cr. 3**

Prereq: ANT 2100, 3200, or consent of instructor. 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 America prehistory. (B)



**6550 Practicum in Archaeology. Cr. 2-4 (Max. 8)**

Prereq: ANT 5270 or 5280, or consent of instructor. 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)

**6650 Studies in Physical Anthropology. Cr. 2-4 (Max. 12)**

Prereq: ANT 2110 or consent of instructor. 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 5200 or consent of instructor. Selected topics in cultural anthropology. Topics to be announced in Schedule of Classes. (I)

**6700 Topics in Medical Anthropology. Cr. 3**

Prereq: ANT 2100 or consent of instructor. New and emerging topics in medical anthropology or topics presented by visiting faculty in areas of theory, practice, and methodology. (B)

**6710 Medical Anthropology: Alcohol/Drug Use and Abuse. Cr. 3**

Prereq: ANT 2100 or consent of instructor. Biological and cultural aspects of alcohol and drug use and abuse considered in the context of medical anthropology and its theory, practice and research. (Y)

**6992 Field Practicum in Business/Industrial Anthropology. Cr. 2-8**

Prereq: consent of instructor. Students gain firsthand experience in conceptualizing, conducting, and/or implementing applied research in business/industrial organizations. (F,W)

# ART HISTORY

Office: 150 Art Building, 450 Reuther Mall; 577-2980

Interim Chairperson: Robert J. Martin

Undergraduate Adviser: Paul Clemens

Slide Collection Curator: Susan Nalezty

Exhibition Curator: Sandra Dupret

Art Studio Supervisor: Todd Mitchell

## Professors

John G. Hegarty, Marion E. Jackson, Robert J. Martin, James Nawara, Thomas C. Parish, Melvin Rosas

## Associate Professors

Jeffrey Abt, Pamela DeLaura, Thomas P. Fitzgerald, Urban Jupena, Nancy Locke, Brian Madigan, Judith Moldenhauer, James M. Raymo, Stanley L. Rosenthal, Peter Williams, Joseph B. Zajac, Marilyn Zimmerman

## Assistant Professors

Sarah Bassett, Tammy Evans, Margaret Franklin, Brian Kritzman, John Richardson

## Lecturers

Rayneld Johnson, Jiro J. Masuda, Dennis Robare, Susan Widawski

## *W. Hawkins Ferry Endowed Chair in Twentieth Century Art History and Criticism*

Dora Apel

The discipline of art history is one of the few academic subjects that gives a student a profound understanding of both Eastern and Western civilizations over a 5,000-year period. Students of art history become more visually aware of their surroundings and learn to appreciate, analyze, and critically appraise works of art. Aside from gaining visual acuity, the student of art history learns to understand art as an outgrowth of specific historic societies, for works of art reflect more accurately than written texts the complex socio-cultural, political, economic and psychological dynamics of a culture. In addition, the purpose of art history is to train students for professional roles as art history teachers on the high school and college level, and to prepare them to assume curatorial, educational, and administrative roles in museums and art galleries.

## Degree Programs

*BACHELOR OF ARTS with a major in art history*

*\*MASTER OF ARTS with a major in art history*

Students may elect to earn the Bachelor of Arts degree with a major in art history from either the College of Liberal Arts, or the College of Fine, Performing and Communication Arts. Those electing to earn the degree from the College of Liberal Arts must fulfill all requirements for undergraduate degrees in this College (see pages 223-227).

For information relative to Admission and Degree Requirements and for Courses of Instruction, see the Department of Art and Art History, College of Fine, Performing and Communication Arts; page 176.

Students who elect to earn their degrees or certificates in the College of Liberal Arts should consult the Advisor in Art History, 150 Art Building, 450 Reuther Mall (577-2980), for clarification and further information.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

# CANADIAN STUDIES

Office: 3125 Faculty/Administration Building; 577-2799  
Web: <http://www.cla.wayne.edu/canadianstudies/>

Director and Adviser: John J. Bukowczyk (History)

## Interdisciplinary Minor in Canadian Studies

Specialization in Canadian Studies is offered only as a *minor* concentration at Wayne State University. The program is interdisciplinary and is intended to offer students an opportunity to focus on linkages that exist between the United States and Canada. Included in the courses comprising the minor are offerings in both the social sciences and the humanities, including disciplines such as geography, political science, English, and history.

An academic minor in Canadian Studies allows students to select a major in an established discipline, while still making possible the pursuit of interests in Canada.

Students planning to minor in Canadian Studies should consult with the Canadian Studies Director at the beginning of their junior year.

### Minor Requirements -- eighteen credits, including:

1. P S 2700 -- Introduction to Canadian Studies  
(GPH 2700, HIS 2700, ENG 2670)
2. Core electives (minimum of nine credits, three courses), from:  
HIS 3450 -- Canadian American Relations  
GPH 5700 -- Urban Canada (U P 5700)  
GPH 5750 -- Social and Economic Geography of the U. S. and Canada  
GPH 6350 -- Ethnic Groups in the United States and Canada  
MKT 7600 -- The North American Economy  
P S 5510 -- Political Culture in Modern North America

Other cognates:

- ANT 3530 -- Native Americans
- ANT 6500 -- North American Prehistory
- ENG 2600 -- Introduction to Folklore
- ENG 5460 -- Topics in American Lit. of 20th Century: Robertson Davies
- P S 3840 -- American Foreign Policy and Administration

**Note:** Additional core electives and cognates may be taken at the University of Windsor, Ontario, chosen from a list of Canadian Studies courses which is available from the Canadian Studies adviser.

# CLASSICS, GREEK, and LATIN

Office: 431 Manoogian Hall; 577-3032

Chairperson: Kenneth R. Walters

## Professors

Kathleen McNamee, Richard W. Minadeo (Emeritus)

## Associate Professors

Ernest J. Ament (Emeritus), Joel B. Itzkowitz, Michele V. Ronnick, Jennifer A. Sheridan, Kenneth R. Walters

## Assistant Professor

Leah R. Johnson

## Lecturer

Vasilios Kosmidis

## Degree Programs

*BACHELOR OF ARTS with a major in Classics*

*\*MASTER OF ARTS with a major in Classics*

This department offers courses and programs of instruction in Latin and Greek (both ancient and modern) as well as the cultures and the literatures of these languages in English translation. These studies have been the basis of Western civilization and education for over two thousand years. Because of the importance of this heritage for a wide variety of academic disciplines, Classics majors receive excellent preparation for a variety of careers: business, law, teaching at the high school or university level, library and information science, museum practice, political science, medicine and the health sciences (when combined with science study); or non-academic fields such as government, publishing, tourism and business, where intelligence and a broad liberal education are valued. The Department offers programs of both major and minor standing as well as cognate work for majors in other departments, to provide other perspectives.

## Bachelor of Arts Degrees

**Admission requirements** for this program are satisfied by the requirements for undergraduate admission; see page 15.

A student who wishes to major or minor in the Department should plan his/her program with the Departmental undergraduate adviser as soon as possible after entering the University. Each program is arranged to satisfy each individual student's interests and purposes, whether they be to combine majors and minors for teacher certification, to acquire language skills needed for technical work in other areas of study, to enrich professional background, or to broaden general cultural development.

**DEGREE REQUIREMENTS:** Students must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29) and the College of Liberal Arts Group Requirements (see page 223), as well as the major requirements cited below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15 -46 and 223-227, respectively.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

**MAJOR REQUIREMENTS IN CLASSICS:** A major in Classics consists of one of the following:

*A concentration in Ancient Greek*, requiring twenty-eight credits in Ancient Greek (exclusive of Greek 1010 and 1020) and any two Classics courses at the 2000-level or above. Potential majors are also encouraged to elect Classics 1010 (Classical Civilization) during their freshman or sophomore year. Recommended cognates are listed below.

*A concentration in Latin*, requiring twenty-eight credits in Latin (exclusive of Latin 1010 and 1020) and any two Classics courses at the 2000-level or above. Potential majors are also encouraged to elect Classics 1010 (Classical Civilization) during their freshman or sophomore year. Recommended cognates are listed below.

*A concentration in both Ancient Greek and Latin*, requiring twenty to twenty-four credits in either Ancient Greek or Latin (exclusive of Greek or Latin 1010 and 1020), plus sixteen credits of course work in the other language. Potential majors are also encouraged to elect Classics 1010 (Classical Civilization) during their freshman or sophomore year. Recommended cognates are listed below.

*A concentration in Classical Civilization*, requiring Greek or Latin 2010, four Classics courses from Classics 2000 and above, Art History 5200 (Early Greek Art) and 5210 (Hellenistic and Roman Art), History 5330 (History of Ancient Greece) and 5340 (History of Ancient Rome), or Philosophy 2100 (Ancient and Medieval Philosophy).

In addition, two courses from the following electives are required:

Anthropology 3200 . . . . . (HS) Lost Cities and Ancient Civilizations  
Anthropology 5270 . . . . . Introduction to Archaeology  
Anthropology 5310 . . . . . Language and Culture  
Art History 3070 . . . . . Art & Archaeology of Ancient Egypt  
Art History 5220 . . . . . Ancient Greek Architecture  
Art History 5250 . . . . . Ancient Rome  
Art History 5260 . . . . . Classical Greek Art  
Art History 5300 . . . . . Early Christian Art and Architecture  
Art History 5310 . . . . . The Ancient City of Athens  
Art History 5320 . . . . . Classical Architecture in Britain and the U. S.  
Classics 2000 . . . . . Greek Mythology  
Classics 2100 . . . . . (PL) Classical Origins of Western Thought  
Classics 3100 . . . . . Law and Ancient Society  
Classics 3190 . . . . . Women in Classical Antiquity  
Classics 3250 . . . . . The Ancient City  
Classics 3350 . . . . . Plutarch: Lives  
Classics 3999 . . . . . Further Studies in Mythology  
Greek 2600 and above; Greek 1010-2010 if Latin is major language  
Greek 3710 . . . . . (FC) Modern Greek Literature and Culture  
History 3310 . . . . . History & Civilization of the Ancient Near East I  
History 5330 . . . . . History of Ancient Greece  
History 5340 . . . . . History of Ancient Rome  
History 5350 . . . . . The Hellenistic Period  
Latin 2600 and above; Latin 1010-2010 if Greek is major language  
Near Eastern Studies 2010 . . . . . The Bible and Ancient Mythology  
Philosophy 5410 . . . . . Plato  
Philosophy 5420 . . . . . Aristotle  
Speech (SPC) 2190 . . . . . Rhetoric in Western Thought

Recommended Cognate Courses: All majors in the fields covered by the Department are strongly urged to take as much work as possible in the literatures of other languages, including English, as well as:

Anthropology 5310 . . . . . Language and Culture  
Art History 5200 . . . . . Early Greek Art  
Art History 5210 . . . . . Hellenistic and Roman Art  
Art History 5220 . . . . . Ancient Greek Architecture  
Art History 5300 . . . . . Early Christian Art and Architecture  
Art History 5310 . . . . . The Ancient City of Athens  
Classics 2000 . . . . . Greek Mythology  
Classics 2100 . . . . . (PL) Classical Origins of Western Thought  
Classics 2200 . . . . . (PL) Introduction to Greek Tragedy  
Classics 3100 . . . . . Law and Ancient Society  
Classics 5200 . . . . . Special Studies

History 5330 . . . . . History of Ancient Greece  
History 5340 . . . . . History of Ancient Rome  
History 5350 . . . . . The Hellenistic Period  
History 5360 . . . . . The Early Middle Ages: 300-1000  
Philosophy 2100 . . . . . (PL) Ancient and Medieval Philosophy  
Philosophy 5410 . . . . . Plato  
Philosophy 5420 . . . . . Aristotle

**Combined Curriculum for Secondary Teaching:** Students who are preparing to teach Latin in the secondary schools and who wish to obtain a B.A. degree with a concentration in Latin must complete the concentration in Latin as outlined above and the requirements for this curriculum set by the College of Education. For further information on this curriculum, see 'Secondary Teaching,' under Undergraduate Curricula, page 230.

## Honors Program

Qualified majors may apply for participation in the departmental Honors Program. Only the student who has demonstrated superior ability in the field of Classical languages and/or literature and who shows promise of acquiring greater breadth and depth of knowledge through tutorial study will be admitted to the program. As preparation for admission, the student is required, during the freshman and sophomore years, to acquire basic knowledge of one of the languages (ideally, of both) and is encouraged to elect Classics 1010 (Classical Civilization) and 2000 (Greek Mythology).

Once the Honors candidate has been admitted to the program (normally at the end of the sophomore year) he/she shall fulfill the normal requirements for the elected major. In the senior year students should elect a minimum of eight credits in Classics 4900, which will prepare and guide them in the writing of a Senior Honors Essay. One of the 4000-level interdisciplinary seminars offered by the Honors Program must also be completed, and the student must have acquired at least fifteen credits in honors-designated course work, including Classics 4900 and the Honors Program seminar. Finally, written and oral comprehensive examinations must be successfully completed in the senior year. The diploma of a successful honors candidate will read 'Graduation with honors in Classics'.

Eligible students who are interested in the program should consult the department undergraduate adviser. For information about additional honors-designated course work available each semester, contact the Director of the Honors Program (577-3030) or see the Liberal Arts section of the University Schedule of Classes under 'Honors Program.'

## Minors and Cognate Study

**Minor Requirements in Classics:** A minor in Classics consists of one of the following:

*A concentration in Ancient Greek*, consisting of twenty credits exclusive of Greek 1010 and 1020 and including one Classics course from CLA 2000 or above. Potential minors are also encouraged to elect Classics 1010 (Classical Civilization) and Classics 2000 (Greek Mythology) during their freshman or sophomore year. For recommended cognates, see those listed above for majors in the field.

*A concentration in Latin*, consisting of twenty credits exclusive of Latin 1010 and 1020 and including one Classics course from CLA 2000 or above. Potential minors are also encouraged to elect Classics 1010 (Classical Civilization) and Classics 2000 (Greek Mythology) during their freshman or sophomore year. For recommended cognates, see those listed above for majors in the field.

*A concentration in both Ancient Greek and Latin*, consisting of twelve to sixteen credits in either Ancient Greek or Latin, exclusive of Greek or Latin 1010 and 1020, plus twelve credits in the other language. Recommended cognates are CLA 1010, CLA 2000, and CLA 2200, as well as those listed above for majors in the Department.

**Minor Requirements in Classical Civilization:** A minor in Classical Civilization consists of twenty-three to twenty-six credits distributed as follows:

1. Greek or Latin 1010 and 1020 (8 credits).
2. Two Classics courses, from CLA 2000 or above (6-8 credits).
3. Art History 5200 (Early Greek Art) or 5210 (Hellenistic and Roman Art) (3 credits).
4. History 5330 (History of Ancient Greece or 5340 (History of Ancient Rome) (3 credits).
5. Philosophy 2100 (Ancient and Medieval Philosophy) (3 credits).

**Minor Requirements in Modern Greek Studies:** A Minor in Modern Greek Studies consists of six courses distributed as follows: four courses in Modern Greek language including the sequence GRK 1110<sup>1</sup>, 1120<sup>1</sup>, 2110<sup>1</sup>, 2610, plus one course in Modern Greek language or culture at the 3000-level or above, plus one elective course in Classics selected from among CLA 2000, 2100, 2200, 3100, 3190, 3250, 6260; HIS 5330, 5350; PHI 2100, 5410, and 5420.

## Foreign Language Group Requirement

The student may satisfy the Foreign Language Group Requirement (see page 200) by completing the third course of the elementary language sequence of either Ancient or Modern Greek or Latin, or by a special examination through which one might place out of the requirement. Students continuing the study of any of the above languages begun in high school or in another college should consult with their Department undergraduate adviser to determine the level of study at which to continue in the Department (phone: 577-3032).

The satisfaction of the Liberal Arts Foreign Language Group Requirement also satisfies the University General Education Foreign Culture (FC) Requirement.

## University General Education Requirements and College of Liberal Arts Group Requirements

As noted above, satisfaction of the College of Liberal Arts Foreign Language Group Requirement also satisfies the Foreign Culture Requirement of the University General Education Program. Modern Greek 3710 also satisfies the Foreign Culture Requirement. Classics 1010, 2100, and 2200 satisfy the Philosophy and Letters portion of the University General Education Program and of the College Humanities Requirement; and Classics 2000 satisfies the College of Liberal Arts Civilizations and Societies Requirement.

## Scholarships

**Modern Greek Studies Scholarship:** The Ministry of Culture and Science of the Hellenic Republic annually makes available one scholarship to a student of Modern Greek language and literature. The purpose of the scholarship is to enable the student to acquire a first-hand knowledge of Greece, its people and their way of life, and to establish personal contacts with cultural and scientific figures in Greece. The annual summer program includes tours of archeological sites in Greece, visits to some of the Aegean Islands and attendance at such cultural events as the Epidauros Festival and the Athens Festival. Written applications are due in the month of March. For further information, consult with the instructor in charge of the Modern Greek Studies Program.

**Other Study Abroad:** The Department encourages students in Classics and Modern Greek to study abroad for one or two semesters in any of several reputable programs available. For information on financial support for such study, students should contact the Undergraduate Adviser (577-6227).

See also page 227, above, and the section on the Office of Scholarships and Financial Aid, page 20.

1. Students who place out of one or more of the introductory Greek courses must take a corresponding number of additional electives, including any GRK course.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

## CLASSICS IN ENGLISH TRANSLATION (CLA)

*NOTE: All of the Classics courses listed below are taught in English translation, with no knowledge of Greek or Latin required.*

### 1010 (PL) Classical Civilization. Cr. 3-4

Survey of the culture and civilization of Ancient Greece and Rome, in particular those aspects that laid the political, social, and cultural framework of the modern world. (T)

### 2000 Greek Mythology. Cr. 3-4

Typical myths related to religion, custom, ethics, philosophy, art, literature. (Y)

### 2100 (PL) Classical Origins of Western Thought. (HON 2100) Cr. 3

Prereq. for Honors students: 3.3 cumulative g.p.a. (3.5 g.p.a. for entering freshmen). Classical foundations of contemporary Western Thought. Topics include: relations between the sexes, democracy, slavery, war, social criticism, rationality, relations between parents and children, literature and performing arts. (I)

### 2200 (PL) Introduction to Greek Tragedy. Cr. 3-4

Dramatic and literary qualities of representative plays of Aeschylus, Sophocles and Euripides. The origin and development of Greek tragedy related to the enduring quality and contemporary relevance of these dramas. (I)

### 3100 Law and Ancient Society. Cr. 3-4

Law systems of ancient Greece and Rome; law codes of Solon and of the Twelve Tables. Issues include: family law, rights of women and children, interpersonal relations; judges, juries, and courtroom procedure. Students study actual cases from ancient times. (B)

### 3190 Topics on Women in Antiquity. Cr. 3

Topics on roles of women and views of gender and sexuality in ancient Greece and Rome, drawn from fields such as literature, art, drama, and law.

### 3250 The Ancient City. (CLA 6250) Cr. 3-4

Infrastructure, architecture, planning, and social and political forces that shaped Rome and other great cities of the ancient world. (B)

### 3350 Plutarch's Lives of the Noble Greeks and Romans. (CLA 5350) Cr. 3

Structured exploration of Plutarch's Parallel Lives in translation. (B)

### 3930 Topics in Classical Civilization. Cr. 1-4 (Max. 8)

In-depth study of some aspects of Greek and Roman civilization. Topics to be announced in Schedule of Classes. All readings in English. (Y)

### 3999 Further Studies in Mythology. (CLA 6260) Cr. 3 (Max. 6)

Prereq: CLA 2000 or GER 1700 or equivalent introductory mythology course in any other department or consent of instructor. A more in-depth study of mythology with special reference to particular classical myths or theories. (I)

### 5100 Law and Ancient Society. Cr. 3

Law systems of Ancient Greece and Rome. Law codes of Solon and of the Twelve Tribes. Issues include: family law, rights of women; courtroom procedure. Study of actual cases from antiquity. (B)

**5190 Daily Life in the Ancient World. Cr. 3**

Topics such as family, gender relations and sexual mores, housing, city and country life, athletics, festivals and entertainment, soldiering, slavery, trade, and farming; focus on everyday experiences. (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, including: Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terence, and Seneca. Historical development of theatre design and dramatic staging. (I)

**5350 (CLA 3350) Plutarch's Lives of the Noble Greeks and Romans. Cr. 3**

Structured exploration of Plutarch's Parallel Lives in translation. (B)

**5750 (ENG 5750) Theories of Second Language Acquisition. (FRE 5750) (GER 5750) (ITA 5750) (LIN 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)

**5810 (FRE 5810) Teaching Foreign Languages: Receptive Skills. (CLA 7810) (FRE 7810) (GER 5810) (GER 7810) Cr. 3**

Prereq: CLA 5850 or 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)

**5820 (FRE 5820) Teaching Foreign Languages: Productive Skills. (CLA 7820) (FRE 7820) (GER 5820) (GER 7820) Cr. 3**

Prereq: CLA 5850 or 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 (GER 5830) Technology in the Foreign Language Classroom. (CLA 7830) (FRE 5830) (FRE 7830) (GER 7830) Cr. 3**

Prereq: CLA 5850 or 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 (GER 5850) Second Language Instruction: Theory and Methods. (CLA 7850) (FRE 5850) (FRE 7850) (GER 7850) 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 testing. (B)

**5860 (GER 5860) Foreign Language Testing. (CLA 7860) (FRE 5860) (FRE 7860) (GER 7860) Cr. 3**

Prereq: CLA 5750 or 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)

**5993 (WI) Writing Intensive Course in Classical Civilization. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any CLA, LAT, or

GRK course numbered 3000 or higher which satisfies major requirement. Offered for S and U grades only. No degree credit. Required for all majors. Grade in CLA 5993 is independent of grade in corequisite course. Disciplined writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated 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)

**6250 (CLA 3250) The Ancient City. Cr. 3-4**

Prereq: graduate standing. Infrastructure, architecture, planning, and social and political forces that shaped Rome and other great cities of the ancient world. (B)

**6260 (CLA 3999) Further Studies in Mythology. (Cr. 3 (Max. 6)**

Prereq: CLA 2000 or GER 1700 or equivalent introductory mythology course in any other department, or consent of instructor. An in-depth study of mythology with special reference to particular classical myths or theories of myth. (I)

## GREEK (GRK)

### Ancient Greek

**1010 Elementary Greek. Cr. 4**

Basic vocabulary, forms, grammar, and introduction to ancient Greek culture. (Y)

**1020 Elementary Greek. Cr. 4**

Prereq: GRK 1010. Continuation of GRK 1010 with increasing emphasis on reading ability. (Y)

**2010 (FC) Classical Greek Prose. Cr. 4**

Prereq: GRK 1020. Selections from various classical Greek prose authors such as Plato and Lysias. (Y)

**2600 Homer. Cr. 4**

Prereq: GRK 2010 or equiv. or consent of instructor. Reading of selected passages from the Iliad or the Odyssey; study of the fundamentals of Homeric Greek. (I)

**5000 Ancient Greek for Graduate Students. Cr. 1-3 (Max. 3)**

Prereq: written consent of graduate adviser. Introduction to basic vocabulary, forms and grammar of classical Greek leading to the reading of continuous Greek prose passages. Offered in conjunction with GRK 1010 or GRK 1020. (T)

**5100 Greek Prose Composition. Cr. 2**

Prereq: GRK 2600 or equiv. or consent of instructor. Practice in the essentials of writing idiomatic and stylistic Greek prose. Supplementary readings in Greek for imitation. (I)

**5200 Pastoral, Lyric, Elegy. Cr. 4**

Prereq: GRK 2600 or equiv. or consent of instructor. Selected authors in poetic genres other than epic and drama. (I)

**5500 Greek Historians. Cr. 4**

Prereq: GRK 2600 or equiv., or consent of instructor. Prose style and historiographic techniques of ancient historians; selections from Herodotus, Thucydides, Xenophon, and Polybius. (I)

**5600 Epic Poetry. Cr. 4**

Prereq: GRK 2600 or consent of instructor. Study in ancient Greek of Homer, Hesiod, Apollonius Rhodius and others. Theory of oral vs. literary composition, the Homeric question, metrics. (I)

**5990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: undergrad., written consent of chairperson; grad., consent of chairperson and graduate officer. (T)

**6250 Greek Drama. Cr. 4**

Prereq: GRK 2600 or consent of instructor. 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)

## Modern Greek

### 1110 Elementary Modern Greek I. Cr. 4

Training in pronunciation, conversation and reading; introduction to the culture of Greece today. Material fee as indicated in the Schedule of Classes. (F)

### 1120 Elementary Modern Greek II. Cr. 4

Prereq: GRK 1110 or equiv. Continuation of GRK 1110. Material fee as indicated in the Schedule of Classes. (W)

### 2110 (FC) Intermediate Modern Greek I. Cr. 4

Prereq: GRK 1120 or equiv. Review of grammar, practice in oral and written modern Greek, based on readings in modern Greek literature. Material fee as indicated in the Schedule of Classes. (F)

### 2610 Intermediate Modern Greek II. Cr. 4

Prereq: GRK 2110 or equiv. Special attention to vocabulary enrichment and writing compositions. Class conversation based on reading of cultural materials and short stories. Translation exercises from English to Greek; study of appropriate grammar rules. (W)

### 3710 (FC) Modern Greek Literature and Culture in English. Cr. 3

No knowledge of modern Greek required for this course; all readings in English translation; satisfies humanities group requirement; does not satisfy foreign language requirement. Survey of the culture and civilization of modern Greece through a study of their literature, customs, festivals and popular art. (I)

## LATIN (LAT)

### 1010 Elementary Latin. Cr. 4

Basic vocabulary, forms, grammar, and introduction to the culture of the ancient Romans. (Y)

### 1020 Elementary Latin. Cr. 4

Prereq: LAT 1010. Continuation of LAT 1010, with increasing emphasis on reading ability. (T)

### 2010 (FC) Latin Literature. Cr. 4

Prereq: LAT 1020. Representative selections of Latin prose and poetry. (T)

### 2600 Introduction to Latin Literature. Cr. 4 (Max. 8)

Prereq: LAT 2010 or equiv. or consent of instructor. Selections from Latin prose authors and poets. (Y)

### 3150 Cicero. Cr. 4

Prereq: LAT 2010 or 2600 or equiv. Selections from the basic philosophical and rhetorical writings of Cicero and from his letters. (I)

### 3210 Latin Poetry. Cr. 4

Prereq: LAT 2600 or equiv. or consent of instructor. Intermediate-level course for reading representative samples of poetry by prominent Latin authors. (F)

### 3220 Latin Prose. Cr. 4

Prereq: LAT 2600 or equiv. or consent of instructor. Intermediate-level course for reading representative samples of prose by Latin authors. (W)

### 5000 Latin for Graduate Students. Cr. 1-3 (Max. 3)

Prereq: written consent of graduate adviser. Basic vocabulary, forms and grammar of Latin leading to the reading of continuous Latin prose passages. (T)

### 5810 Roman Historians. Cr. 4

Prereq: LAT 2600 or equiv. or consent of instructor. 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 2600 or equiv. or consent of instructor. Readings in Latin of the works of epic poets such as Ennius, Vergil, Lucan, Statius and others. (I)

### 5990 Directed Study. Cr. 1-4 (Max. 8)

Prereq: undergrad., written consent of chairperson; grad., written consent of chairperson and graduate officer. (T)

### 6500 Roman Epistolography. Cr. 4

Prereq: LAT 2600 or equiv. or consent of instructor. Social, literary, and historical significance of the letters of such writers as Cicero, Pliny and Seneca. (I)

### 6820 Roman Rhetoric. Cr. 4

Prereq: LAT 2600 or equiv. or consent of instructor. Study of Roman rhetorical theory and practice. (I)

### 6840 Roman Drama. Cr. 4

Prereq: LAT 2600 or equiv. or consent of instructor. 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 2600 or equiv. or consent of instructor. Readings in the works of satirists such as of Horace, Persius and Juvenal. (I)

# CRIMINAL JUSTICE

Office: 2305 Faculty/Administration Building; 577-2705

Chairperson: Steven Stack

Academic Services Officer: Marianka Holloway

## Professors

Steven Stack, Marvin Zalman

## Associate Professor

Thomas M. Kelley

## Assistant Professors

David Canales-Portalatin, Brad Smith, Olga Tsoudis

## Lecturer

Caron Jacobson

## Adjunct Faculty

Cara Best, William Brown, Calvin Engelberg, Micheal Falvo, Michael Kusluski, John O'Neill, Monique Patterson, Janet Prater, Stephen White, James Windell

## Degree Programs

*BACHELOR OF SCIENCE in Criminal Justice*

*\*MASTER OF SCIENCE in Criminal Justice*

Criminal Justice is organized society's primary formal means of social control. Generally, it is the practice of public and private agencies and groups which seek to prevent, control, adjudicate, punish, correct, and defend juvenile delinquents, criminal suspects, and convicted offenders. The core of the criminal justice system is comprised of police agencies, prosecutors, defense attorneys, courts, and correctional agencies. This system enforces federal and state laws and provides numerous other services. Criminal justice is part of a larger administration of justice complex which involves court administration, juvenile justice, and public and private security.

The study of criminal justice begins with analysis of the entire justice system as a force for social order. Advanced study inquires into the political, organizational, social and behavioral aspects of various components of the criminal justice system. Research courses give students the tools with which to independently analyze criminal justice and skills important for career development. Legal courses foster an awareness of the values of due process and the limits of governmental power in a democratic society.

Career opportunities in criminal justice include roles as police officers, supervisors, and executives; criminal justice investigators working for public defenders, prosecutors, fire departments, and insurance companies; correctional officers for whom a college degree is mandatory, such as probation officers, parole officers, and community corrections specialists. Other specialized roles in criminal justice include juvenile intake officers, juvenile probation officers, volunteer administrators, criminologists, forensic scientists, forensic psychologists, medical examiners, and policy analysts.

## Bachelor of Science in Criminal Justice

The Bachelor of Science program is structured to meet the highest educational standards of the Academy of Criminal Justice Sciences. Required courses expose a criminal justice major to all aspects of the justice system and foster a systemic view rather than a specialization in a single component of this field. Within this broad framework, courses which deal with specific topics and pre-professional concerns are available. Practical field experience is desirable and may be arranged for up to eight credits under the guidance of the internship coordinator.

The curriculum is designed to offer students a comprehensive education in criminal justice: it provides a fundamental understanding of the criminal justice system together with skills and knowledge useful in pursuing professional careers in justice administration. The emphasis of the program on analytical and writing skills is consonant with the growing sophistication of criminal justice agencies. Police departments, correctional facilities, and court administrators' offices require more personnel with quantitative analytical abilities and computer skills, administrative and personal interaction skills, excellent command of English, knowledge of foreign languages, and the ability to understand legal materials.

*Core courses (28 credits)* include classes comprising theories of criminal behavior, criminal law, criminal justice institutions, criminal justice research methods, and the criminal justice process. Core courses in the criminal justice curriculum are designed to acquaint students with the problems of crime and deviance in American society, the major public institutions which deal with these problems, the legal foundation of criminal justice, and analytic research methods used to better understand the social and behavioral realities of criminal justice. Criminal justice majors must complete all major courses with a final grade of 'C-minus' or better and maintain a minimum 2.0 grade point average in the major.

*Electives:* A minimum of twelve credits must be selected for concentrated elective course work in the criminal justice field. The approved criminal justice electives provide a structured set of rigorous upper-division courses which are relevant to (1) a deeper understanding of the justice process and (2) knowledge and skills in specific career areas in the field.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29) and the College of Liberal Arts Group Requirements (see page 223), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively. It is recommended that students complete most, if not all, of the General Education Requirements *before* they initiate Criminal Justice major course work.

**Residency Requirements:** A minimum of sixteen of the twenty-eight credits in Core courses and four of the twelve credits in Elective courses must be earned at Wayne State University.

**Major Requirements:** It is the student's responsibility to meet with a Criminal Justice adviser to officially file a Declaration of Major form with the Department and to identify all major requirements. Students majoring in criminal justice must complete a minimum of forty and no more than forty-six credits. A minimum of twenty-eight credits must be completed in core courses, and a minimum of twelve credits in elective courses.

### *I. Required Core Courses (Twenty-eight credits total)*

CRJ 1010 -- Intro. to the Criminal Justice System. . . . . 4  
CRJ 4000 -- Criminological Theories. . . . . 4

\* For specific requirements, see the Wayne State University Graduate Bulletin.

CRJ 4300 -- Corrections . . . . .	4
CRJ 4600 -- The Police in America . . . . .	4
CRJ 5710 -- Constitutional Criminal Procedure . . . . .	4
CRJ 5860 -- Research Methods in Criminal Justice . . . . .	4

One of the following process courses:

CRJ 4400 -- The Judicial Process . . . . .	4
CRJ 4410 -- The Juvenile Justice System . . . . .	4

**II. Approved Electives (Minimum twelve credits required)**

CRJ 3120 -- Politics of the Criminal Justice Process (P S 3120) . . . . .	4
CRJ 3260 -- Investigation . . . . .	3
CRJ 3510 -- Introduction to Security . . . . .	4
CRJ 3710 -- Legal Writing . . . . .	4
CRJ 3750 -- Gender Issues for CRJ Professionals (W S 3750) . . . . .	4
CRJ 4400 -- Judicial Process . . . . .	4
CRJ 4410 -- Juvenile Justice System . . . . .	4
CRJ 4750 -- Criminal Justice Response to Domestic Violence. . . . .	4
CRJ 4800 -- Outsiders, Outcasts, and Social Deviants (SOC 4800) . . . . .	3
CRJ 4990 -- Directed Study . . . . .	1-3
CRJ 4998 -- Honors Thesis. . . . .	3
CRJ 5060 -- Comparative Criminal Justice Systems . . . . .	3
CRJ 5340 -- Community Based Corrections . . . . .	3
CRJ 5700 -- Understanding Stress in Law Enforcement. . . . .	3
CRJ 5720 -- Criminal Law . . . . .	4
CRJ 5790 -- Topics in Justice and Law . . . . .	4
CRJ 5810 -- Law in Human Society (SOC 5810) . . . . .	3
CRJ 5910 -- Seminar in Crime, Victimization, and Society . . . . .	4
CRJ 5994 -- Dispute Resolution (PCS 5000) . . . . .	3
CRJ 5995 -- Special Topics. . . . .	3
CRJ 6000 -- Internship . . . . .	3-4
CRJ 6230 -- Advanced Law Enforcement Administration . . . . .	3
CRJ 6430 -- Counseling Strategies for Juvenile Offenders. . . . .	3
CRJ 6600 -- Social and Legal Dynamics of Child Abuse . . . . .	3
CRJ 6750 -- Administrative Law in Criminal Justice . . . . .	3
CRJ 6860 -- Organized Crime (SOC 6860) . . . . .	3

TOTAL DEGREE PROGRAM CREDITS . . . . . 40

**Writing Intensive (WI) Course in Criminal Justice (CRJ 5993):** Students majoring in criminal justice must register for CRJ 5993 and coregister in the same term for one of the following courses (with the instructor's consent): CRJ 3120, 3260, 3510, 3710, 3750, 4000, 4300, 4400, 4410, 4600, 4750, 4990, 4998, 5060, 5340, 5700, 5710, 5720, 5860, 5995, 6000, 6230, 6430, 6600, or 6750.

**Minor and Other Study**

**Minor in Criminal Justice:** The Department offers a minor in Criminal Justice for which the notation of a minor appears on the student's transcript. The required Criminal Justice courses are:

credits

CRJ 1010 -- Introduction to the Criminal Justice System . . . . .	4
CRJ 4300 -- Corrections . . . . .	4
CRJ 4400 -- The Judicial Process. . . . .	4
CRJ 4600 -- The Police in America. . . . .	4
CRJ 5710 -- Constitutional Criminal Procedure . . . . .	4
Criminal Justice Elective . . . . .	3-4

Total: 23-24

Students wishing to minor in criminal justice are encouraged to visit the Departmental Offices for information and counseling. A minor must be declared prior to filing for graduation.

**Pre-Law Advising and Curriculum:** Students wishing to major or minor in criminal justice and who are considering legal careers should notify the Department's adviser at the beginning of their junior year and arrange a conference with a pre-law adviser. For non-majors wishing to take a pre-law sequence of courses in criminal justice the following are recommended:

CRJ 1010 . . . . .	Introduction to the Criminal Justice System
CRJ 3260 . . . . .	Investigation
CRJ 3710 . . . . .	Legal Writing
CRJ 4400 . . . . .	Introduction to the Judicial Process
CRJ 5710 . . . . .	Constitutional Criminal Procedure
CRJ 5720 . . . . .	Criminal Law
CRJ 5790 . . . . .	Topics in Justice and Law

**Graduate Study:** Graduating seniors who are planning graduate study in criminal justice may qualify to complete approved course work toward the Master of Science in Criminal Justice degree under the AGRADE or the Senior Rule provision.

**AGRADE Program:** The College of Liberal Arts Accelerated Graduate Enrollment (AGRADE) Program allows qualified seniors to apply a maximum of fifteen credits toward both the Bachelor of Science and Master of Science in Criminal Justice degrees. Qualifications for AGRADE include Senior status and a minimum major g.p.a. of 3.6. For additional information, interested students should contact the Criminal Justice Academic Services Officer (577-0772).

**Senior Rule Study:** Minimum requirements for Senior Rule study include: a 3.0 grade point Average for the junior and senior years of study, and at least one (but not more than ten) credits remaining to be completed for the undergraduate degree. Additional limitations and requirements apply for this status and for continuing graduate study in criminal justice. Interested seniors should consult with their undergraduate adviser for further information.

A more complete discussion of the Master of Science in Criminal Justice degree program appears in the Wayne State University Graduate Bulletin.

**Honors in Criminal Justice**

The Honors Program in Criminal Justice is open to students of superior academic ability who are majoring in criminal justice. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/ she must accumulate at least fifteen credits in honors-designated course work from various departments in the College, including honors requirements within Criminal Justice, and including at least one 4000-level Honors Program seminar (consult the Schedule of Classes under 'Honors Program'). The Honors student must demonstrate the ability to do an original Honors Thesis during the senior year. For information about the requirements of the department's honors curriculum, contact the Criminal Justice Honors Director (577-2705).

**UNDERGRADUATE COURSES (CRJ)**

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493 .

**1010 Introduction to the Criminal Justice System. Cr. 4**  
Scientific method and multidisciplinary approach to administration, procedures, and policies of agencies of government charged with enforcing the law, adjudicating crime, and correcting criminal and deviant conduct. Response of justice system to social norms and trends; reciprocal relationship to social behaviors and values. (T)

**3120 Politics of the Criminal Justice Process. (P S 3120) Cr. 4**  
Prereq: sophomore standing. Political aspects of criminal justice; politics of crime legislation, police function, prosecution, adjudication, and corrections; Federal role in criminal justice. (Y)

**3260 Investigation. Cr. 3**  
Prereq: CRJ 1010. Overview of the history of criminal investigation, the functions of police investigators, crime scene search and evidence processing, an introduction to criminalistics, locating and inter-



viewing witnesses, examining the elements of proof required in specific criminal offenses and interrogation techniques (pre- and post-Miranda). (T)

**3510 Introduction to Security: Persons and Property. Cr. 4**

No credit after former CRJ 2310. Historical, philosophical and legal framework for security operations; detailed presentations of specific security processes and programs currently and historically utilized in providing security; operational view of specialized areas of security in loss prevention management. (T)

**3710 Legal Writing for Criminal Justice. Cr. 4**

Basic elements of legal research; the law library and finding the law; case analysis; statutory analysis; constitutional analysis; writing legal memorandums; writing legal briefs; persuasive writing. (F,W)

**3750 Gender Issues for Criminal Justice Professionals. (W S 3750) Cr. 4**

Becoming aware of gender issues faced by criminal justice professionals; explanation of issues through sociological theory; research studies; suggested system improvements. (F,W)

**4000 Criminological Theories. Cr. 4**

Delineation, review, and critical analysis of major explanations of criminality including biological, psychological, deterrence, rational choice, learning and integrated theories. (F,W)

**4300 Corrections. (SOC 3840) Cr. 4**

Prereq: CRJ 1010. No credit after former CRJ 2300 or CRJ 2700. Description and analysis of legal, social and political issues affecting contemporary correctional theory and practice. Topics include: history of corrections; function and social structure of correctional institutions; institutional alternatives including diversion, probation and parole. Field trips to institutions and community correctional settings may be offered. (T)

**4400 The Judicial Process. Cr. 4**

Prereq: CRJ 1010. No credit after former CRJ 2400. Structure, powers, doctrines and judicial processes including origin, nature and functions of judicial review in the criminal justice system. (T)

**4410 The Juvenile Justice System. Cr. 4**

Prereq: CRJ 1010. No credit after former CRJ 2410 or CRJ 2991. Overview of the juvenile justice system; interrelationships with other components of the criminal justice system. Evaluation of law enforcement approaches to police-juvenile contacts. (T)

**4600 The Police in America. Cr. 4**

Prereq: CRJ 1010. No credit after former CRJ 2600. Role of the police officer in relation to the customs and problems of the community and to other elements in the criminal justice system. Comparative analysis of techniques being used by law enforcement agencies to deal with crime. (T)

**4750 Criminal Justice Responses to Domestic Violence. Cr. 4**

Scientific knowledge of criminal justice responses to partner assault. Rationales for developing policies and federal grants for criminal justice interventions. (F,W)

**4800 (SOC 4800) Outsiders, Outcasts and Social Deviants. Cr. 3**

Definition and characteristics of behaviors which have, at times, been considered deviant, such as: criminality, mental illness, alcoholism, drug addiction, abortion, prostitution, and pornography. Interdisciplinary theories introduced to facilitate understanding of those behaviors, their diagnosis, management, control, and prevention. (T)

**4990 Directed Study. Cr. 1-3**

Prereq: criminal justice major; written consent of instructor. Open only to Criminal Justice majors. Independent reading or research in a particular facet of criminal justice, culminating in an extended paper or research report prepared under direct supervision of faculty. (T)

**4998 Honors Thesis in Criminal Justice. Cr. 3-6**

Prereq: CRJ 4990, written consent of instructor and honors program director. Open only to criminal justice majors. Research problem to be completed under the direction of a faculty member. (Y)

**5060 Comparative Criminal Justice Systems. Cr. 3**

No credit after former CRJ 6500. Selected criminal justice systems in other nations. (I)

**5340 Community Based Corrections. Cr. 3**

Prereq: CRJ 2300. History, theory and practice of community based corrections. Probation and parole; halfway houses and other residential correctional facilities. Jails as community correctional centers. Legal issues. International perspectives. The future of community corrections. (F,W)

**5700 Understanding and Coping With Stress in Law Enforcement. Cr. 3**

Provides criminal justice personnel with a bio-social framework or model to identify specific stresses peculiar to law enforcement work and develop adaptive mechanisms to mediate stress and alleviate the psychological effects of stress. (I)

**5710 Constitutional Criminal Procedure. Cr. 4**

Prereq: minimum of twelve credits in criminal justice; CRJ 1010. Not for graduate credit without consent of graduate program adviser. Constitutional safeguards and legal controls on governmental action. Constitutional doctrines examined: due process, equal protection of the laws, search and seizure, self-incrimination, double jeopardy, right to counsel, speedy trial, bail, cruel and unusual punishments. Topics may include: role of Supreme Court, investigation, arrest, stop and frisk, searches, electronic eavesdropping, confessions, preliminary examination, grand jury, plea bargaining, jury trial, sentencing, prisoners' rights, death penalty. (T)

**5720 Criminal Law. Cr. 4**

Not for graduate credit without consent of graduate program adviser. An examination of the common law. Development of the criminal law, the general elements of crime, general defenses, principles of accountability, and the particular elements of specific crimes. (T)

**5790 Topics in Justice and Law. Cr. 4**

Prereq: junior status; 3.0 g.p.a. or above, or honors student. Legal analysis of selected topics in justice and law; rotating topics including political trials. (I)

**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)

**5860 Research Methods in Criminal Justice. Cr. 4**

Criminal justice data sources; designs for research; analysis and application of descriptive and inferential statistics in criminal justice planning and evaluation. (F,W)

**5910 Seminar on Crime, Victimization, and Society. Cr. 4**

Prereq: CRJ 1010 and 5860. Review of advanced research on crime, victimization, and society. (I)

**5993 (WI) Writing Intensive Course in Criminal Justice. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: CRJ 3120, 3260, 3510, 3710, 3750, 4000, 4300, 4400, 4410, 4600, 4750, 4990, 4998, 5060, 5340, 5700, 5720, 5860, 5995, 6000, 6230, 6430, 6600, or 6750. Offered for S and U grades only. No degree credit. Required for CRJ majors. Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite; see Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. (T)

**5994 (PCS 5000) Dispute Resolution. (P S 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. No credit for repeated section. (T)

**6000 Internship. (U S 6000) Cr. 1-8 (Max. 8)**

Prereq: written consent of adviser. A comprehensive internship program involving various criminal justice agencies. Placement may be made in court, corrections, police, juvenile justice, and other agencies at the federal, state, county and local levels; work opportunities include agency procedure and policy, patrol, case analysis, report writing and research. (T)

**6230 Advanced Law Enforcement Administration. Cr. 3**

Prereq: CRJ 1010 and CRJ 4600. Police-management problems; organization and objectives, planning and coordination, public relations and support. (W)

**6430 Counseling Strategies with Youthful Offenders. Cr. 3**

Prereq: CRJ 4410. No credit after former CRJ 6991. Application of causal theories to counseling strategies. Models for offender classification and treatment. Counselor attitudes and styles. Special issues in the treatment of delinquents. Individual and group models for counseling. Evaluation models to assess counseling effectiveness. (W)

**6600 Social and Legal Dynamics of Child Abuse. Cr. 3**

Prereq: CRJ 4410. Dynamics and psychopathology of child abuse: its incidence and impact on the family, society, and the numerous social and legal agencies involved in the detection, processing, and treatment of both child abusers and the abused. (F)

**6750 Administrative Law in Criminal Justice. Cr. 3**

Prereq: junior, senior or graduate level standing. Functions, powers, procedures, and constitutional limitations germane to administrative agencies and officers, with particular emphasis on those operating in the criminal justice field. (Y)

**6860 (SOC 6860) Organized Crime: Its History and Social Structure. Cr. 3**

Prereq: CRJ 3850 or SOC 3820. Open only to juniors, seniors and graduate students. Analysis of the history and social structure of organized crime. Contemporary national and international forms of criminal enterprises. (B)

# ECONOMICS

Office: 2074 Faculty/Administration Building; 577-3345

Chairperson: Jay H. Levin

Administrative Assistant: Delores G. Tennille

## Professors

Ralph M. Braid, David I. Fand (Emeritus), Thomas J. Finn, Jr. (Emeritus), Allen C. Goodman, I. Bernard Goodman (Emeritus), Mark L. Kahn (Emeritus), Jay H. Levin, Li Way Lee, John M. Mattila (Emeritus), John D. Owen (Emeritus), Karl Roskamp (Emeritus), Robert J. Rossana

## Associate Professors

R. King Adamson (Emeritus), Kevin D. Cotter, Stephen J. Spurr

## Assistant Professors

Basma Bekdache, Julie Hunsaker, Jee-Hyeong Park

## Adjunct Professors

Timothy M. Bates, Gail A. Jensen

## Degree Programs

*BACHELOR OF ARTS with a major in economics*

*\*MASTER OF ARTS with a major in economics*

*\*DOCTOR OF PHILOSOPHY with a major in economics*

*(Also see Master of Urban Planning with specialization in economics, and Master of Arts in Industrial Relations, in the Wayne State University Graduate Bulletin)*

Economists frequently describe their work as the study of how individuals and societies allocate limited resources to try to satisfy unlimited wants. Economics is a science of choices. Households and firms must decide what and how much to consume or produce and how much to pay for products and for the use of labor, land and capital. The federal government makes decisions affecting inflation and unemployment, taxation and expenditures, the monetary system and international trade. Together these public and private choices determine the nation's prosperity and shape the distribution of its wealth. Since every social relationship has economic aspects, an understanding of economic principles and systems is an integral part of a liberal education.

Economics majors have a wide choice of courses and careers. Many supplement their major with cognate courses to prepare for careers in business, journalism, health care administration or public service. Others find it excellent preparation for law school. Undergraduates who want to do graduate work in economics need a good mathematics background. Ph.D. graduates are in demand at universities, corporations, financial institutions and government agencies. M.A. graduates may teach at junior colleges but more typically go into business or public service.

## Bachelor of Arts in Economics

**Admission requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 15, as well as the instructions for declaring a major (page 224). The Economics Department presumes as prerequisite to all economics courses at least two years of high school-level algebra and one year of geometry.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

**Major Requirements:** Students considering an economics major should take ECO 2010 and 2020 as soon as possible. They should also pass MAT 1500 or 1800 prior to the junior year or demonstrate eligibility for MAT 2010 in the mathematics qualifying examination.

A major consists of thirty-two credits in economics. These must include Economics 2010 and 2020 (Principles of Microeconomics and Macroeconomics), Economics 5000 and 5050 (Intermediate Microeconomics and Macroeconomics), and Economics 5100 (Introductory Statistics and Econometrics). The Department recommends that majors complete all of these courses by the end of their junior year.

Majors must elect at least three courses in two or more of these fields: industrial organization, international economics, labor and human resources economics, public finance, economic history and development, money and banking, and urban and regional economics. Each student should consult his/her major adviser to choose the economics electives best suited to his/her intellectual and professional aims.

Majors must satisfy the following residency requirement: at least sixteen credits of the thirty-two credits required for the major must be earned at Wayne State University.

To satisfy the General Education Major Competency Requirement, Economics majors must have a cumulative grade point average of 2.0 in their economics courses. In addition, all majors must receive a minimum grade of 'C' in each of the Department's core courses (ECO 5000, 5050, and 5100).

**Writing Proficiency/Writing Intensive Requirement:** To enable the Department to evaluate their writing proficiency, economics majors must register for ECO 5993, the zero-credit WI course, in conjunction with one of its stipulated corequisites. All economics majors must satisfy this requirement, even if they are not subject to the University General Education Requirements. Papers written for economics courses may satisfy the requirement, when certified by the assigning faculty member as satisfying the writing proficiency requirement.

**Cognate Courses:** Economics majors should consult with their adviser about cognate courses. Majors may earn as many as sixteen cognate credits in business courses. Courses in other social sciences and in computer science are also useful complements to economics. Majors who plan graduate study in economics are encouraged to take the Mathematics 2010 sequence as early as possible. Cognate credits contribute to the 120 credits required for graduation, but they do not count toward the required thirty-two credits in economics.

**Combined Curriculum for Teaching Certificate:** Economics majors wishing to enter secondary teaching should see page 208 for a description of the requirements and procedures for combining a degree in Liberal Arts with a teaching certificate. Students must complete the Economics major requirements as part of their program of study.

## Honors Program

Economics majors with strong academic records and an interest in research are urged to apply to the departmental undergraduate adviser for admission to the Honors Program. Applicants should have overall grade point averages of 3.3 or above.

Honors majors must take Economics 4997, the Senior Honors Seminar, during their last two semesters before graduation. They conduct research for the seminar under the close supervision of an Economics faculty member and write their results as an honors thesis, the

length of which depends on the nature of the research project. Honors majors also must elect at least one 4000-level seminar offered by the Honors Program. (See the Schedule of Classes under 'Honors Program' for seminar topics.) Finally, the student must accumulate at least fifteen credits in honors-designated course work, including Economics 4997 and the Honors Program Seminar. These honors credits need not be in the Economics Department. Those who successfully complete these requirements and finish their undergraduate course work with an overall grade point average of 3.3 or above will graduate with the degree designation 'With Honors in Economics'. For additional information on other honors-designated course work available each semester, see the Liberal Arts section of the University Schedule of Classes under 'Honors Program,' or contact the Director of the Honors Program (577-3030).

## Minor in Economics

A minor consists of ECO 2010, ECO 2020, and any three elective courses at the 4000-level or above. (ECO 4100 cannot be used to satisfy minor requirements.) At least three courses must be taken in residency. Students must have a cumulative grade point average of 2.0 or better in economics courses.

## 'AGRADE' Program

The Economics Department actively participates in the 'AGRADE' (Accelerated Graduate Enrollment) Program, which enables qualified seniors in the College of Liberal Arts to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of fifteen credits toward both an undergraduate and graduate degree in economics. Students interested in 'AGRADE' should contact the Director of Undergraduate Studies: 577-3345.

## The Samuel M. Levin Award

Economics undergraduates are eligible to enter in the annual essay competition for the Samuel M. Levin Award. Essays are judged by a faculty committee, which awards a cash prize of \$1000 provided that an entry of sufficient merit is received. The award fund is supported by private donations in honor of Samuel M. Levin, the Department's first chairperson, and is intended to encourage research and publication in economics.

## UNDERGRADUATE COURSES (ECO)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

## Introductory Economics

### 1000 (SS) Survey of Economics. Cr. 4

Not for major credit. Scope of economics and the task of the economist in modern society; the market economy - its evolution and development; non-market economies; economic problems and prospects in the contemporary world. (T)

### 2010 (SS) Principles of Microeconomics. Cr. 3-4

Supply, demand, price at the level of the firm and industry; business institutions and their operation; determinants of wage and salary levels, interest rates, rent, profits, income distribution; public policy in relation to business and labor. (T)

### 2020 (SS) Principles of Macroeconomics. Cr. 3-4

Determination of national income, consumption and saving, and investment; money, banking and the Federal Reserve; inflation and unemployment; monetary and fiscal policy; economic growth and productivity; the international sector. (T)

## Field A: Economic Theory

### **5000 Intermediate Microeconomics. Cr. 4**

Prereq: ECO 2010, MAT 1500 or MAT 1800 or equiv. based on satisfactory score on mathematics placement examination. Theory of the firm and consumer. Analysis of a price system as a means to efficient allocation of productive resources. (T)

### **5020 Fundamentals of Economic Analysis. (ECO 7020) Cr. 4**

Prereq: ECO 5000 and MAT 2010 or MAT 1800 or equiv. ECO 5020 offered for undergraduate credit only; ECO 7020 offered for graduate credit only. Basic mathematical methods applied to economic analysis, including applications of differential and integral calculus, analytical geometry, and linear algebra. Problems used to illustrate applications in microeconomics and macroeconomics. (F)

### **5050 Intermediate Macroeconomics. Cr. 4**

Prereq: ECO 2020, MAT 1500 or MAT 1800 or equiv. based on satisfactory score on mathematics placement examination. Theory of national income determination. National output and income, saving and capital formation. (T)

### **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. 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)

### **6450 Economic Analysis and Public Administration. Cr. 3**

No major or minor credit in economics. Basic tools of microeconomic analysis; decision-making by individuals, firms (including government regulation), collectivities (including benefit-cost analysis). Application of analysis to areas of public administration, such as: aging, health care, education, pollution, discrimination, income stabilization, industrial policy, other long-term policy issues. (S)

## Field B: Quantitative Methods

### **4100 Economics and Business Statistics. Cr. 3**

Prereq: ECO 2010 and 2020; MAT 1500 or MAT 1800 or equiv based on satisfactory score on math placement exam. Not for major credit. Introduction to statistical inference; probability, including subjective probability; expected value and variance; sampling distributions and elementary problems of estimation and hypothesis testing. (T)

### **5100 Introductory Statistics and Econometrics. Cr. 4**

Prereq: ECO 2010, 2020; MAT 1500 or MAT 1800 or equiv. based on satisfactory score on mathematics placement examination. Preliminary data analysis; simple regression; multiple regression; probability and statistics; inference in multiple regression; generalized regression. (T)

### **6100 Introduction to Econometrics. Cr. 4**

Prereq: ECO 5050 and 5100 or consent of instructor. Application of statistics and mathematics to the quantitative analysis of the position of and changes in the economy as a whole. Typical problems formulated as testable hypotheses. Models of the economy analyzed. (F)

### **6120 Statistics and the Law. Cr. 3**

Prereq: MAT 1800 or equiv. or consent of instructor. Open only to Law students. 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)

## Field C: Industrial Organization

### **5210 Market Power and Economic Welfare. Cr. 4**

Prereq: ECO 2010. Monopoly, oligopoly, and competition in U.S. industry; sources of market power and their effect on prices, profits, and technological progress, as illustrated by such industries as steel, automobiles, petroleum, retailing, or prescription drugs. Selected topics in antitrust policy. (Y)

### **5250 Economic Analysis of Law. Cr. 4**

Prereq: ECO 2010. 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. (Y)

## Field D: International Economics

### **5300 International Trade. Cr. 4**

Prereq: ECO 2010. Factors in international economic relations; patterns of international specialization; balance of international payments; foreign exchange; commercial policy of the United States and other countries; foreign investment and economic development; international economic cooperation. (F)

### **5310 International Finance. Cr. 4**

Prereq: ECO 2010. 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; the European monetary system; the Third World debt problem; and proposals to reform the international monetary system. (W)

## Field E: Labor and Human Resources

### **5490 American Labor History. (HIS 5290) (HIS 7290) Cr. 4**

Prereq: ECO 2010 or consent of instructor. Development of the American labor movement; its behavior in the contemporary scene. Labor's experiments with social, political, legal, and economic institutions. Comparisons with foreign labor movements. (B)

### **6410 Labor Markets. Cr. 4**

Prereq: ECO 2010. Labor supply; causes of and remedies for unemployment; labor mobility and the operation of labor markets; productivity and real wages; wage determination; human capital, income distribution, and economic development; poverty and its causes; economic impact of collective bargaining. (Y)

### **6420 Labor Relations and Public Policy. Cr. 3**

Prereq: ECO 2010 or graduate standing. 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)

## Field F: Public Finance

### **5500 Public Finance: Taxation and Expenditure Theory. Cr. 4**

Prereq: ECO 2010 or consent of instructor. 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. (S,F)

### **5550 Economics of Health Care. Cr. 4**

Prereq: ECO 2010. 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 economics of health care. (Y)

## Field G: Economic History and Development

### **5600 Introduction to Development Economics. Cr. 4**

Prereq: ECO 2010 or consent of instructor. National poverty and economic growth viewed from an historical and theoretical perspective; particular emphasis on national and international policies. (Y)

### **6650 (ULM 6210) Regional, State, and Urban Economic Development: Policy and Administration. (P S 6440) (U P 6550) Cr. 3**

Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

## Field H: Money and Banking

### **5700 Money and Banking. Cr. 4**

Prereq: ECO 2010. 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. (F,W)

## Field I: Urban and Regional Economics

### **5800 Urban and Regional Economics I. (U P 5820) Cr. 4**

Prereq: ECO 2010 or 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)

### **6810 (ULM 6150) Political Economy of the Urban Ghetto. (SOC 6850) (U P 6670) Cr. 3**

Prereq: graduate standing; upper division undergraduates by consent of instructor. Examination of the economic, social and political transformation of U.S. cities; particular attention to the formation, dynamics, economics and social sub-systems of urban ghettos and their relationship to broader contexts. (B)

## Directed Readings and Special Courses

### **3990 Directed Study. Cr. 1 (Max. 2)**

Prereq: senior standing with 12 or more credits in economics with grade A or B. For the student who shows evidence of ability and interest in economic study and who desires opportunity for advanced reading in a special field. Arrange with adviser. (T)

### **3991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. Directed study at University of Salford, England. (F,W)

### **4991 Research in Economics. Cr. 3-12 (Max. 12)**

Prereq: consent of department prior to registration; senior standing with 12 or more credits in economics with grade A or B. Economic research on an appropriate topic of the student's choice, conducted under faculty supervision. (T)

### **4997 Senior Honors Seminar. Cr. 4 (8 req.)**

Prereq: economics honors program, senior standing, major in economics. Must be elected two successive semesters. Research methodology, reading and discussion in areas selected by the seminar instructor. A senior honors essay. (T)

### **5991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. Directed study at University of Salford, England. (F,W)

### **5992 Directed Study: Economics for High School Teachers. Cr. 4**

Prereq: consent of adviser. Open to area high school teachers. Designed for Detroit-area high school teachers and covering material taught in high school: micro- and macroeconomic concepts, urban issues, international economics; methods for teaching economics. (T)

### **5993 (WI) Writing Intensive Course in Economics. Cr. 0**

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: ECO 3990, 5200, 5210, 5490, 5600, 5700, or 5800. 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)

# ENGLISH

Office: Room 1200, 51 West Warren; 577-2450

Chairperson: Robert Burgoyne

Associate Chairperson: Elizabeth S. Sklar

Academic Services Officer: Margaret M. Maday

## Professors

Ellen Barton, Lesley Brill, Robert Burgoyne, Walter F. Edwards, Henry L. Golemba, William A. Harris, Jerry Herron, Donna Landry, Christopher Leland, Kathryn Lindberg, Gerald MacLean, Arthur F. Marotti, Ruth E. Ray, John R. Reed, Michael H. Scrivener, Anca Vlasopolos, Renata M. Wasserman

## Associate Professors

Anthony Aristar, Cynthia Erb, Janet C. Langlois, Bernard Levine, Richard C. Marback, Ljiljana Progovac, Ross J. Pudaloff, Martha Ratliff, Elizabeth S. Sklar, Barrett Watten

## Assistant Professors

Robert Aguirre, Gwendolen Gorzelsky, Kenneth Jackson, Sheila Lloyd, Bruce S. Morgan, Yvonne Paschal, Frances Ranney, Kirsten Thompson

## Senior Lecturers

Carla Harryman, Michael L. Liebler

## Lecturers

Marta O. Dmytrenko-Ahrabian, Christopher Bierman, Todd Duncan, Laurie Evans, Dorothy Huson, Margaret Jordan, Dean-Michael Lynn, Phoebe Mainster, Sara Tipton, Chris Tysh, Barbara Van Camp

## Director, English Language Institute

Bruce S. Morgan

## Emeritus / Emerita Professors

Samuel Astrachan, Alvin B. Aubert, Esther M. Broner, Samuel A. Golden, Arnold L. Goldsmith, Yates Hafner, Orville F. Linck, Ralph L. Nash, Joseph Prescott, Alfred Schwarz, Robert M. Strozier II, Marilyn L. Williamson, Beongcheon Yu

## Emeritus / Emerita Associate Professors

Bradford S. Field, Jeanne A. Flood, Isabel Graham, David S. Herreshoff, William E. Mockler, Amy K. Richards, Edward Sharples, Paul Sporn, Travis E. Trittschuh

## Degree Programs

*BACHELOR OF ARTS with a major in English*

*\*MASTER OF ARTS with a major in English*

*\*MASTER OF ARTS in Comparative Literature*

*\*DOCTOR OF PHILOSOPHY with a major in English and specializations in American literature, English literature, literary criticism, and composition research*

## Bachelor of Arts With a Major in English

English Studies today includes many fields of inquiry and areas of textual theory and analysis. The English major is designed to introduce students to these fields and to provide a challenging and flexible liberal arts education as well as a pre-professional program for students interested in careers in education, the law, business, and other professions.

**Admission requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**Advising:** The Associate Chairperson of the Department and the Assistant to the Associate Chairperson provide advising to English majors. As soon as possible, and no later than the completion of sixty credits, the prospective major should consult one of the advisers in the Department to discuss a course of study. E-mail advising is available at: [advise@lists.wayne.edu](mailto:advise@lists.wayne.edu)

English majors and minors are not exempt from the English Proficiency Examination in Composition.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223 -227, respectively.

**Credit Limitations:** NO MORE than forty-six credits in the major field may count toward degree requirements. With the adviser's approval, appropriate English 5990 (Directed Study) credit may count toward a major.

**Major Requirements** consist of twelve English courses beyond the University General Education Competency Requirement (see page 29), and Liberal Arts Group Requirements (see page 223). Ten of these courses must be beyond the 2000 level. (For exceptions in combined degree programs, see below.) Specific requirements are as follows:

1. English 3100, Introduction to Literary Studies, Cr. 3.
2. Three courses in English and American literature:
  - a) English 3110, (PL) English Literature to 1700, Cr. 3.
  - b) English 3120, (PL) English Literature after 1700, Cr. 3.
  - c) English 3140, (PL) Survey of American Literature, Cr. 3.
3. One upper-division course with an emphasis on theory in one of the following areas: composition theory, literary or cultural theory, film theory, folklore theory, linguistic theory, rhetorical theory (English 5040, 5080, 5090, 5600, 5700, 5740, 5750, or 5790).
4. One upper-division course in cross-disciplinary or comparative studies in one of the following areas: comparative literature, gender studies, African-American literature, film, cultural studies, folklore, or creative writing (English 5030, 5060, 5070, 5480, 5580, 5590, 5650, 5670, 5870, 5880, or 5890).
5. English 5992, Senior Seminar, Cr. 4. This course with co-registration in ENG 5993 fulfills the General Education Writing Intensive requirement. With the consent of the associate chairperson and the appropriate instructor, students are occasionally permitted to substitute a 5000-level course, with ENG 5993 co-registration, for the Senior Seminar and to fulfill the Writing Intensive requirement.

In addition to the above requirements, majors must take at least five other English courses for a minimum of 36 credits (46 credits maximum). Three of these five courses must be at the 5000 level. The Department recommends that students preparing themselves for graduate work in literature choose course work that will expose them to a broad historical range of English and American texts. Students who wish to teach English on the secondary school level are advised to take a course in Shakespeare (English 2200 or 5150), courses in

\* For specific requirements, see the Wayne State University Graduate Bulletin.

American literature beyond the basic major requirements, and an advanced course either in composition, composition theory, or the teaching of writing. Students are free to select courses in any of the fields of English studies and to emphasize any one of the areas covered by the Department's course offerings.

## Honors in English

The English Department participates in the Liberal Arts Honors Program. To graduate with honors in English an undergraduate student must have a minimum 3.5 g.p.a. in English. Honors requirements are:

1) A minimum of thirty-six credits in English courses beyond the Liberal Arts Group requirements and General Education requirements, twelve credits of which must be in Honors courses. The required English courses are:

- a) English 3100, Introduction to Literary Studies: three credits.
- b) the three basic surveys of English and American literature: ENG 3110, 3120, and 3140: nine credits;
- c) one course in theory: three credits;
- d) one comparative or cross-disciplinary course: three credits;
- e) the English Honors Seminar, ENG 4991: three to six credits;
- f) the English Honors Project, ENG 4992: three credits;

g) electives in English, most of which must be at the 5000-level, and three credits of which must be taken with the Honors Option designation: nine to twelve credits.

2) At least one 4200-level interdepartmental Honors Seminar, HON 4200-4280.

Candidates for honors in English may arrange for their Honors-option coursework by contracting with any professor teaching a 5000-level course to do honors-level work in that course. Supplementary work required for the 'honors' designation might consist of an extra paper, a longer term paper, evidence of additional readings (for example, through journal entries), an oral or written report on an aspect of criticism, a special examination, or the like.

The Honors Project should be twenty to thirty pages long. It may be in any specialty comprised by the broad field of English: creative writing (accompanied by a short critical essay), film studies, linguistics, literature, literary theory, folklore, cultural studies, or writing theory.

Students who wish to become candidates for degrees with honors in English are encouraged to consult early with the Associate Chairperson of the English Department (577-7694) or with the Director of the University Honors Program (577-3030).

## 'AGRADE' Program

The English Department invites academically superior majors to petition for admission to the 'AGRADE' (Accelerated Graduate Enrollment) Program. 'AGRADE' procedures enable qualified seniors to enroll simultaneously in the undergraduate and graduate programs of the Department and to apply a maximum of fifteen credits toward both a bachelor's and a master's degree. Students admitted to the 'AGRADE' Program may be able to complete both degrees in five years of full-time study.

An 'AGRADE' applicant should petition the Director of Graduate Studies of the English Department for admission. Applications will be accepted no earlier than the semester in which ninety credits are completed. Applicants must have an overall grade point average at the 'cum laude' level (approximately 3.4) and not less than a 3.6 g.p.a in the major courses already completed. If a student's petition is accepted, a designated faculty adviser will develop a graduate Plan of Work, specifying the 'AGRADE' courses to be included in subsequent semesters.

For more details about the 'AGRADE' Program, contact the Director of Graduate Studies in English: 577-2450.

## Combined Curriculum Requirements

**Combined Curriculum for Secondary Teaching:** An English major who wishes to prepare for a career in secondary school teaching must complete either the regular program for majors or the Honors Program. Information regarding this curriculum is on page 229.

**Combined Curriculum with Dentistry, Law, or Medicine:** (See page 225.) Students who wish to major in English and receive the Bachelor of Arts degree by the end of their first professional year of study must complete six courses in English beyond the General Education and Liberal Arts Group Requirements. At least four of these must be above the 2000 level.

## Cognate Study in English

**College and University Requirements:** All students in the University must pass English 1020 (Introductory College Writing), and all students in the College of Liberal Arts must pass one designated writing-emphasis literature course at the 2000 level to fulfill the College English Group Requirement. Those students whose scores on the English Qualifying Examination, taken prior to matriculation, indicate need for instruction and practice in composition will be placed in English 1010/1015 (Basic Writing) before they take English 1020. (To take the English Qualifying Examination, students must apply upon admission to: Testing and Evaluation, University Counseling Services.)

In addition, designated English courses may be used toward fulfillment of the College and University Philosophy and Letters requirement (see page 32).

Courses at the 2000 and 3000 level are open to all undergraduates who have completed 1020. Courses at the 5000 level are open to both undergraduates and M.A. students. Senior standing is prerequisite to undergraduates' admission to all 6000-level courses. Only graduate students may register for 7000-level courses.

Students should note that some English courses have general titles which are constant while specific sub-titles change each semester. Students may elect such courses more than once, up to the maximum number of credits allowed.

**The Minor in English:** The minor in English requires six courses beyond freshman composition for a total of at least eighteen credits:

- a. at least one course from the following: English 3110, English 3120, English 3140.
- b. at least one course from ENG 5080 through 5590.
- c. four electives in English, provided that at least two are selected from ENG 2200, 3110, 3120, 3140, and 5000-level courses.

No 1000-level course and not more than two 2000-level courses will count toward the minor.

The minor in English permits study in literature, film and literature, folklore, creative writing, linguistics, and expository writing. Students are invited to discuss their program with an English adviser.

*The English minor in folklore* is for students interested in the analysis of the oral and material aspects of a traditional culture. It requires a minimum of six courses: English 2600, 3600, 5600, 5650, and 5670, and a cognate course selected from appropriate offerings in English or other departments. Folklore minors should consult with the undergraduate folklore adviser (577-7708) to set up an appropriate program. Not more than two courses at the 2000 level will count toward the minor, and no 1000-level course will count.

## Scholarships

Also see page 227, above, and the section on the Office of Scholarships and Financial Aid, page 20. For further information, contact the Department Office.

*Gilbert R. and Patricia K. Davis Endowed Scholarship for English Majors:* Award open to part-time students majoring in English in the College of Liberal Arts, with a g.p.a. of 3.0 or above and a minimum

of fifteen credits in residence at Wayne State University. Recipients must be Michigan residents. Contact the English Department for details.

*Loughead-Eldredge Endowed Scholarships in Creative Writing:* Awards open to advanced undergraduates and M.A. students in good academic standing who are pursuing a B.A. or M.A. in English with a concentration in creative writing. Contact the English Department for details.

*Albert Feigenson Endowed Memorial Scholarship:* Awards open to full-time students majoring in music or English, with high scholastic standing and demonstrated financial need. Contact the English Department and the Office of Scholarships and Financial Aid.

*Doretta Burke Sheill Endowed Memorial Scholarship:* Awards open to students majoring in English literature who demonstrate high scholastic achievement, character, leadership, and financial need. Contact the English Department and the Office of Scholarships and Financial Aid.

*Stephen H. Tudor Memorial Scholarship in Creative Writing:* Awards 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. Contact the English Department for details.

*Pearl Applebaum Warn Endowed Scholarship in English:* Award open to returning full- or part-time female students age 27 years and older, with high scholastic achievement and demonstrated financial need. Contact the English Department for details.

*Joseph J. and Mary E. Yelda Endowed Scholarship for English:* Award open to full-time students who graduated from a metropolitan Detroit area high school, are majoring in English in the College of Liberal Arts, and have a g.p.a. of 3.0 or above. Awarded on the basis of academic merit and financial need. Contact the English Department for details.

## UNDERGRADUATE COURSES (ENG)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

*NOTE: ENG 1020 or its equivalent is prerequisite to all English courses numbered above 1999.*

### **0500 English Language Institute. Cr. 1-12 (Max. 12)**

Offered for S and U grades only. No degree credit. Intensive course in English for speakers of other languages. Includes reading, writing, grammar, listening comprehension, and speaking. (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 S and U 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)

### **1010 Basic Writing. Cr. 2**

Prereq: placement through English Qualifying Examination; coreq: ENG 1015 (Students must elect section of ENG 1015 with the same Class ID as elected section of ENG 1010.) Offered for S and U grades only. No credit toward English group requirement. One hour arranged. Extensive practice in fundamentals of college writing and reading in preparation for ENG 1020. Required of students qualifying on the basis of the English Qualifying Examination. (T)

### **1015 Basic Writing Workshop. Cr. 2**

Offered for S and U grades only. No degree credit. Coreq: ENG 1010 (Students must elect section of ENG 1010 with the same Class ID as elected section of ENG 1015.) (T)

### **1020 (BC) Introductory College Writing. Cr. 4**

Prereq: placement through English Qualifying Examination or passing grade in ENG 1010. A course in writing and critical reading, including at least one appropriately documented paper based upon outside sources. (T)

### **1030 English as a Second Language (ESL). Cr. 1-12**

Offered for S and U grades only. Integrated skill course designed to teach communication skills to non-native speakers of English at various levels of proficiency. (S)

### **1050 (BC) Freshman Honors: English I. Cr. 4**

Open only to Honors Program students. Freshman seminar in reading and writing about fiction, poetry, and drama. (F)

### **1080 (EP) Writing Workshop. Cr. 2**

Prereq: ENG 1020 or equiv. Offered for S and U grades only. Open only to those failing the English Proficiency Examination. Only two credits apply toward degree. Review of basic skills in writing and critical reading. Students must demonstrate writing proficiency on final exam in order to receive credit. Achieving an S grade in English 108 satisfies the English Proficiency Examination requirement. (T)

### **1700 English Grammar. (LIN 1700) Cr. 3**

Intensive course in the rules of English grammar, especially those rules needed for written work in college. Explication of the linguistic principles inherent in the rules of usage. (B)

### **2050 (IC) Freshman Honors: English II. Cr. 4**

Open only to Honors Program students. Continuation of ENG 1050. (W)

### **2100 (IC) Introduction to Poetry: Literature and Writing. Cr. 3**

Prereq: ENG 1020 or equiv. Introduction to techniques and forms of poetry through critical reading of, and writing about, poems of various types and from many periods. (F,W)

### **2110 (IC) Introduction to Drama: Literature and Writing. Cr. 3**

Prereq: ENG 1020 or equiv. Introduction to techniques and forms of drama through critical reading of, and writing about, representative plays from various traditions and periods. (Y)

### **2120 (IC) Introduction to Fiction: Literature and Writing. Cr. 4**

Prereq: ENG 1020 or equiv. Introduction to techniques and forms of fiction through critical reading of, and writing about, short stories and novels. (T)

### **2200 (PL) Shakespeare. Cr. 3**

Prereq: ENG 1020 or equiv. Emphasis on the dramatic and literary qualities of the plays: representative comedies, tragedies and histories. (T)

### **2210 (IC) Great English Novels: Literature and Writing. Cr. 3**

Prereq: ENG 1020 or equiv. Critical reading of, and writing about, a representative sample of important and pleasurable English novels from the eighteenth century through the modern period. (F,W)

### **2310 (IC) Major American Books: Literature and Writing. Cr. 3**

Prereq: ENG 1020 or equiv. Critical reading of, and writing about, representative texts in prose, poetry, and drama by such writers as Emerson, Twain, Dickinson, O'Neill, Ellison. (T)

### **2390 (IC) Introduction to African-American Literature: Literature and Writing. (AFS 2390) Cr. 4**

Prereq: ENG 1020 or equiv. Introduction to major themes and some major writers of African-American literature, emphasizing modern works. Reading and writing about representative poetry, fiction, essays, and plays. (T)



**2450 (FLM 2010) (VP) Introduction to Film. (SPF 2010) Cr. 4**

Examination of film techniques and basic methods of film analysis. Material fee as indicated in the Schedule of Classes. (T)

**2460 (FLM 2020) (VP) History of Film. (SPF 2020) Cr. 3**

Critical study of the motion picture as a modern visual art; screening and analysis of representative fiction films to illustrate important historical periods and genres. Material fee as indicated in the Schedule of Classes. (T)

**2500 (PL) The English Bible as Literature. Cr. 4**

Prereq: ENG 1020 or equiv. The King James text as a literary masterpiece. (Y)

**2530 Literature and Identity. Cr. 3**

Prereq: ENG 1020 or equiv. Study of literary texts with emphasis on how identity is shaped by ethnicity, religion, gender, sexual orientation, and other factors. (Y)

**2540 Literatures of the World. Cr. 3**

Prereq: ENG 1020 or equiv. Comparative approach to national or regional literatures throughout the world: Asian, Pacific, African, North and South American, and European. (Y)

**2570 (IC) Literature By and About Women: Literature and Writing. Cr. 3**

Prereq: ENG 1020 or equiv. Introduction to the major themes and issues of writing by and about women. Reading and writing about representative fictional and non-fictional works. (Y)

**2600 Introduction to Folklore. Cr. 3**

Prereq: ENG 1020 or equiv. Introduction to the study of the oral literatures, customs, traditional beliefs and practices of selected folk communities. (Y)

**2670 (P S 2700) Introduction to Canadian Studies. (GPH 2700) (HIS 2700) Cr. 3**

Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. (Y)

**2720 (PL) Basic Concepts in Linguistics. (LIN 2720) Cr. 3**

Prereq: ENG 1020 or equiv. Analysis of the structure and use of language, from the standpoint of current linguistic practice. Topics include: phonetics and sound structure, word structure, syntax, semantics, language origin and history, dialects, language learning, animal communication, and language in social interaction. (T)

**2730 Languages of the World. (LIN 2730) Cr. 3**

Prereq: ENG 1020. Survey of structure of major language families of the world, western and non-western; interrelationships of language and culture; universals and variations of universals in language and culture. (B)

**2800 Techniques of Imaginative Writing. Cr. 4**

Prereq: ENG 1020 or equiv. Writing in various creative forms. Frequent individual conferences and student readings for class criticism. (T)

**3010 (IC) Intermediate Writing. Cr. 3**

Prereq: ENG 1020 or equiv. Intermediate course in writing and critical reading, building upon skills taught in ENG 1020. Areas of emphasis may include: analyzing and synthesizing written material, writing essays in a variety of rhetorical modes, developing style, and improving research skills. (T)

**3030 (IC) Writing the Research Paper. Cr. 3**

Prereq: ENG 1020 or equiv. Instruction in methods of academic research, including evaluation of sources and appropriate documentation. Opportunities to explore influence of computer-generated technology on the library and on research strategies. Requires at least one substantial research paper. (I)

**3040 (FLM 3040) Major Works of World Cinema. Cr. 4**

Prereq: ENG 2450, FLM 2010, SPF 2010 recommended. Non-anglophone films of major directors viewed and studied; practice in film analysis; introduction to historical/cultural context. Emphasis on Europe and Asia; Latin America, Africa, Australia, and other areas may be included. Material fee as indicated in the Schedule of Classes. (Y)

**3050 (IC) Technical Communication I: Report Writing. Cr. 3**

Prereq: ENG 1020 or equiv., sophomore standing; coreq: ENG 0500 (1 credit) required for international students with serious ESL writing problems. Instruction in basic technical writing skills. Requirements include writing letters and memos, summaries, technical instructions, proposals, and reports. Topics include: audience and purpose analysis, visual support of texts, and formatting. (T)

**3060 (OC) Technical Communication II: Writing and Speaking. Cr. 3**

Prereq: grade of C or better in ENG 3050; coreq: ENG 0500 (1 credit) required for international students with serious ESL writing problems. Continuation of technical reporting techniques introduced in ENG 3050, emphasizing instruction and practice in oral technical reporting. Requirements include: process demonstrations, mechanism descriptions, press conferences, and a group project culminating in a written feasibility report and formal oral presentation. (T)

**3100 Introduction to Literary Studies. Cr. 3**

Prereq: ENG 1020 or equiv. Open only to English majors or students in College of Education; others by consent of instructor. Methods of reading, responding to, analyzing, and writing about texts, for students majoring in English Studies. (T)

**3110 (PL) English Literature to 1700. Cr. 3**

Prereq: ENG 1020 or equiv. Selected works from such writers as Chaucer, Spenser, Shakespeare, Donne, Milton. Required of English majors. (T)

**3120 (PL) English Literature after 1700. Cr. 3**

Prereq: ENG 1020 or equiv. Selected works from such writers as Swift, Pope, Wordsworth, Dickens, Tennyson, Eliot, Hardy. Required of English majors. (T)

**3140 (PL) Survey of American Literature. Cr. 3**

Prereq: ENG 1020 or equiv. Historical survey of American literature from the colonial period through the twentieth century with emphasis on nineteenth and early twentieth centuries. (T)

**3400 Literary Themes and Genres. Cr. 3 (Max. 12)**

Prereq: ENG 1020 or equiv. Literature in a topical or thematic context. Topics such as initiation, metamorphosis, politics and the novel, the epic, satire, recent experimental fiction. Topics to be announced in the Schedule of Classes. (Y)

**3600 Survey of American Folklore. Cr. 3**

Prereq: ENG 1020 or equiv. Survey of the oral literatures, the tall tale, customs, traditional beliefs and practices of selected folk communities of the United States, Canada, Mexico and the Caribbean in relation to American culture and society. (I)

**3810 Poetry Writing. Cr. 3**

Prereq: ENG 2800. Instruction and practice in the art of English and American poetic forms: patterns of sound, quantitative values, diction, metaphors and images. (Y)

**3820 Fiction Writing. Cr. 3**

Prereq: ENG 2800. Fundamentals of fiction, mainly the short story. Analysis of stories by established writers and by students. Frequent individual conferences. (Y)

**3830 Play Writing. Cr. 3**

Prereq: ENG 2800. Basic instruction in the development of plays for stage and television, or of movie scenarios. Attention to the writing of dialogue. (Y)

**3991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: written consent of departmental adviser. Open only to students admitted to Salford - W.S.U. Exchange Program. Directed study at the University of Salford. (F,W)

**4990 Directed Study: Honors Program. Cr. 3-6 (Max. 24)**

Prereq: written consent of English Honors Committee. (T)

**4991 Honors Seminar. Cr. 3-6 (Max. 24)**

Prereq: written consent of instructor or English Honors Committee. Honors seminar. (T)

**4992 Honors Project. Cr. 3**

Prereq: senior standing; written consent of departmental honors adviser. Substantial essay in literature, linguistics, folklore or film, or body of creative writing accompanied by an essay; directed by two members of the English faculty. (T)

**5010 Advanced Expository Writing. Cr. 3 (Max. 6)**

Prereq: grade of B or better in an intermediate writing course or consent of instructor. Advanced study and practice in various forms of expository prose, especially the essay. Topics to be announced in Schedule of Classes. (Y)

**5030 Topics in Women's Studies. (W S 5030) Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Thematic, critical or generic study of women and literature. Topics to be announced in Schedule of Classes. (Y)

**5040 Film Criticism and Theory. (FLM 5040) Cr. 4**

Prereq: ENG 2450 or another film course or consent of instructor. 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 Concepts in Film Studies. (FLM 5050) Cr. 3-4 (Max. 12)**

May not be elected more than three times. Specific movements or tendencies in film historiography. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (B)

**5060 Styles and Genres in Film. (FLM 5060) Cr. 4 (Max. 12)**

Study of significant works within selected genres: the western, the horror film, comedies. Emphasis on styles of particular directors. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (Y)

**5070 Topics in Film. (FLM 5070) Cr. 4 (Max. 12)**

Topics (such as film and fusion of the arts) to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (Y)

**5080 Topics in Cross-Disciplinary and Cultural Studies. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Study of cultural formations and practices from comparative and interdisciplinary perspectives furnished by history, semiotics, anthropology, linguistics, sociology, feminism, psychoanalysis, rhetoric, etc. Topics to be announced in Schedule of Classes. Required of English majors, but one may substitute another course in cross-disciplinary or comparative studies. (Y)

**5090 Topics in Literary and Cultural Theory. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Study of literary and cultural theory in various contexts -- urban, metropolitan, ethnic, global -- with reference to primary texts. Topics to be announced in Schedule of Classes. Required of English majors; another theory course may be substituted. (Y)

**5100 Literature of the Middle Ages. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Readings in Old and Middle English literature (900-1500), mostly in translation. Topics to be announced in Schedule of Classes. (I)

**5110 Chaucer. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Readings from The Canterbury Tales and from Chaucer's other works in cultural context. (I)

**5120 Topics in Medieval Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Themes, genres, writers in English and continental Medieval literature. Topics to be announced in Schedule of Classes. (I)

**5140 Introduction to Old English. Cr. 3**

The fundamentals of language and grammar and the literary analysis of Old English texts. (Y)

**5150 Shakespeare. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. For English majors and others interested in more intensive study than is offered in ENG 2200. Some attention to Shakespearean scholarship. (Y)

**5160 Studies in Old English. Cr. 3-4 (Max. 12)**

Prereq: ENG 5140 or 6100 or equiv. Selected topics such as Beowulf, poetry of the Exeter Book, gnomic literature, saints' lives. Topics to be announced in Schedule of Classes. (B)

**5170 Literature of the English Renaissance: 1500-1660. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Survey of literature in all genres from Skelton through Milton, with an emphasis on non-dramatic poetry and prose. (B)

**5180 Milton. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Emphasis on Milton's major poetry through attention to his prose and to historical background. (I)

**5190 Topics in Renaissance Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. 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 Schedule of Classes. (B)

**5200 Restoration and Eighteenth Century Literature. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. A survey of English literature from 1660 to 1784. Readings from authors such as John Dryden, Aphra Behn, Mary Astell, Alexander Pope, Lady Mary Montagu, Jonathan Swift. (B)

**5240 Topics in Restoration and Eighteenth Century Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. For students familiar with literary history of the period. Special topics for detailed study of a genre, movement or author to be announced in Schedule of Classes. (B)

**5250 Nineteenth Century Literature. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. A survey of nineteenth century British literature, with works selected from such authors as Wordsworth, Keats, Dickens, Carlyle, Tennyson, Swinburne and Hardy. (B)

**5260 Literature of the Romantic Period. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. 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: 12 credits in ENG above the 1000 level. 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: 12 credits in ENG above the 1000 level. Readings emphasize thematic, generic, historic or aesthetic concerns in literature of the period. Topics to be announced in Schedule of Classes. (B)

**5300 Twentieth Century British Literature. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Selected works in all genres from 1900 to the present. (B)

**5320 Topics in Twentieth Century British Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Selected writers, themes, or genres, movements: Eliot, Auden, Shaw, Lawrence; the modern novel, Bloomsbury, The Great War, the 'Thirties. Topics to be announced in Schedule of Classes. (B)

**5410 American Literature: 1800-1865. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. 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. (Y)

**5420 American Literature: 1865-1914. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. 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 like Cahan, Chopin, Dreiser and Dunbar. (Y)

**5450 Modern American Literature. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. 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: 12 credits in ENG above the 1000 level. Twentieth century literature from specific perspectives, such as generic, historical, thematic. Topics to be announced in Schedule of Classes. (I)

**5470 Survey of African-American Literature. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Historical survey of African-American literature from Colonial times through the twentieth century. (B)

**5480 Topics in African American Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Thematic, generic or historical perspectives: topics such as early black writers, Harlem Renaissance, African-American poetry, contemporary black writers. Topics to be announced in Schedule of Classes. (B)

**5490 Topics in American Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. 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 Schedule of Classes. (I)

**5500 Topics in English and American Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Generic, historical or thematic perspectives. Topics such as the romantic hero, the divided self in modern literature; to be announced in Schedule of Classes. (I)

**5520 Irish Literature. Cr. 3**

Prereq: 12 credits in ENG above the 1000 level. Major twentieth century Irish writers in the context of Irish history and politics: W.B. Yeats, James Joyce, major dramatists. (I)

**5580 The Art of Translation. Cr. 3**

Methods and theories of translation, analysis of distinguished literary translations and student practice. Required of all students in the Comparative Literature Program. (I)

**5590 Topics in Comparative Literature. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. The study of literary texts from an international point of view. Topics to be announced in Schedule of Classes. (B)

**5600 Studies in Folklore. (ANT 6080) Cr. 3**

Basic concepts, methods, and issues of folklore study. Comparative and interdisciplinary approach to problems of definition, form, creation, performance, transmission, and cultural, historical, psychological and literary significance. (B)

**5650 Folklore and Literature. Cr. 3**

Identification and analysis of the interrelations of folklore and literature. (B)

**5670 Topics in Folklore and Folklife. Cr. 3 (Max. 9)**

Topics such as fieldwork; analysis of collected oral literature; study of separate genres of oral literature, social folk custom, and folk arts. Topics to be announced in 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, semantics, sociolinguistics, and pragmatics. Introduction to selected disciplinary and interdisciplinary topics: typology and universals, communication systems, psycholinguistics, sociolinguistics, historical linguistics, anthropological linguistics. (T)

**5710 Phonology. (LIN 5290) Cr. 3**

Prereq: ENG 5700 or LIN 5700. Basic introduction to articulatory phonetics; natural language sound systems and phonological processes studied through data analysis of phonological problems from a wide range of languages. (B)

**5720 Topics in Language. (LIN 5720) Cr. 3 (Max. 12)**

Topics such as phonology, morphology, semantics, pragmatics, historical linguistics, history of English, pidgins and creoles, language variation. Topics to be announced in Schedule of Classes. (T)

**5730 Traditional Grammar. (LIN 5730) Cr. 3**

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (T)

**5740 Syntax. (LIN 5300) Cr. 3**

Prereq: ENG 5700 or 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 discussed and various theories of syntax reviewed. (B)

**5750 Theories of Second Language Acquisition. (CLA 5750) (FRE 5750) (GER 5750) (ITA 5750) (LIN 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)

**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**

Review of linguistic, rhetorical, and/or literary theories of written language. Analysis of the principles, purposes, types, and modes of written discourse. Course includes extensive reading and writing. (B)

**5820 Internship Practicum. Cr. 3 (Max. 6)**

Undergrad. prereq: junior or senior standing, written consent of internship director; grad. prereq: written consent of graduate director. Students work 18-20 hours per week as writers, editors or researchers in publishing firms and in public information and research divisions of other businesses and community organizations; students meet once per week in classroom sessions on analytical, literary and other scholarly texts related to their workplace experience. (T)

**5830 Introduction to Technical and Professional Writing Practices. Cr. 3**

Prereq: grade of B or better in intermediate writing course or consent of instructor. 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: ENG 5830 or consent of adviser. 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. Some technical report writing, a research paper, and extensive reading and writing. (B)

**5870 Poetry Writing Workshop. Cr. 3 (Max. 6)**

Prereq: ENG 3810, 3820, or 3830; or consent of instructor after submission of manuscript. 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: ENG 3810, 3820, or 3830; or consent of instructor after submission of manuscript. The writing of fiction, conducted on a seminar basis; discussion and criticism of the work of students in the course. Frequent individual conferences. (Y)

**5890 Writing for Theatre. (THR 5130) Cr. 3 (Max. 6)**

Prereq: ENG 3830 or consent of instructor. Advanced study, in a workshop setting, of dramatic structure and writing for the theatre, terminating in the writing of an original stage play. (Y)

**5990 Directed Study. Cr. 1-3 (Max. 6)**

Undergrad. prereq: 3.0 g.p.a., proposal submitted in preceding term, written consent of instructor and chairperson; grad. prereq: written consent of adviser and graduate officer. Advanced work for superior students whose program cannot be adequately met by scheduled classes. Course requires substantial written work. (T)

**5991 Directed Study: Salford-W.S.U. Exchange. Cr. 3-9**

Prereq: written consent of departmental adviser. Open only to students admitted to Salford-W.S.U. Exchange Program. (F,W)

**5992 Senior Seminar. Cr. 4**

Open only to undergraduate English majors; should be taken in last year of course work. Prereq: 12 credits in ENG above the 1000 level. Study and discussion of topics to be announced in Schedule of Classes. Each student produces a substantial research paper; this course may be used to fulfill the General Education Writing Intensive requirement. (F,W)

**5993 (WI) Writing Intensive Course in English. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Exam, written consent of instructor; coreq: ENG 5992 or any 5000-level course below ENG 5800. 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 designated 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)

**6100 Introduction to Old English. Cr. 3**

The fundamentals of language and grammar and the literary analysis of Old English texts. (Y)

**6800 Advanced Creative Writing. Cr. 3 (Max. 6)**

Prereq: grade of B or better in any 5000-level creative writing course or consent of instructor after submission of manuscript. Writing in any of the creative forms. Work by students presented in seminar meetings; individual conferences. Topics to be announced in Schedule of Classes. (Y)

# FILM STUDIES

Offices: 51 West Warren, 313-577-2978;  
585 Manoogian, 313-577-2943

Co-Directors: Jackie Byars, Cynthia Erb

## Advisory Committee

*AFRICANA STUDIES*: Melba Boyd, Njia Kai

*COMMUNICATION*: Jackie Byars, Daniel Marcus, Robert Steele, Laura Wackwitz

*ENGLISH*: Lesley Brill, Robert Burgoyne, Cynthia Erb, Kirsten Thompson

*GERMAN AND SLAVIC STUDIES*: Kenneth Brostrom, Mark Ferguson

*ROMANCE LANGUAGES*: Andrea diTommaso

## Degree Program

*BACHELOR OF ARTS* with a major in film studies

Film Studies is an interdepartmental program that offers undergraduate students the opportunity to examine cinema from a variety of perspectives: as a visual and narrative art form, as an important social and cultural force in the twentieth century, as an industry, and as a technologically based communications medium. Introductory film (FLM) courses focus on the historical development of film and provide students with the necessary technical vocabulary to discuss the nature of the film experience. Advanced courses from participating departments (Africana Studies, Communication, English, German and Slavic Studies, and Romance Languages and Literatures) continue historical and aesthetic studies, but they are also concerned with theories of film, particular genres and directorial styles, and the multiple relationships between film and other art forms. Additionally, the study of techniques and skills of film writing and production is also available.

Many students take film studies courses as electives complementary to other majors. Students who major in the program may be preparing for careers as film teachers, film librarians and archivists, film critics, script writers, or workers in film production. Additional study at the graduate level is usually necessary to achieve these goals, and an adviser should be consulted regarding available graduate programs.

The film studies program is administered by an advisory committee composed of specialists in this field from the five departments noted above. Interested students should consult one of the Co-Directors or a committee member whose field most closely approximates the student's interests.

## Bachelor of Arts with a Major in Film Studies

**Admission Requirements** for this degree program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS**: Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

**Major Requirements**: Students majoring in film studies must complete a minimum of thirty-five credits, distributed as follows:

### CORE COURSES (Fifteen Credits)

FLM 2010 -- (VP) Introduction to Film . . . . .	4
FLM 2020 -- (VP) History of Film . . . . .	3
FLM 4997 -- Senior Assessment Essay . . . . .	1

FLM 5993 -- (WI) Writing Intensive Course in Film Studies . . . . .	0
SPR 1600 -- Intro: Audio-TV-Film Production . . . . .	3
ENG 5040 -- Film Criticism and Theory . . . . .	4

### ELECTIVE COURSES (Twenty Credits)

AFS 3200 -- The African American Film Experience . . . . .	4
AFS 5800 -- Third World Cinema . . . . .	4
ENG 5050 -- Concepts in Film Studies . . . . .	3-4 (Max. 12)
ENG 5060 -- Styles and Genres in Film . . . . .	4 (Max. 12)
ENG 5070 -- Topics in Film . . . . .	4 (Max. 12)
FLM 3040 -- Major Works of World Cinema . . . . .	4
FLM 3990 -- Directed Study . . . . .	1-3 (Max. 6)
ITA 5150 -- Italian Cinema Since 1942 (FLM 5150) . . . . .	3 (Max. 9)
SLA 3710 -- (VP) Russian & E. European Film (ARM/(POL/RUS 3710)) . . . . .	3
SPF 5020 -- Studies in Film History . . . . .	4 (Max. 12)
SPF 5060 -- Documentary and Non-Fiction Film . . . . .	4
SPF 5250 -- Screenwriting . . . . .	3
SPF 5440 -- Film Production . . . . .	4
SPF 5460 -- Motion Picture Animation Techniques . . . . .	3
SPR 5030 -- Studies in Television Criticism & Theory . . . . .	3
SPR 5400 -- Techniques of Film/Video Production . . . . .	4
SPR 6680 -- Individual Projects in Radio-Television-Film . . . . .	3 (Max. 6)

## Minor in Film Studies

Completion of a minor in film studies requires nineteen credits including FLM 2010 and any other selections from either the core or elective courses cited above under the Bachelor of Arts major program.

## UNDERGRADUATE COURSES (FLM)

The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.

**2010 (VP) Introduction to Film. (ENG 2450) (SPF 2010) Cr. 4**  
Examination of film techniques and basic methods of film analysis. Material fee as indicated in the Schedule of Classes. (T)

**2020 (VP) History of Film. (ENG 2460) (SPF 2020) Cr. 3**  
Critical study of the motion picture as a modern visual art; screening and analysis of representative fiction films to illustrate important historical periods and genres. Material fee as indicated in the Schedule of Classes. (T)

**3040 Major Works of World Cinema. (ENG 3040) Cr. 4**  
Prereq: ENG 2450, FLM 2010, SPF 2010 recommended. Non-anglophone films of major directors viewed and studied; practice in film analysis; introduction to historical/cultural context. Emphasis on Europe and Asia; Latin America, Africa, Australia, and other areas may be included. Material fee as indicated in the Schedule of Classes. (Y)

**3200 (AFS 3200) The Afro-American Cinematic Experience. Cr. 4**  
Historical and contemporary portrayals of African American people in narrative and documentary film. Emphasis on filmic approaches to race relations, cinematic elaboration of racial stereotypes, and legitimation functions of film. (Y)

**3750 (POL 3750) Polish and Yugoslavian Auteur Cinema. Cr. 3**  
Significant films of: Wajda, Polanski, Makavejev, Kieslowski and Kusturica. (W)

**3990 Directed Study. Cr. 1-3 (Max. 6)**  
Prereq: consent of adviser; completion of 12 credits in film courses from FLM, ENG, or SPF. (T)

**4997 Senior Assessment Essay. Cr. 1**  
Prereq: senior standing, consent of adviser. Required of film studies majors in term of graduation. Preparation of formal paper demon-

strating knowledge of methods of film analysis, film history, and film theory. (T)

**5040 (ENG 5040) Film Criticism and Theory. Cr. 4**

Prereq: ENG 2450 or another film course or consent of instructor. 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 (ENG 5050) Concepts in Film Studies. Cr. 3-4 (Max. 12)**

May not be elected more than three times. Specific movements or tendencies in film historiography. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (B)

**5060 (ENG 5060) Styles and Genres in Film. Cr. 4 (Max. 12)**

Study of significant works within selected genres: the western, the horror film, comedies. Emphasis on styles of particular directors. Topics to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (Y)

**5070 (ENG 5070) Topics in Film. Cr. 4 (Max. 12)**

Topics (such as film and fusion of the arts) to be announced in Schedule of Classes. Material fee as indicated in the Schedule of Classes. (Y)

**5150 (ITA 5150) Italian Cinema since 1942. 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)

**5800 (AFS 5800) Third World Cinema. Cr. 4**

Prereq: upper division or graduate standing. Study of the cinematic traditions and film practices in the Third World with emphasis on anti-colonial and post colonial political cinema. (B)

**5993 (WI) Writing Intensive Course in Film Studies. Cr. 0**

Prereq: junior standing, consent of instructor, satisfactory completion of English Proficiency Examination; coreq: ENG 5040. 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 designated 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)

# GEOGRAPHY

Office: 225 State Hall; 577-2701; Fax: 577-0022

Web: <http://www.science.wayne.edu/~gup>

Interim Chairperson: Robin M. Boyle

## Professors

Robin M. Boyle, Fred E. Dohrs (Emeritus), Robert J. Goodman (Emeritus), George J. Honzatko (Emeritus), Laura Reese, Robert Sinclair, Alma H. Young

## Associate Professors

Eugene D. Perle, Gary Sands

## Assistant Professor

Kameshwari Pothukuchi

## Lecturers

Kelly Patterson, Richard Sauerzopf

## Adjunct Faculty

Ibrahim Abdel-Karim, Ernando Minghine, Bryan Swartz, Robert Swartz, Bryan Thompson, Paul Vigeant

## Degree Programs

*BACHELOR OF ARTS with a major in geography*

*\*MASTER OF ARTS with a major in geography*

*\*MASTER OF URBAN PLANNING*

The discipline of geography is concerned with the analysis of environmental and social systems, their variations over the earth's surface and their interactions in different regions. The undergraduate program has three major goals: (1) to provide students with a geographic framework for understanding global, regional and local issues and problems; (2) to prepare students for many occupations in which geographic understanding is essential, including retail location analysis, community and regional development, resource conservation and management, cartography, urban and environmental planning, and numerous government positions; and (3) to train students for advanced geographic research. Students are invited to consult with geography faculty members concerning the content of the discipline, as well as employment opportunities available for geographers.

## Bachelor of Arts

### With a Major in Geography

**Admission requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work, including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

**Major Requirements:** A major in geography requires completion of thirty-two credits in the Department. Unless an exception is granted by the Department, courses taken should include: GPH 1100, 2000 or 3130, 3020, 6420, and four other courses selected in consultation with a Departmental adviser.

\* For requirements, consult the College of Urban, Labor and Metropolitan Affairs section of the Wayne State University Graduate Bulletin.

**Recommended Cognate Courses:** The varied opportunities for specialization within geography warrant careful selection of cognate courses. Geography majors are encouraged to emphasize cognate courses in one or two disciplines. Choice of cognate courses should be discussed with Geography faculty.

## Honors Program

Students with a grade point average of 3.3 or higher may be admitted to the Honors Program in Geography. The honors major must elect one semester of a 4000-level Honors Program seminar and accumulate at least fifteen credits in honors-designated course work. Honors courses from any department in the College, including this one, all contribute to the fifteen-credit requirement. The honors major student is permitted to follow a course of study somewhat independent of standard requirements, through the election of Honors Directed Study (GPH 4990). For information about other honors-designated coursework available each semester, including the required 4000-level Honors Program seminar, see the Liberal Arts section of the University Schedule of Classes, under 'Honors Program.'

## Minor in Geography

The discipline of geography complements expertise and understanding in many other disciplines selected as majors. It specifically addresses the spatial processes and variations over space as they impact economic, social, political, historical, criminal, commercial and other phenomena. The courses listed below for a minor in geography are basic to all aspects of spatial analyses. It is strongly recommended that the student minoring in geography consult with faculty concerning the most appropriate selection of courses to complement his or her interests.

Requirements for a minor in geography are: twenty credits in geography including Geography 1100 and 3020.

## UNDERGRADUATE COURSES (GPH)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 1100 (SS) World Regional Patterns. Cr. 4

Concepts and theory in analyzing areal relationships and distinguishing regional patterns of human activity; cultural factors and physical conditions (climate, landforms) as factors in regional delineations; comparisons and contrasts in regional economic development; analysis of concentrations/dispersals of human activity; local, national and regional phenomena in the interpretation of global patterns. (T)

### 2000 (U S 2000) (SS) Introduction to Urban Studies. (HIS 2000) (P S 2000) (SOC 2500) Cr. 4

Urban phenomena both past and present, including the quality and nature of urban life; major concerns of urban areas; perspectives and techniques of various urban-related disciplines. (T)

### 2200 Geography of Michigan. Cr. 3

The spatial physical, social, environmental, settlement and developmental patterns and problems of the State of Michigan. (I)

### 2500 Geography of Africa. (AFS 2500) Cr. 4

Geography of modern Africa: regions, countries, peoples. Physical environment, resource potential, population groups, migrations, economics, development, political systems and conflicts. (I)

### 2700 (P S 2700) Introduction to Canadian Studies. (ENG 2670) (HIS 2700) Cr. 3

Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. (Y)

### 2810 Geography of Latin America. Cr. 4

Variation in human and physical geographic phenomena in Latin America and implications for conflict and coordination of interests (for example, trade interests, economic development, agricultural competition). (B)

### 3020 (WI) Spatial Organization: Concepts and Techniques. Cr. 3

Introduction to spatial organization concepts, survey research procedures and statistical techniques. Topics include: geographic problems, research design, models, data sources, sampling, questionnaire design and descriptive statistics. (Y)

### 3120 Cartography/Map Analysis. Cr. 4

Basic map design; coordinate systems; map symbology and text; scale; topographic, thematic and surface maps; surveying and land record systems; digital mapping; global positioning systems. (Y)

### 3130 (SS) Introductory Urban Geography. Cr. 4

An introduction to the geographer's view of cities, with emphasis on the North American city. Topics include the pre-industrial city, migration, evolution of the American urban pattern, city classification, city-regional relationships, and the city's internal structure (ethnic, residential, commercial, and industrial). (Y)

### 3200 (SS) Europe. Cr. 3

Analysis of European countries. Emphasis on population changes resource problems, industrial location, urbanization, regional development, and emerging economic and political unities. (I)

### 3400 The Physical Landscape. Cr. 4

Physical processes such as running water, glaciers, wave and wind action, plus the resultant erosional and/or depositional landforms. (B)

### 3500 Introduction to Remote Sensing. Cr. 4

Prereq: familiarity with personal computers; introductory statistics recommended. Methodologies for the thematic extraction of earth resource information using computer-based image processing systems. (Y)

### 3530 (U P 3530) Urban and Regional Planning. (U S 3530) Cr. 3

Introduction to urban and regional planning concepts, including zoning, growth management and economic development. Emphasis on metropolitan Detroit. (Y)

### 3600 Introduction to Geographic Information Systems. Cr. 4

Prereq: GPH 3120 and GPH 3500 or equiv. recommended. Theory and application of computer-based systems for the analysis and representation of spatial data. (Y)

### 3900 Topics in Geography. Cr. 3

Topics to be announced in Schedule of Classes. (B)

### 3990 Directed Study. Cr. 1-3 (Max. 9)

Prereq: consent of adviser. Readings and research. (T)

### 3991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9

Prereq: consent of departmental adviser. Open only to students admitted to Salford - WSU exchange. Courses available for lower division credit in geography for W.S.U. - Salford exchange. (F,W)

### 4510 (U S 4510) Cities and Regions. Cr. 4

Processes of urbanization and metropolitanization in both the western and non-western worlds. (W)

### 4600 Advanced Geographic Information Systems. Cr. 4

Prereq: GPH 3600 or equiv. Application of GIS to analyses of spatially-referenced data. (Y)

**4650 GIS Practicum. Cr. 4**

Prereq: GPH 4600 or equiv; written consent of instructor. Placement with public or private agency; supervised work experience utilizing GIS. (Y)

**4990 Directed Study: Honors Program. Cr. 2-12 (Max. 16)**

Prereq: consent of chairperson. (T)

**5650 (GEG 5650) Metropolitan Detroit. Cr. 4**

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)

**5700 (GEG 5700) Urban Canada. (U P 5700) Cr. 4**

Geographic introduction to Canada; emphasis on urban topics, including: images of the Canadian city; evolution of the urban system; internal characteristics of cities; urban regions; specific cities; comparisons between cities in Canada and the United States. (B)

**5750 (GEG 5750) Social and Economic Geography of the United States and Canada. Cr. 4**

Human geography of North America: population distribution and change, economic geography and economic restructuring, the urban system and urban development, and changing social patterns and problems. (Y)

**5810 (GEG 5810) Locational Issues in Hazardous Waste Management. (HWM 5810) Cr. 3**

Analyses of spatial aspects of hazardous waste sites; corporate and public considerations and reactions; regulatory impacts. (B)

**5991 (GEG 5991) Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford - WSU exchange. Courses available for upper division credit in geography for W.S.U. - Salford exchange. (F,W)

**6150 (GEG 6150) Internal Structure of the City. (U P 5420) Cr. 4**

Perception of the urban environment, spatial interaction and movement, models of structure and growth, migration to and within the city, ethnic and social areas, community extension, social processes and spatial form. (Y)

**6240 (GEG 6240) Industrial Geography. (U P 5520) Cr. 4**

Location of industry in theory and practice. Locational analysis of selected industries and selected manufacturing regions. Locational practices of multinational corporations, global transformation of manufacturing, industrial restructuring, industrial decline. Industries and services in a post-industrial economy. Industrial location and urban development. (B)

**6280 (GEG 6280) Marketing Geography. (U P 5620) Cr. 4**

Factors underlying retail location and shopping center development; evaluation of population, income levels, access and competition for location decisions; techniques applicable to sales potential/rent-up/sell-out estimates for retail units, housing developments, recreation facilities, office buildings; retail impact on urban land use; crime and commercial location; considerations for the elderly in commercial locations. (B)

**6350 Ethnic Groups in the United States and Canada. (GEG 6350) Cr. 4**

Ethnic settlement patterns in the United States and Canada from 1800 to the present. Topics include: meaning of ethnicity, migration theory, immigration, community formation and growth, urban spatial structure, ethnic Detroit, ethnic characteristics of selected Canadian cities including Toronto. (B)

**6420 (U P 6320) Quantitative Techniques I. (GEG 6420) Cr. 4**

Statistical inference with emphasis on applications including control tendency, dispersion, hypothesis testing, correlation and regression. (Y)

**6510 (U P 6510) Urban and Regional Systems. (GEG 6510) Cr. 4**

Theory course dealing with concepts, processes and organization of urban and metropolitan regions, primarily focusing on the western world experience. Some comparative perspective derived from non-western experiences. Primary focus on system structure and change. (Y)

**6520 (GEG 6520) Independent Field Study. (U S 6050) Cr. 2-4**

Prereq: consent of instructor; for Urban Studies students: U S 4010 and consent of instructor. Observation and interpretation of data in the field. Preparation, use and evaluation of classroom units in K-12; for pre-college teachers taking course for credit towards an advanced degree. Class preparations prior to travel; for K-12 teachers, classroom use and evaluation. Written reports. (Y)



# GERMAN and SLAVIC STUDIES

Office: 443 Manoogian Hall; 577-3024; Fax 577-3266;  
Web site: <http://www.langlab.wayne.edu/germslav/gerlav.html>

Chairperson: Donald Haase

## Professors

Penrith Goff (Emeritus), Edmund Ordon (Emeritus), Marvin Schindler (Emeritus), Guy Stern

## Associate Professors

Achim Bonawitz (Emeritus), Kenneth Brostrom, Alfred Cobbs, Donald Haase

## Assistant Professors

Frank J. Corliss, Jr. (Emeritus), Suzanne K. Hilgendorf

## Senior Lecturer

Mark Ferguson

## Lecturers

Rebecca Garber, Alina Klin, Laura Kline

## Adjunct Faculty

Vera Andrushkiw, Hans-Peter Soder, Dickran Toumajan

## Degree Programs

*BACHELOR OF ARTS with a major in German*

*BACHELOR OF ARTS with a major in Russian*

*BACHELOR OF ARTS with a major in Slavic Languages*

*\*MASTER OF ARTS with a major in German*

*\*MASTER OF ARTS with a major in Language Learning*

*\*DOCTOR OF PHILOSOPHY with a major in modern languages*

## Bachelor of Arts Degrees

**Admission Requirements** for these programs are satisfied by the general requirements for undergraduate admission to the University; see page 15. Students who wish to major in one of the programs offered by the Department should consult with the adviser for that program as soon as possible.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements of one of the following programs. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

### -- Major Requirements

**Major Requirements in German:** A major in German must satisfactorily complete German 2310, 2710, 2720, 3100, 3200, 4100, 5993, and four courses in German on the 5000 or 6000 level. German majors must also take one course in the culture or literature of another country, offered by the Department of German and Slavic, and approved by the major adviser.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

**Major Requirements in Russian:** Students majoring in Russian must complete satisfactorily Russian 2020, 3010 (eight credits), 3020 (eight credits), 3510, 5600, 5650, Slavic 2310, and one course in the culture or literature of another country, offered by the Department of German and Slavic, and approved by the major adviser. The Writing Intensive requirement is satisfied by taking RUS 5993.

**Major Requirements in Slavic:** Students majoring in Slavic are required to complete satisfactorily twenty-four credits in Russian or Polish as a concentration, and sixteen credits in Polish, Russian, or Ukrainian or the equivalent in another Slavic language, and one course in the literature of that language. Students should also take either Polish 5993 or Russian 5993, to satisfy the Writing Intensive requirement.

All majors are strongly urged to elect courses in cognate fields, such as geography, history, political science, or art history.

## Minors and Cognate Study

**Minor in German:** Students wishing to obtain a minor in German shall complete German 2020, 2710, 2720, 3100, 3200, and 2310 or 2991.

**Minor in Russian:** Students wishing to obtain a minor in Russian are required to complete Russian 2020, 3010, 3020, 3510, 3600, and 3650.

**'AGRADE' Program:** Qualified seniors majoring in German may begin graduate study towards the M.A. in German through the Accelerated Graduate Enrollment ('AGRADE') Program. Students accepted in the program may expect to complete the bachelor's and master's degrees in five years of full-time study; they may elect from three to fifteen 'AGRADE' credits, which are used to complete the baccalaureate degree and also serve as graduate study credit. Interested students should contact the graduate or undergraduate adviser in German for more information.

## Foreign Language Group Requirement

The student may satisfy the requirement by passing the first three courses in one language or by a special examination.

**Courses:** The courses numbered 1010, 1020, and 2010 are essentially a continuum designed to give students command of the basic elements of the language and insights into culture.

**Placement:** Students who wish to continue the study of a language begun in high school or in another college should take a placement test or consult with the Coordinator for Placement Examinations before registering. Contact the Department for placement information.

## Honors in German and Slavic Languages and Literatures

The Honors Program in German and Slavic Studies is open to students of superior academic ability who are majoring in this department. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/she must accumulate at least fifteen credits in honors-designated course work, including at least one 4000-level seminar offered through the Honors Program of the College of Liberal Arts (see the Schedule of Classes under 'Honors Program' for seminar topics), and the departmental credits associated with completion of a Senior Thesis. For more information about the specific requirements of the department's honors curriculum, contact the Chairperson of the Department, or the Director of the Honors Program (577-3030).

## Study Abroad

**Junior Year in Germany Program:** Juniors, seniors, or graduate students who would like to spend a year studying at the University of Munich are encouraged to contact the Junior Year in Germany Office, 471/473 Manoogian Hall; (313) 577-4605; (jym@wayne.edu). For a

more detailed description of the program see 'Study Abroad,' page 231.

## Scholarships

*Concordia Singing Society Foundation Scholarships for Study in Germany:* Awards made annually to American undergraduate or graduate students for the study of language, music, arts or culture in Germany. Applications are available online and in the office year-round, and the deadline for submission is March 15. Three documents should be submitted with the completed application: 1) two letters of recommendation from teachers or professors; 2) a statement of purpose (250-500 words, typed, double-spaced) describing the applicant's plans for study or independent research in Germany and how this experience will contribute to meeting his/her academic goals; 3) a current transcript. Number and amount of awards vary.

*Uwe K. Faulhaber Scholarship for Undergraduate German Language Studies:* Open to all officially-declared German majors and minors. Applications are available online and in the office year-round, and the deadline for submission is March 15. Three documents should be submitted with the completed application: 1) a copy of current Wayne State transcript; 2) one letter of recommendation from a Wayne State instructor, and 3) a one-page, typed, double-spaced essay explaining how the applicant perceives the role of German Studies in his/her undergraduate education and in life after graduation. Number and amount of awards vary.

*Friends of German Studies Scholarship:* Award open to undergraduates enrolled in German language, literature, or culture courses, offered through Wayne State German Studies Area. Awards made by faculty nomination.

*German and Slavic General Scholarships:* Awards made to students of German and Slavic languages, literature, and culture. Number and amount of awards vary. Awards made by faculty nomination.

Also see page 227, above, and the section on the Office of Scholarships and Financial Aid, page 20. For further information, contact the Department Office.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### OFFERED IN ENGLISH

*No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. (For foreign language courses, see the section 'Foreign Language Instruction,' below.)*

### Armenian Cultural Studies in English (ARM)

**3410 (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (GER 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3**

Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. (F)

**3700 (SLA 3700) The Changing Face of Europe. (GER 3700) (POL 3700) (RUS 3700) (UKR 3700) Cr. 1-2**

Experts on Western and Eastern Europe present and provide the background to the developments now changing the political and cultural face of Eastern Europe. Topics include: unification of East and

West Germany; cementing of the European community into a partner and rival of the United States. (W)

**3710 (SLA 3710) (VP) Russian and East European Film. (POL 3710) (RUS 3710) (UKR 3710) Cr. 3**

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

**4750 (FC) Survey of Armenian Culture and Literature: The Modern Period. Cr. 3**

The great awakening; great expectations shattered by genocide. Dawn of new hope; cultural explosion in homeland and in the diaspora. (W)

### German Cultural Studies in English (GER)

**2310 (PL) Short Fiction from Central Europe and Russia. (SLA 2310) Cr. 3**

Explores how writers use short fictional forms, such as parable, short story, fairy tale, and satire, to express important themes in the Central European experience, including violence and cruelty, freedom and imprisonment, utopian visions, and urban life. (F)

**2700 (PL) Anguish and Commitment: European Existentialist Literature. (FRE 2700) (ITA 2700) (RUS 2700) (SPA 2700) Cr. 3-4**

Only students in Honors Program may register for four credits. A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Svevo, Sartre, Camus and Sabato. (B)

**2710 (FC) Survey of Germanic Culture I. Cr. 3**

Development of Germanic people from their origin to 1835; their major contributions of cultural significance to the Western world. (F)

**2720 (FC) Survey of Germanic Culture II. Cr. 3**

Development of Germanic people from 1835 to the present; the Nazi period; and World War II. (W)

**2991 (PL) Understanding the Fairy Tale. Cr. 3**

Fairy tale's meaning and role in Western society from the Brothers Grimm to Walt Disney. Methods of fairy-tale interpretation. All lectures and reading in English. (B)

**3410 (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3**

Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. (F)

**3700 (SLA 3700) The Changing Face of Europe. (ARM 3700) (POL 3700) (RUS 3700) (UKR 3700) Cr. 1-2**

Experts on Western and Eastern Europe present and provide the background to the developments now changing the political and cultural face of Eastern Europe. Topics include: unification of East and West Germany; cementing of the European community into a partner and rival of the United States. (W)

**5350 Early German Film. Cr. 3**

Film as new medium emerging out of late 19th century mass culture; films produced during Weimar Republic and under fascism as they responded to modernization, industrialization, and urbanism through story and imagery. Taught in English. (F)

**5400 (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)

## Polish Cultural Studies in English (POL)

### 2710 (FC) Survey of Polish Culture. Cr. 3

Introductory cultural survey from beginnings of Polish state to present. Polish society and cultural developments analyzed in comparative contexts. (Y)

### 3410 (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (RUS 3410) (UKR 3410) Cr. 3

Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. (F)

### 3700 (SLA 3700) The Changing Face of Europe. (ARM 3700) (GER 3700) (RUS 3700) (UKR 3700) Cr. 1-2

Experts on Western and Eastern Europe present and provide the background to the developments now changing the political and cultural face of Eastern Europe. Topics include: unification of East and West Germany; cementing of the European community into a partner and rival of the United States. (W)

### 3710 (SLA 3710) (VP) Russian and East European Film. (ARM 3710) (RUS 3710) (UKR 3710) Cr. 3

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

### 3750 Polish and Yugoslavian Auteur Cinema. (SLA 3750) (FLM 3750) Cr. 3

Significant films of: Wajda, Polanski, Makavejev, Kieslowski and Kusturica. (W)

## Russian Cultural Studies in English (RUS)

### 2700 (GER 2700) (PL) Anguish and Commitment: European Existentialist Literature. (FRE 2700) (ITA 2700) (SPA 2700) Cr. 3-4

Only students in Honors Program may register for four credits. A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Svevo, Sartre, Camus, and Sabato. (W)

### 3410 (SLA 3410) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (POL 3410) (UKR 3410) Cr. 3

Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. (F)

### 3510 (FC) Study of Russian Culture. Cr. 3

Basic features of Russia's cultural heritage. Impact of Gorbachev's glasnost and perestroika on Soviet political and economic structures and on everyday life; emerging trends. (Y)

### 3600 (PL) Literature Before Communism. Cr. 3

Russian society, culture, and politics studied through lives and works of Pushkin, Dostoevsky, Tolstoy, and others. How literature reflects and grows out of history; how culture is affected by writers and poets. Taught in English; readings in English. (F)

### 3700 (SLA 3700) The Changing Face of Europe. (ARM 3700) (GER 3700) (POL 3700) (UKR 3700) Cr. 1-2

Experts on Western and Eastern Europe present and provide the background to the developments now changing the political and cultural face of Eastern Europe. Topics include: unification of East and West Germany; cementing of the European community into a partner and rival of the United States. (W)

### 3710 (SLA 3710) (VP) Russian and East European Film. (ARM 3710) (POL 3710) (UKR 3710) Cr. 3

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

## Slavic Cultural Studies in English (SLA)

### 2310 (GER 2310) (PL) Short Fiction from Central Europe and Russia. Cr. 3

Explores how writers use short fictional forms, such as parable, short story, fairy tale, and satire, to express important themes in the Central European experience, including violence and cruelty, freedom and imprisonment, utopian visions, and urban life. (F)

### 3310 Women in the Slavic World. Cr. 3

Women in Russia and eastern Europe. Changing status and roles of women examined through folklore, painting, literature, music and film, as well as historical texts and artifacts. (W)

### 3410 (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3

Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. (F)

### 3700 The Changing Face of Europe. (ARM 3700) (GER 3700) (POL 3700) (RUS 3700) (UKR 3700) Cr. 1-2

Experts on Western and Eastern Europe present and provide the background to the developments now changing the political and cultural face of Eastern Europe. Topics include: unification of East and West Germany; cementing of the European community into a partner and rival of the United States. (W)

### 3710 (VP) Russian and East European Film. (ARM 3710) (POL 3710) (RUS 3710) (UKR 3710) Cr. 3

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

### 3750 (POL 3750) Polish and Yugoslavian Auteur Cinema. (FLM 3750) Cr. 3

Significant films of: Wajda, Polanski, Makavejev, Kieslowski and Kusturica. (W)

### 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)

## Ukrainian Cultural Studies in English (UKR)

### 3410 (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 3410) (GER 3410) (POL 3410) (RUS 3410) (UKR 3410) Cr. 3

Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. (F)

### 3700 The Changing Face of Europe. (ARM 3700) (GER 3700) (POL 3700) (RUS 3700) (UKR 3700) Cr. 1-2

Experts on Western and Eastern Europe present and provide the background to the developments now changing the political and cultural face of Eastern Europe. Topics include: unification of East and West Germany; cementing of the European community into a partner and rival of the United States. (W)

**3710 (VP) Russian and East European Film. (ARM 3710)  
(POL 3710) (RUS 3710) (UKR 3710) Cr. 3**

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

## FOREIGN LANGUAGE INSTRUCTION

*For courses on culture and literature taught in English, see the preceding section.*

### ARMENIAN (ARM)

**1010 Elementary Armenian. Cr. 4**

Introduction to sounds, spelling, speaking, reading, writing, grammar; emphasis on ability to speak and read Armenian. Introduction to ancient Armenian culture. Material fee as indicated in the Schedule of Classes. (F)

**1020 Elementary Armenian. Cr. 4**

Prereq: ARM 1010 or equiv. Continuation of ARM 1010. Introduction to medieval Armenian culture. Material fee as indicated in the Schedule of Classes. (W)

**2010 (FC) Intermediate Armenian. Cr. 4**

Prereq: ARM 1020 or equiv. Conversation, grammar, reading, composition. Introduction to modern Armenian culture. Material fee as indicated in the Schedule of Classes. (F)

### GERMAN (GER)

**1010 Elementary German. Cr. 4**

Development of ability to speak and read German. Material fee as indicated in the Schedule of Classes. (T)

**1020 Elementary German. Cr. 4**

Prereq: GER 1010 or placement. Continuation of GER 1010. Material fee as indicated in the Schedule of Classes. (T)

**1060 Intensive German. Cr. 6**

Prereq: previous knowledge or study of German or consent of instructor. Accelerated, intensive treatment of material normally treated in GER 1010 with a gradual slowing to treat the material in GER 1020. GER 1060 will accommodate learners with previous knowledge of the language while still providing them with review and practice, encouraging them to build on the knowledge of German they have. (F,S)

**2010 (FC) Intermediate German. Cr. 4**

Prereq: GER 1020 or placement. Continuation of GER 1020. Reading of graded German literature and grammar review. Material fee as indicated in the Schedule of Classes. (T)

**2020 Intermediate German. Cr. 4**

Prereq: GER 2010 or equiv. Continuation of GER 2010. (T)

**2100 German for Business and Industry I. Cr. 4**

Prereq: GER 2010. Acquisition of German language skills and practical expertise within the environment of business and industry in Germany. Study of German economy and industry provides context for practice in applied business communication and technical translation. (Y)

**2500 Speaking German. Cr. 1 (Max. 2)**

Prereq. or coreq: GER 2010. Offered for S and U grades only. Students meet once weekly to participate in variety of speaking activities, such as presentations, role-playing and simulations, pair work exchanges, small or whole group discussions. (T)

**3100 Intermediate Composition and Conversation I. Cr. 3**

Prereq: GER 2020 or equiv. German of common usage. Practical approach to contemporary idioms. (Y)

**3200 Intermediate Composition and Conversation II. Cr. 3**

Prereq: GER 2020 or equiv. German of common usage. Practical approach to contemporary idioms. (Y)

**4100 Introduction to German Studies. Cr. 3**

Prereq: GER 2020 or equiv. Basic introduction to reading literature and cultural texts in a German Studies context. (F)

**4600 Proseminar: Modern German Literature. Cr. 3**

(I)

**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)

**5300 Children's Literature and Culture. (GER 7300) Cr. 3-4**

Historical, cultural and critical aspects of German children's literature; includes works for young children and adolescents. (I)

**5390 Exile and Holocaust. (GER 7390) Cr. 3-4**

Exiled writers and the Holocaust, from a literary and cultural perspective. (I)

**5500 Pre-Modern Germany. (GER 7500) Cr. 3-4**

Medieval period, Northern Renaissance, Reformation, and Baroque. Literary and nonliterary forms of representation, literary traditions and intellectual currents are examined within social, political and historical contexts. (I)

**5650 Romanticism. (GER 7650) Cr. 3-4 (Max. 8)**

German Romantic literature and thought in a European context. Survey of Romanticism as a period is linked to studies of specific writers, genres, and cultural developments. (I)

**5670 Literature in the Age of Industrial Revolution.  
(GER 7670) Cr. 3-4 (Max. 8)**

Nineteenth-century literary and cultural texts emanating from the period of rising industrialization in the German-speaking world. (I)

**5720 Enlightenment and Sturm und Drang. (GER 7720)  
Cr. 3-4 (Max. 8)**

Lessing, the Storm and Stress movement, Goethe, Schiller; literary and cultural achievements. (I)

**5730 The Classical Age. (GER 7730) Cr. 3-4 (Max. 8)**

Goethe, Schiller, and the literary background of Weimar and German Classicism. (I)

**5750 (ENG 5750) Theories of Second Language Acquisition.  
(CLA 5750) (FRE 5750) (ITA 5750) (LIN 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)

**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)

**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)

**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 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)

**5810 (FRE 5810) Teaching Foreign Languages: Receptive Skills. (CLA 5810) (CLA 7810) (FRE 7810) (GER 5810) Cr. 3**

Prereq: GER 5850 or 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)

**5820 (FRE 5820) Teaching Foreign Languages: Productive Skills. (CLA 5820) (CLA 7820) (FRE 7820) (GER 7820) Cr. 3**

Prereq: GER 5850 or 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. (CLA 5830) (CLA 7830) (FRE 5830) (FRE 7830) (GER 7830) Cr. 3**

Prereq: GER 5850 or 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 Second Language Instruction: Theory and Methods. (CLA 5850) (CLA 7850) (FRE 5850) (FRE 7850) (GER 7850) 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 testing. (B)

**5860 Foreign Language Testing. (CLA 5860) (CLA 7860) (FRE 5860) (FRE 7860) (GER 7860) Cr. 3**

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)

**5990 Directed Study. Cr. 1-4 (Max. 8)**

Undergrad. prereq: written consent of German adviser; grad. prereq: written consent of German graduate adviser and chairperson. (T)

**5993 (WI) Writing Intensive Course in German. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: GER 4600 or any 5000-level German literature course. 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. (F,W)

**6100 Critical Approaches to German Studies. Cr. 3-4**

Prereq: consent of major adviser required for undergraduates. Major critical approaches to German literature and cultural texts, and the questions and problems that drive contemporary German studies. (B)

## POLISH (POL)

**1000 Polish for Business and Travel. Cr. 2**

Ten-week practical introduction to Polish language and culture. Students learn to communicate in typical situations, while learning in English about the essentials of Polish Culture. For students of inter-

national business and others needing basic language and cultural survival skills. (Y)

**1010 Elementary Polish. Cr. 4**

Sounds, spelling, vocabulary, forms, syntax as basis for reading and conversation. Material fee as indicated in the Schedule of Classes. (T)

**1020 Elementary Polish. Cr. 4**

Prereq: POL 1010 or equiv. Continuation of POL 1010. Material fee as indicated in the Schedule of Classes. (T)

**2010 (FC) Intermediate Polish. Cr. 4**

Prereq: POL 1020 or equiv. Development and practice of basic language skills to increase proficiency in Polish; contemporary Polish culture and current issues. Material fee as indicated in the Schedule of Classes. (T)

**2060 Composition and Conversation. Cr. 1-4 (Max. 8)**

Prereq: POL 2010 or placement examination. For students with rudimentary knowledge of Polish. Four skills modules: listening and comprehension (offered Monday); conversation (Tuesday); reading and comprehension (Thursday); and writing (Friday). Student may choose which language skill (or skills) they want to master, up to four credits per semester. (Y)

**3030 Language Skills: Advanced Speaking and Writing. Cr. 2-4**

Prereq: POL 2060 or equiv. Original texts and audio-visual materials used to further knowledge of Polish culture and develop language skills. Students may focus on listening and speaking, and/or reading and writing. (W)

**3990 Directed Study. Cr. 1-3 (Max. 6)**

Prereq: POL 2010 or equiv.; written consent of chairperson. For students desiring additional work in the language at the intermediate level; for programs of work not included in scheduled course, either in language or literature. (T)

**5990 Directed Study. Cr. 1-3 (Max. 12)**

Prereq: POL 3020 or equiv., written consent of chairperson. (T)

**5993 (WI) Writing Intensive Course in Polish. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 3000-, 4000-, or 5000-level Polish literature course. 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. (F,W)

## RUSSIAN (RUS)

**1010 Elementary Russian. Cr. 4**

Development of practical skills in speaking, understanding, reading, and writing contemporary Russian. Material fee as indicated in the Schedule of Classes. (T)

**1020 Elementary Russian. Cr. 4**

Prereq: RUS 1010 or equiv. Continuing development of the four skills in contemporary Russian. Material fee as indicated in the Schedule of Classes. (T)

**2010 (FC) Intermediate Russian. Cr. 4**

Prereq: RUS 1020 or equiv. Continuation of RUS 1020 with emphasis on developing speaking and reading skills. Material fee as indicated in the Schedule of Classes. (T)

**2020 Intermediate Russian. Cr. 4**

Prereq: RUS 2010 or equiv. Objectives begun in RUS 2010; at more advanced level. (W)

**3010 Intermediate-Advanced Russian I. Cr. 4 (Max. 8)**

Prereq: RUS 2020 or equiv. Further development of skills; taught in two tracks at fifth- and seventh-semester levels, with both combined and individualized activities. (Y)

**3020 Intermediate-Advanced Russian II. Cr. 4 (Max. 8)**

Prereq: RUS 3010. Taught in two tracks at sixth- and eighth-semester levels; both combined and individualized instruction. (F)

**3050 Russian Practicum. Cr. 3**

Prereq: RUS 3010 or consent of Russian major adviser. Internship with local Russian businesses and non-profit organizations to enable students to use Russian in real-life settings. (F,W)

**3650 (PL) Literary Masterpieces: Love, War and Revolution. Cr. 3**

Russian literature in the twentieth century as country develops from feudal decay to totalitarian superpower. Universal human issues within personal experience of war, revolution, political terror and dictatorship, and collapse of Soviet Union. Taught in English; readings in English. (Y)

**3990 Directed Study. Cr. 1-3 (Max. 6)**

Prereq: RUS 2010 or equiv.; written consent of chairperson. For students desiring additional work in the language at the intermediate level; for programs of work not included in scheduled courses, either in language or literature. (T)

**5600 Major Russian Writers. Cr. 3-4**

For advanced undergraduate and graduate students interested in literature. Major nineteenth-century authors: Pushkin, Dostoevsky, Chekhov, Tolstoy, others. Close readings of works introduce traditions and character types within historical and socio-cultural contexts; relevant intellectual, religious, political concerns. Taught in English; readings in English or Russian. (F)

**5650 Love, War, and Revolution in Russian Literature. Cr. 3-4**

Prereq: consent of instructor. For advanced undergraduate and graduate students interested in literature. Close analysis of major twentieth-century works; overview of social, political, and cultural developments. Russian modernism, Socialist Realism, political dissidence in literature, emerging developments in post-Soviet period. Taught in English; readings in English or Russian. (W)

**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)

**5993 (WI) Writing Intensive Course in Russian. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 3000-, 4000-, or 5000-level Russian literature course. 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. (F,W)

## UKRAINIAN (UKR)

**1010 Elementary Ukrainian. Cr. 4**

Sounds, spelling, vocabulary, forms, syntax as a basis for reading and conversation. Material fee as indicated in the Schedule of Classes. (F)

**1020 Elementary Ukrainian. Cr. 4**

Prereq: UKR 1010 or equiv. Continuation of UKR 1010. Material fee as indicated in the Schedule of Classes. (W)

**2010 (FC) Intermediate Ukrainian. Cr. 4**

Prereq: UKR 1020 or equiv. Study in-depth of structure and syntax based on reading. Oral and written practice. Material fee as indicated in the Schedule of Classes. (F)

**3990 Directed Study. Cr. 1-3 (Max. 6)**

Prereq: UKR 2010 or equiv.; written consent of chairperson. For students desiring additional work in the language at the intermediate level; for programs of work not included in scheduled courses, either language or literature. (T)

**5860 (MKT 5860) The Cultural Environment of Ukrainian Business. Cr. 3**

Prereq: upper division standing, consent of instructor. Culture and history of the Newly Independent States (NIS). History, past cultural achievements, commercial evolution in Ukraine as compared to other cultures. Topics include: Stalinist repression, Khrushchev thaw, 1960s Renaissance, implosion of Soviet empire. (Y)

**5990 Directed Study. Cr. 1-3 (Max. 12)**

Prereq: UKR 3020 or equiv.; written consent of chairperson. No graduate credit. For students who wish credit for program of work not included in regularly scheduled courses, either in language or in literature. (T)

# HISTORY

Office: 3094 Faculty/Administration Building; 577-2525;  
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Chairperson: Marc W. Kruman

## Professors

John J. Bukowczyk, Marc Cogan, Charles K. Hyde, Christopher H. Johnson, Marc W. Kruman, Philip P. Mason, Alan Raucher, Monica Schuler, Samuel F. Scott, Melvin Small, David Weinberg

## Associate Professors

Effie Ambler, Jose Cuello, Elizabeth Faue, Osumaka Likaka, Stanley Shapiro, Sandra VanBurkleo

## Assistant Professors

Jorge China, Linda Housch-Collins, Hans Hummer

## Lecturers

Thomas Anderson, Daniel Inkelas, Alexander Nalbach

## Emeritus / Emerita Professors

Thomas N. Bonner, William J. Brazill, Jr., R. V. Burks, Tilden G. Edelstein, Corinne Gilb, Edwin C. Hall, Harry J. Magoulias, Richard Studing

## Emeritus Associate Professor

Stanley D. Solvick

## Degree Programs

*BACHELOR OF ARTS with a major in history*

*\*MASTER OF ARTS with a major in history*

*\*DOCTOR OF PHILOSOPHY with specializations in America and Europe*

*\*GRADUATE CERTIFICATE in Archival Administration*

Historical studies have long been one of the cornerstones of a liberal education. Through the record of our own past and that of other cultures, we learn who we are and how our institutions developed. We study history to learn about the past, to understand the present, and perhaps, to discover clues as to what the future may hold. A broad discipline, history deals with all of humankind's activities, including war and peace, regions, nations, communities and individuals, technology, science, culture, the arts, and religions. With its emphasis on reading in the primary sources and good writing, the study of history in the undergraduate years is good preparation for careers in business or government, and for law and other graduate schools.

## Bachelor of Arts with a Major in History

**Admission requirements** for this program are satisfied by the requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College; see pages 15-46, and 223-227, respectively. The minimum requirement for a major in history is thirty-three credits, distributed according to the following five requirements:

### Major Requirements in History

1) A survey sequence consisting of two courses chosen from one of the following groups:

HIS 1100 - 1200 - 1600 - 1610

HIS 1200 - 1300 - 1400 - 1610

HIS 1300 - 1400 - 2040 - 2050

2) A minimum of eighteen credits in upper division coursework consisting of at least five HIS courses numbered 3000 or above (excluding HIS 4990, 4997, and 5993).

3) Diversity of regional content reflected by selection of two courses in European history, two courses in American history, and one additional course in any of the following areas: Africa, Asia, Latin America, the Near or Middle East.

4) Distribution of chronological content reflected by selection of two courses in the pre-1789 period and two courses in the post-1789 period. Any course with both pre- and post 1789 content may only be counted as satisfying requirements for one period.

5) HIS 5993 (Writing Intensive Course in History) is required of all students responsible for completing the University General Education Requirements.

6) HIS 5996 (Capstone Course) is required of all students who declare history as a major. This course should be taken in the senior year.

Department advisers will help each student plan a program to fit his or her particular needs and background. A maximum of sixteen credits satisfying the major requirements may be transferred from other institutions.

**Recommended Cognate Courses:** Among recommended cognates for history majors are courses in anthropology, economics, English, geography, political science, and sociology. The history of philosophy, the history of art, and the history of music are also appropriate electives.

**Cognate in Business:** Many history majors pursue careers in business and industry. It is possible to arrange a coherent cognate of several courses in the School of Business Administration that enhances the preparation of history majors for potential employment in business and industry, and also may serve as background for an M.B.A. program. Interested students should consult advisers in the School of Business Administration for assistance in constructing the cognate.

**Pre-Law Program:** The following courses are strongly recommended for pre-law students: History 5090, 5160, 5170, and 5280 (see also suggested pre-law curriculum in the Liberal Arts Undergraduate Curricula, page 228).

## Honors Program in History

The History Department offers a Bachelor of Arts degree 'With Honors in History.' Qualified students planning post-baccalaureate work in history or in a professional school are especially encouraged to obtain an Honors degree. Honors majors must have a 3.5 grade point average (g.p.a.) in history courses and a 3.3 cumulative g.p.a. in all courses. Honors majors must complete at least twelve credits in

\* For specific requirements, see the Wayne State University Graduate Bulletin.

honors-designated course work, complete at least one 4000-level seminar offered through the Honors Program, and complete HIS 5995 (Honors Seminar) after the completion of HIS 5996 (Capstone Course). To be admitted to the Honors Seminar, the student must have completed twenty-four credits in history, nine of which must be at or above the 3000 level. Students in the Honors Seminar will complete a senior thesis begun in HIS 5996. This thesis will be directed by two regular faculty members; the student will also defend the thesis before them. For additional information on honors-designated course work available each semester, see the Liberal Arts section of the University Schedule of Classes under 'Honors Program,' or consult the Director of the Honors Program (577-3030).

## Minor in History

The minimum requirement for a minor in history is eighteen credits, of which at least fourteen must be from classes at the 3000 level or higher.

## AGRADE' Program

The History Department permits academically superior majors in their senior year to participate in the 'AGRADE' Program (Accelerated Graduate Enrollment). Those admitted by the Department may enroll in courses that count toward both a B.A. and a M.A. For further information, consult with the Departmental Chairperson or Undergraduate Adviser.

## Honors, Awards, and Scholarships

*Phi Alpha Theta:* Undergraduates and graduate students who demonstrate excellence in their history courses are eligible for election to the chapter of Phi Alpha Theta sponsored by the Department. The international honor society in history, Phi Alpha Theta, offers annual cash prizes to student members, sponsors conferences, and publishes a scholarly journal, *The Historian*. History majors and other history students interested in joining should inquire at the Department.

*Mark and Linee Diem Endowed Scholarship:* This award is made to an outstanding undergraduate major and provides one full year of tuition to its recipient (maximum thirty-two credits).

*Rolf and Jennie Johannesen Memorial Scholarship:* Undergraduate and graduate majors with an expressed interest in classical civilization and its influence on culture and history from the Middle Ages to the present are eligible for this scholarship. The Department makes at least one annual award of not less than \$500 based on the merits of applicants' research papers.

*F. Richard Place Memorial Scholarship:* Undergraduate History majors who have completed the Writing Intensive requirement are eligible for this scholarship. The Department makes at least one annual award based on the merits of applicants' research papers and academic records. Although the amount of awards depends on funds available, it is usually not less than \$500.

## UNDERGRADUATE COURSES (HIS)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **1030 History of American Political Institutions. Cr. 4**

A historical survey of the development since colonial times of American municipal, state, and national government. Special attention to federalism, separation of powers, citizenship, and the two-party system. (I)

### **1050 (AI) American Civilization Since World War II. Cr. 3-4**

Recent American ideas, institutions, and social movements within the broad context of global change and conflicts. (B)

### **1100 (HS) The Ancient World. Cr. 3-4**

From prehistory to the break up of Mediterranean unity. (T)

### **1200 (HS) The Medieval World. Cr. 3-4**

Medieval civilization from the barbarian invasions to the Renaissance. (T)

### **1300 (HS) Europe and the World: 1500-1945. Cr. 3-4**

No credit after HIS 2870 or HIS 1990. The rise of the modern West and the response of the non-West from the age of Columbus to the age of Hitler: the foundations of the contemporary world. (T)

### **1400 (HS) The World Since 1945. Cr. 3-4**

No credit after HIS 1040. Selected topics in world history since 1945, including: impact of World War II on Europe and European empires; bipolar division of the world between the United States and the Soviet Union; the international order and relations between the industrial nations (First World) and the developing nations (Third World). (T)

### **1600 (HS) African Civilizations to 1800. Cr. 3-4**

No credit after former HIS 2400. Africa from ancient Egypt to the Atlantic slave trade. Emphasis on state-building; regional and international commercial network and their role in economic, political, and socio-cultural change. (T)

### **1610 (HS) African Civilizations Since 1800. Cr. 3-4**

No credit after former HIS 2410. The origins of contemporary Africa, nineteenth century state-building, spread of Islamic religion, establishment of European empires, independence struggles, problems of independence. (T)

### **1700 East Asian Civilizations to 1840. Cr. 3**

Traditional East Asian culture and civilization; introduction to origins, growth, and development of the traditional societies of China, Korea, and Japan from remote antiquity until about 1840. (I)

### **1710 East Asian Civilizations Since 1840. Cr. 3**

Introduction to the traditional societies of China, Korea, and Japan, and their responses to the Western challenge. (I)

### **1800 (N E 2030) (HS) The Age of Islamic Empires: 600-1600. Cr. 3**

Historical evolution of the Islamic world from birth of Islam to height of Ottoman Empire. Islamic history and civilization in a world-historical context; developments indigenous to specific regions, such as Islamic Spain. (Y)

### **1810 (N E 2040) (HS) The Modern Middle East. Cr. 3**

Survey of Middle East history in modern era, focusing on the nineteenth and twentieth centuries. Ottoman history from 1600: impact of European imperialism and nationalist movements, resulting in devel-



opment of modern state systems, regional/national conflicts, Islamic response to modernization. (Y)

**1995 (HS) Society and the Economic Transition. Cr. 3**

Historical survey of the interaction between technological change, socio-economic systems, and culture. Multi-disciplinary studies of hunting, agrarian, and industrial societies. (F)

**2000 (U S 2000) (SS) Introduction to Urban Studies. (GPH 2000) (P S 2000) (SOC 2500) Cr. 4**

Urban phenomena, past and present, quality and nature of urban life, major concerns of urban areas; perspectives and techniques of various urban-related disciplines. (T)

**2040 United States to 1877. Cr. 3-4**

American experience with colonialism, revolution and nation building. (T)

**2050 United States Since 1877. Cr. 3-4**

Industrialization, urbanization, and emergence of the United States as a world power. (T)

**2240 History of Michigan. Cr. 3-4**

Social, economic development of the state, from French explorations to the present. (B)

**2320 (N E 2020) Survey of Jewish History and Civilization. Cr. 3**

History of the Jewish people from their origins to the contemporary period. Development of the Jewish community and the Jewish religion in relation to the hegemonic cultures of those regions in which there was major Jewish settlement. (I)

**2430 (CBS 2430) History of Latinos in the United States. Cr. 3**

Historical development of people of Hispanic descent in the United States from the early nineteenth century to the present. Cultural conflict, interaction of political, social, and economic forces. (F)

**2440 (CBS 2410) (FC) History of Mexico. Cr. 3**

Historical development of Mexico and the Mexican people from the Spanish conquest to the present. Interaction of political, social, economic and cultural influences. (F)

**2500 (PCS 2000) Introduction to Peace and Conflict Studies. (P S 2820) Cr. 3**

Required for the peace and conflict studies co-major. A variety of approaches to the origins, processes, and resolution or management of conflict in all human systems from the individual to the nation-state. (Y)

**2510 (PHY 2020) Science, Technology, and War. (P S 2440) (PCS 2020) Cr. 4**

May not be used to fulfill natural science group requirement. Not open to students who took this topic in HIS 3995. Modern weapons, nuclear and otherwise, becoming increasingly available and dangerous; people with grievances eager to use them. Science and technology behind weapons development and use; impact of technologies on prospects and results of war and peace. Constraints of career, bureaucracy and society on development, deployment, and use of weapons. History of humanity and its tools of war. (B)

**2520 (PCS 2010) Topics in Peace and Conflict Studies. (P S 2830) Cr. 1-4**

Special topics relating to peace and conflict studies. (Y)

**2530 (PCS 2050) The Study of Non-Violence. (P S 2550) (SOC 2050) Cr. 3**

Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. (Y)

**2700 (P S 2700) Introduction to Canadian Studies. (ENG 2670)(GPH 2700) Cr. 3**

Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. (Y)

**3050 United States and the Vietnam Experience. Cr. 4**

The United States' involvement in Vietnam; military, domestic and diplomatic impact. (Y)

**3140 The Black Experience in America I: 1619-1865. (AFS 3140) Cr. 3-4**

African origins of the American black; transition from freedom to slavery; status of the black under slavery. (F)

**3150 The Black Experience in America II: 1865 to the Present. (AFS 3150) Cr. 3-4**

The black in national life since emancipation. (W)

**3160 (AFS 3160) Black Urban History. Cr. 4**

Historical experience of African Americans in urban areas; impact of their communities on urban development from 1860 to contemporary times. (F,W)

**3170 (HIS 3170) Ethnicity and Race in American Life. (AFS 6170) (HIS 6170) 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)

**3190 History of American Business. Cr. 3**

Major innovators and leaders as entrepreneurs, as corporate managers, and as business statesmen from colonial era to present. Special attention to relationship, American values, and government policies. (B)

**3240 (P S 3250) Detroit Politics: Continuity and Change in City and Suburbs. (ULM 3250) Cr. 4**

Detroit area political systems and processes, historical, economic, and social influences on local politics. Traditions, changes, and future challenges in Detroit and metropolitan area. (B)

**3250 The Family in History. Cr. 3-4**

Only Honors Program students may elect for four credits. Comparative survey emphasizing the transformation from traditional patterns of family life to family and kin in modern industrial society; students research their own family histories. (B)

**3300 Technology in America. Cr. 3-4**

Technological change in the United States from European settlements to the present; impact of technology in American society; meaning of technology in American culture; history of technologies used in agriculture, manufacturing, transportation, communication, and warfare. (B)

**3310 (N E 3310) History and Civilization of the Ancient Near East I. Cr. 3**

Survey of the history of the Ancient Near East from the beginning of civilization to Cyrus the Great; emphasis on history of Mesopotamia and Egypt, rise and fall of their dynasties and empires, and their impact on the rest of the Near East, especially Ancient Israel. (I)

**3320 (N E 3040) Twentieth Century Middle East. Cr. 3**

The contemporary Middle East; emphasis on social and economic development. Investigation of issues that identify the region, such as oil, gender issues, fundamentalism, and regional conflicts. (Y)

**3330 Civilizations of the Nile Valley: Egypt and Nubia. Cr. 4**

From Neolithic era to the seventh century of our era. (B)

**3360 (AFS 3360) Black Workers in American History. Cr. 4**

Survey course. Slave and free workers during antebellum period; skill trades, sharecropping, menial labor, coal mining during Reconstruction; labor struggles and job discrimination in the twentieth century. (F,W)

**3400 The Automobile and Society: Europe, America, and Japan. Cr. 4**

History of the design, production, and use of the automobile in Europe, the United States, and Japan, from 1885 to the present; impact of automobile on society and culture. (B)

**3450 Canadian-American Relations: 1763 to the Present. Cr. 3**

History of diplomatic, political, economic and cultural relations of Canada and the United States from the French and Indian War to the present. (I)

**3991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. Directed study at University of Salford, England. (F,W)

**3995 Special Topics in History. Cr. 1-4 (Max. 8)**

Specialized and topical studies in historical events, personalities and themes. Topics to be announced in Schedule of Classes. (T)

**3996 Topics in African History. Cr. 1-4 (Max. 8)**

Topics to be announced in Schedule of Classes. (I)

**3998 Topics in American History. Cr. 1-4 (Max. 8)**

Topics to be announced in Schedule of Classes. (I)

**4990 Directed Study. Cr. 1-6**

Prereq: consent of chairperson. (T)

**4997 Internship in Historical Museums. Cr. 3**

Prereq: consent of chairperson. Open only to majors. Offered for S and U grades only. Training in local historical museums and agencies in all aspects of museum administration and service. (T)

**5010 British North America to 1789. (HIS 7010) Cr. 4**

Prereq: HIS 2040. Expansion of British empire to North America, interaction among European, Native American, and African peoples, and development of New World institutions and culture through the framing of the American constitution. (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. 4**

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)

**5060 Modern America: 1917-1945. (HIS 7060) Cr. 4**

Analysis of economic and social problems, politics, 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.

**5090 Constitutional History of the United States from 1937 to the Present. (HIS 7090) Cr. 3**

U.S. constitutional development since the Judicial Revolution of 1937, emphasizing New Deal constitutionalism, dramatic shifts in the role of courts and the executive branch, civil rights movements, and modern rights consciousness. (B)

**5110 (ULM 6100) Class, Race, and Politics in America. (AFS 6100) (P S 6050) (SOC 7330) (U P 7030) Cr. 3**

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

**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) 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, 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)

**5190 History of American Social Thought. (HIS 7190) Cr. 4**

Social thought and ideologies from the colonial era to the recent past, including Puritanism, the Enlightenment, Transcendentalism, Darwinism, Pragmatism, and the social sciences; emphasis on major figures and social context. (B)

**5200 Women in American Life and Thought. (HIS 7200) Cr. 3**

Role of women in the development of American society and in women's movements. (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)

**5251 History of Feminism. (HIS 7251) (W S 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)

**5280 American Legal History. (HIS 7280) Cr. 4**

Non-technical survey of relationships between private law and a developing American society from earliest settlement to the present. Emphasis on evolving conceptions of civil authority and private right, the legal profession, legal education, the law of slavery, and doctrinal developments touching property, labor, women, children, and others. (I)

**5290 (ECO 5490) American Labor History. (HIS 7290) Cr. 4**

Analysis of American workers and unions in the nineteenth and twentieth centuries. (B)

**5300 Economic History of the United States. (HIS 7300) Cr. 4**

Economic growth and development of the United States from origins to present. Emphasis on transformation from agrarian to industrial society and its social and economic impact. (B)

**5320 (AFS 5320) Black Labor History. 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, cultural achievements. (B)

**5340 History of Ancient Rome. (HIS 7340) Cr. 3**

Institutional and cultural development. (B)

**5350 The Hellenistic Period. (HIS 7350) Cr. 3**

Social and economic developments, Alexandrian science, and Hellenization of the East from Alexander the Great to the Roman conquest of the eastern Mediterranean. (B)

**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)

**5380 The Renaissance. (HIS 7380) Cr. 3**

Europe in an age of transition between the fourteenth century and about 1530; Italian cultural and intellectual developments within a social and political context. (B)

**5390 Europe in the Age of Reformation. (HIS 7390) Cr. 3**

Protestant and Catholic reformation seen in the context of social, economic, and political conditions of the sixteenth and seventeenth centuries. (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)

**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, the search for Europe's place in the world. (B)

**5450 The Age of Ideology: Europe in the Interwar Period. (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. 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)

**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)

**5490 Russian History through the Revolution. (HIS 7490) Cr. 4**

Development and transformation of state power, with particular attention to those economic and social elements peculiar to Russia. (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, problems of detente. (Y)

**5530 History of World War I and II. (HIS 7530) Cr. 4**

A military history of the two world wars of the twentieth century. (B)

**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)

**5620 The Rise of the European Working Class: 1750-1850. (HIS 7620) Cr. 3**

The impact of capitalism on peasant society; the transformation of handicraft industry; the emergence of the factory proletariat; class conflict and the working class movement in Europe's revolutionary age. (B)

**5630 Socialism and the European Labor Movement. (HIS 7630) Cr. 3**

Comparative labor history from 1850 to the present; Utopian socialism, Marxism, anarchism, syndicalism, communism, fascism; contemporary trends. (B)

**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 decolonialization and European integration, cultural transformations. (Y)

**5730 The History of West Africa. (HIS 7730) Cr. 4**

West African states; Islam and socio-political change; the termination of the Atlantic slave trade; European conquest; West African resistance and the Colonial experience; nationalism and independence. (B)

**5740 History of South Africa. (HIS 7740) Cr. 4**

Historical origins of Apartheid with emphasis on nineteenth and twentieth century, including Dutch and British settlement, African state building, the mineral revolution, European racism, African resistance and nationalism. (B)

**5991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. Directed study at University of Salford, England. (F,W)

**5993 (WI) Writing Intensive Course in History. Cr. 0**

Prereq: junior standing, consent of chairperson and instructor, satisfactory completion of English Proficiency Examination; coreq: any 5000-level History course. Offered for S and U grades only. Open only to majors. Required for all majors. Students write term paper of approximately twenty typed pages, including footnotes and annotated bibliography. 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. (F,W)

**5995 Honors Seminar. Cr. 3**

Prereq: consent of chairperson; honors standing in history. (T)

**5996 Capstone Course for Majors. Cr. 3**

Prereq: consent of chairperson. Open only to majors. (T)

**6000 Studies in Comparative History. Cr. 2-4**

Topics to be announced in Schedule of Classes. (B)

**6010 Studies in American History. Cr. 2-4 (Max. 9)**

Topics to be announced in Schedule of Classes. (Y)

**6170 (HIS 3170) Studies in Ethnicity and Race in American Life. (AFS 3170) (AFS 6170) 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)

**6190 History of American Business. Cr. 3**

Major innovators and leaders as entrepreneurs, as corporate managers, and as business statesmen from colonial era to present. Special attention to relationship, American values, and government policies. (B)

# HONORS PROGRAM

*Office:* 2311 Faculty/Administration Building; 577-3030

*Director:* Stanley Shapiro; 3139 Faculty/Administration Building; 577-6146

*Adviser:* Karen M. Gurney, 2136 Helen Newberry Joy Student Services Center; 577-2680

The Honors Program is designed for highly motivated students with superior abilities. Undergraduates in any college or department may, if eligible, take honors courses. Typically, honors classes are small and are taught by members of the regular faculty.

**Eligibility:** To enroll in honors courses, students must have at least a 3.3 cumulative grade point average at Wayne State University. Entering freshmen should have a high school grade point average of at least 3.5, and students transferring from a community college a 3.3 g.p.a. (Freshmen may substitute acceptable ACT or SAT scores in lieu of grade point averages.) Continuing students with a 3.3 g.p.a. or better for twenty-four successive credits are also eligible to enter the Honors Program. No application procedure is necessary to take honors courses. Students may take as few or as many honors courses as they wish; all courses are so noted on the transcript. Qualified students may elect: Honors Program courses, honors sections of departmental courses, departmental courses open only to honors students, honors thesis or essay or project courses, honors-option courses, courses with an honors component, and honors directed studies. Students normally will earn many of their honors-designated credits in courses that also fulfill University General Education Requirements (see page 29).

**Honors Degrees:** Students seeking a degree with Departmental Honors must contact their major department or the Honors Program Office for specific requirements (see the appropriate departmental section of this Bulletin). However, all departmental honors programs require (1) at least twelve credits in honors-designated course work, including (2) a senior essay or thesis or project done in the student's major department, and (3) at least one 4200-level seminar offered through the Honors Program (HON 4200-4280). A g.p.a. of 3.3 (higher in some departments) is required for graduation as well. Any honors-designated course work may be included in the twelve honors credits.

Students pursuing a degree with University Honors will follow a course of study consisting of (1) at least twenty-four credits in honors-designated course work, including (2) a senior thesis or essay or project, and (3) one 4200-level seminar offered by the Honors Program (HON 4200-4280). A g.p.a. of 3.3 or higher is required for graduation. Any honors designated course work may be included in the twenty-four honors credits.

A student who satisfactorily completes a Departmental Honors curriculum or University Honors will receive the appropriate Honors designation on both the diploma and the academic transcript. Approval of the Honors Program is necessary for graduation with Departmental or University Honors.

**Additional Benefits of the Honors Program:** Other features of the Honors Program include special faculty advising, guest lectures, participation in regional and national meetings of the National Collegiate Honors Council, an Honors Student Lounge (2311 Faculty/Administration Building), an Honors Group Study Room in the Undergraduate Library, and the opportunity to participate in honors student groups such as the newsletter staff and the social activities committee. Honors majors may also receive research awards to support their senior theses or projects.

## Honors Sections and Departmental Courses

The following departmental courses either have honors sections or are open only to honors students. These courses (when scheduled) will be listed under the Honors Program in the University Schedule of Classes. A complete list of all departmental honors thesis or essay courses are listed only under the respective departmental headings in this Bulletin and the Schedule of Classes. For descriptions of the courses in the following partial list, see the appropriate Departmental sections of this Bulletin.

ANT 2100	(SS) Introduction to Anthropology
ANT 3110	Detroit Area Minorities: Arabs, Hispanics, and African Americans
ANT 4999	Honors Research and Thesis
A H 1120	(VP) Renaissance through Modern Art Survey
BIO 1030	(LS) Biology Today
BIO 1050	(LS) An Introduction to Life
BIO 1500	Basic Life Diversity
BIO 1510	(LS) Basic Life Mechanisms
BIO 6990	Honors Directed Study in Biology
BIO 6997	Senior Seminar: Honors Program
BIO 6999	Terminal Essay: Honors Program
CHM 1410	(PS) Principles I: General and Organic
CHM 1420	Principles II: Organic
CHM 5998	Honors Thesis Research in Chemistry
CLA 1010	(PL) Classical Civilization
CLA 2000	Greek Mythology
CLA 2100	(PL) Classical Origins of Western Thought
CRJ 4998	Honors Thesis in Criminal Justice
CSC 4999	Honors Thesis
ECO 2010	(SS) Principles of Microeconomics
ECO 2020	(SS) Principles of Macroeconomics
ECO 4997	Senior Honors Seminar
ENG 1050	(BC) Freshman Honors: English I
ENG 2050	(IC) Freshman Honors: English II
ENG 4990	Directed Study: Honors Program
ENG 4991	Honors Seminar
ENG 4992	Honors Project
FRE 2700	(PL) Anguish & Commitment: European Existentialist Literature
GER 2700	(PL) Anguish & Commitment: European Existentialist Literature
GPH 4990	Directed Study: Honors Program
HIS 1200	(HS) Medieval World
HIS 1300	(HS) Europe and the World: 1500-1945
HIS 1400	(HS) The World Since 1945
HIS 3250	The Family in History
HIS 5995	Honors Seminar
HUM 2200	(PL) Sophomore Honors Colloquium in Humanities
HUM 3030	Music-Theatre-Cinema
ITA 2700	(PL) Anguish & Commitment: European Existentialist Literature
MAT 2010	Calculus I
MAT 2020	Calculus II
MAT 2030	Calculus III
NFS 2210	Human Nutrition
NFS 5990	Honors Directed Study
PHI 1020	(PL) Honors Introduction to Philosophical Systems
PHI 1040	(PL) Honors Introduction to Philosophical Problems
PHI 1860	Honors Introductory Symbolic Logic
PHI 2320	(PL) Introduction to Ethics
PHI 3550	(PL) Metaphysics
PHI 3600	Space, Time and the Philosophy of Physics
PHI 4870	Honors Directed Reading
PHI 4890	Honors Proseminar
PHY 1040	(PS) Einstein, Relativity and Quanta
P S 1010	(AI) American Government

P S 4995	Senior Honors Paper
PSY 1010	(LS) Introductory Psychology
PSY 2600	Psychology of Social Behavior
PSY 4991	Honors Directed Study
PSY 4998	Senior Thesis Seminar
RUS 2700	(PL) Anguish & Commitment: European Existentialist Literature
SOC 2000	(SS) Understanding Human Society
SOC 5870	Violence in the Family
SPA 2700	(PL) Anguish & Commitment: European Existentialist Literature
SPB 1010	(OC) Oral Communication: Basic Speech
SPB 4996	Honors Seminar in Speech Communication
UGE 1000	(GE) Information Power

## Honors-Option Coursework

The Honors Option allows a student in any course above the 1000 introductory level taught by a regular faculty member to elect honors type work, provided the instructor agrees to furnish commensurate extra instruction. If a grade of 'B' or above is earned in the course and in the additional work, the student will receive honors credit for the course on the transcript. Application forms for the Honors Option are available in the Honors Program Office. The application form must be signed by the instructor and departmental honors adviser and should be returned to the Honors Program Office by the end of the third week of classes. The completed form must then be returned to the Honors Program Office at the end of the semester.

## COURSES OF INSTRUCTION (HON)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 2100 (CLA 2100) (PL) Classical Origins of Western Thought. Cr. 3

Prereq. for HON students: minimum 3.3 cumulative g.p.a. (3.5 g.p.a. for entering freshmen). Classical foundations of contemporary Western Thought. Topics include: relations between the sexes, democracy, slavery, war, social criticism, rationality, relations between parents and children, literature and the performing arts. (I)

### 4200 (PL) Seminar in Philosophy and Letters. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of meanings given to human experience through study of philosophy or letters. Honors variant of an approved PL course in General Education Program. (I)

### 4210 (SS) Seminar in Social Sciences. Cr. 3

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of major institutions in society and their roles in those institutions. Honors variant of an approved SS course in General Education Program. (I)

### 4220 (LS) Seminar in Life Science. Cr. 3

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of aspects, methods, and important issues in various areas of the life sciences. Honors variant of an approved LS course in General Education Program. (I)

### 4230 (PS) Seminar in Physical Science. Cr. 3

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of modern theory and data, implications and possibilities in the physical sciences. Honors variant of an approved PS course in the General Education Program. (I)

**4240 (VP) Seminar in Visual and Performing Arts. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of ways the visual or performing arts may be appreciated, evaluated, and criticized. Honors variant of an approved VP course in the General Education Program. (I)

**4250 (HS) Seminar in Historical Studies. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Studies of periods of history in which there has been major transition or change. Honors variant of an approved HS course in General Education Program. (I)

**4260 (FC) Seminar in Foreign Culture. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Humanistic or social science investigation of peoples and institutions in other cultures. Honors variant of an approved FC course in General Education Program. (I)

**4270 (AI) Seminar in American Society and Institutions. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Study of American society, its institutions and social change. Honors variant of an approved AI course in General Education Program. (I)

**4280 General Honors Seminar. Cr. 3**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. In-depth exploration of important concepts and approaches in liberal studies. Topics to be announced in Schedule of Classes. (I)

**4990 Directed Study. Cr. 2-4 (Max. 16)**

Prereq: 3.3 g.p.a. and written consent of director. (T)

**4998 University Honors Thesis. Cr. 3-6**

Prereq: junior or senior standing and consent of University Honors Program Director. Open only to University honors students. For students not concurrently in departmental/college Honors program. (T)

# HUMANITIES

Office: Room 4228, 51 West Warren; 577-3035

Director: Richard P. Studing

## Professors

Marc Cogan, Bernard M. Goldman (Emeritus), Martin M. Herman (Emeritus), Sara E. Leopold (Emerita), Richard P. Studing

## Associate Professor

Nola H. Tutag (Emerita)

## Lecturer

Linda J. Speck

The Humanities Program focuses on the symbolic ways in which human beings represent their experience. By means of a multidisciplinary, interdisciplinary and comparative approach, it examines relationships among such diverse humanistic disciplines as art, music, literature, history, language and philosophy from both topical/theoretical and historical perspectives. Courses are designed to serve two curricular needs:

1. Those so designated and approved may be taken to fulfill portions of the University General Education Program (see page 29), and the College of Liberal Arts Group Requirements (see page 223).
2. Some may serve as electives or cognates for students majoring in other disciplines.

## COURSES OF INSTRUCTION (HUM)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.*

**1010 (VP) Introduction to Art and Music in Western Civilization. Cr. 4**

Carefully selected examples from the visual arts and music placed in appropriate contexts from antiquity to the present. Museum and listening assignments supplement the lectures. (T)

**1020 (VP) Experiencing the Arts. Cr. 3-4**

Developing the skills to experience (look, listen, read) such artistic media as art, music, and poetry. Considering how such skills relate to the manner in which meaning is communicated. Specific media to be announced in Schedule of Classes. (T)

**1030 (VP) Exploring the Arts in Detroit. Cr. 4**

Examination of the role played by urban institutions in creating, preserving, and transmitting humanistic concepts and the imaginative products of the human mind. Systematic survey of those institutions in metropolitan Detroit which have assumed or been assigned responsibility for communicating these ideas to succeeding generations and for providing continued access to such artifacts. A lecture-field work format assures maximum opportunity for direct access and experience. (T)

**1130 Practicum in Humanities. Cr. 1 (Max. 3) (FLD: 1)**

Prereq. or coreq: HUM 1010, 1020, 1030, 2100, or 2110. Attending and reviewing assigned performances and exhibitions related to HUM 1010, HUM 1020, HUM 1030, HUM 2100, or HUM 2110. (T)

**2000 (IC) Reading and Writing About the Arts. Cr. 3**

Prereq: ENG 1020. Examination of ways in which various modes of expression (e.g., painting, music, drama) and related examples of

expository (critical) prose communicate meaning for the purpose of improving analytical skills and writing ability. (T)

**2100 (PL) Ancient - Medieval: Literature and the Arts. Cr. 4**

Examining relationships among the arts and connections between art and ideas from antiquity to the Renaissance. (F)

**2110 Humanities and the Western Tradition II: Renaissance to the Present. Cr. 4**

Examining relationships among the arts and connections between art and ideas from the Renaissance to the present. (W)

**2200 (PL) Sophomore Honors Colloquium in Humanities. Cr. 4 (Max. 8)**

Prereq: sophomore standing. Open only to students in Honors program. Topics to be announced in Schedule of Classes. (F)

**2220 (PL) Constructs of Human Experience: Histories, Novels, Philosophies. Cr. 3-4**

Examination of texts selected from the major categories of prose writing: history, narrative fiction and philosophy. Critical exploration and comparison of these categories as a means to fuller understanding. (W)

**2500 Images of Labor in the Arts and Literature. (LBS 2500) Cr. 4**

Diverse history of labor as reflected in the popular arts (films, songs, stories, and graphics). (T)

**3030 Music - Theatre - Cinema: Imitation, Adaptation, Transformation. Cr. 3**

Prereq: HUM 1020 or equiv. Examining cycles of thematically related works for the purpose of studying the process of adaptation as it takes place through time and across expressive media. (B)

**3990 Directed Study. Cr. 1-3 (Max. 3)**

Prereq: written consent of humanities director. Open primarily to juniors and seniors. Advanced study in a particular area of the humanities. (T)

# INTERNATIONAL STUDIES

Office: 355 Manoogian Hall; 577-8072; Fax: 577-2738

Program Director: Bruce S. Morgan

## Advisory Committee

Anthropology: Mark L. Weiss

Economics: Allen C. Goodman

English: Renata M. Wasserman

German and Slavic Studies: Donald Haase

Linguistics: Martha Ratliff

Political Science: Charles D. Elder

Romance Languages and Literatures: Louis Kibler

## Co-Major or Minor in International Studies

The interdisciplinary program in international studies serves to broaden the educational horizons of undergraduates; it offers co-major and minor concentrations of study. This program draws upon a combination of subjects which provides students with a distinctive body of knowledge and perspectives essential to ensure their competence in an emerging global market. Students in all majors who add International Studies to their curriculum can expect to gain knowledge of world cultures, politics, economics, geography, and languages. With this enhanced competitive edge, students will be better able to master national and international job markets and to advance their future careers.

The core requirements of the International Studies Program offer foundational knowledge from five different disciplines, while the wide range of elective courses enables students to acquire a variety of intercultural skills or to develop specialized knowledge of a particular area or region of the world.

**MINOR REQUIREMENTS:** Students must fulfill the core requirements and take one elective course, for a minimum of eighteen credits; additional electives are allowed.

**CO-MAJOR REQUIREMENTS:** Students must fulfill the core requirements and elect a minimum of fifteen additional credits in elective courses, for a total of thirty-two credits. For a list of elective courses for this program, contact Dr. Bruce Morgan (577-8072).

### Core Requirements credits

ANT 3100 -- Cultures of the World . . . . .	3-4
GPH 1100 -- (SS) World Regional Patterns. . . . .	4
HIS 1400-- (HS) The World Since 1945 . . . . .	3-4
LIN 2730 -- (ENG 2730) Languages of the World . . . . .	3
P S 2710 or P S 2810	
-- Introduction to Comparative Politics. . . . .	4
-- World Politics . . . . .	4

Courses included in the International Studies Program may also count toward satisfaction of the University General Education Requirements and College of Liberal Arts group requirements.

For more information about the Program, consult the Program Director, Dr. Bruce Morgan, 355 Manoogian Hall.

# LEGAL STUDIES

Office: 3369 Law School; 577-3947  
 Web: <http://www.law.wayne.edu/clis>

Interim Director: Joan Mahoney

Assistant Professor: Brad R. Roth

Academic Services Officer: Enoch W. Baker

## Advisory Committee

Hanley N. Abramson, *Pharmacy*

Janet E. Findlater, *Law*

Allen C. Goodman, *Economics*

Marc W. Kruman, *History*

Barbara W. LeRoy, *Developmental Disabilities Institute*

Frederica B. Lombard, *Law*

Carol J. Miller, *Civil Engineering*

John R. Reed, *English*

Jonathan T. Weinberg, *Law*

## Interdisciplinary Minor in Legal Studies

The College of Liberal Arts offers a Minor in Legal Studies for undergraduate students majoring in other disciplines. The Minor in Legal Studies program consists of twenty-one credits, typically six or seven courses. Students must also complete any prerequisite courses required to enroll in a course satisfying the minor requirements. This minor is intended to provide a broad understanding of law as a fundamental component of human societies. The notation of the minor will appear on the student's transcript but not the diploma. Declaration of the minor will be made by the student only when filing for graduation. Students planning to minor in legal studies are strongly encouraged to consult with the Program Director not later than the beginning of their senior year.

**MINOR REQUIREMENTS:** Successful completion of a minimum of twenty-one credits, including: 1) at least seventeen credits outside the student's major; 2) LGS 2010 -- Introduction to Legal Studies; 3) at least three courses from Group I consistent with the requirements listed below; 4) not more than one course from Group III; 5) courses from at least three different departments.

Substitution of courses not listed below may be made with prior written consent of the Director.

### Group I (three courses must be elected from this group)

The three courses required from Group I must be from more than one sub-group and more than one department. Additional courses from Group I may also be counted toward the twenty-one credits required for the minor.

### Sub-Group A -- Substantive Law

CRIMINAL JUSTICE	
CRJ 5710 -- Constitutional Criminal Procedure	4
CRJ 5720 -- Criminal Law	4
AMERICAN CONSTITUTIONAL LAW	
P S 5110 -- Constitutional Law	4
P S 5120 -- Constitutional Rights and Liberties	4
INTERNATIONAL LAW	
P S 5820 -- International Law	4
P S 5850 -- Human Rights	4

### Sub-Group B -- Historical Approaches

AMERICAN LEGAL HISTORY	
HIS 5280 -- American Legal History	4
AMERICAN CONSTITUTIONAL HISTORY	
HIS 5090 -- Constitutional History of the U. S.: 1937 to Present	3
HIS 5160 -- Constitutional History of the U.S. to 1860	4
HIS 5170 -- Constitutional History of the U.S.: 1860-1940	4
ANCIENT LEGAL HISTORY	
CLA 3100 -- Law and Ancient Society	3-4

### Sub-Group C -- Theoretical Aspects

LEGAL PHILOSOPHY	
PHI 3270 -- Foundations of Law	3
PHI 5270 -- Philosophy of Law	4
MORAL PHILOSOPHY	
PHI 1100 -- (PL) Contemporary Moral Issues	3
PHI 2320 -- (PL) Introduction to Ethics	3-4
PHI 5280 -- History of Ethics	4
PHI 5300 -- Twentieth Century Analytic Ethics	4
NORMATIVE POLITICAL THEORY	
PHI 2330 -- Intro. to Social and Political Philosophy	3
PHI 5240 -- Special Topics in Social and Political Philosophy	4
P S 3510 -- (PL) Law, Authority, and Rebellion	4
P S 3520 -- (PL) Justice	4

### Sub-Group D -- Social Science Approaches

SOCIOLOGY OF LAW	
SOC 5810 -- Law in Human Society (CRJ 5810)	3
SOC 3820 -- Criminology	3
SOCIOLOGY OF RACE AND THE LAW	
AFS 3860 -- Race, Class, & the Criminal Justice Syst. (SOC 3860)	3
AFS 5580 -- Law and the African American Experience (SOC 5580)	4
LAW AND POLITICS	
P S 3100 -- American Legal Systems and Processes	4
LAW AND ECONOMICS	
ECO 5250 -- Economic Analysis of the Law	4

### Sub-Group E -- Capstone

LGS 5999 -- Interdisciplinary Seminar in Legal Studies	3
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### Group II

AGS 3060 -- Law: Analysis and Writing	4
ANT 6170 -- Political Anthropology	3
CRJ 3120 -- Politics of the Criminal Justice Process (P S 3120)	4
CRJ 4300 -- Corrections (SOC 3840)	4
CRJ 4400 -- Introduction to the Judicial Process	4
CRJ 5060 -- Comparative Criminal Justice Systems	3
ECO 5210 -- Market Power and Economic Welfare	4
ECO 5500 -- Public Finance: Taxation and Expenditure Theory	4
ECO 5510 -- Public Choice	4
HIS 5310 -- Social Justice in America (HIS 7310)	4
PCS 2000 -- Intro. to Peace & Conflict (HIS 2500) (P S 2820)	3
PCS 5000 -- Dispute Resol. (CRJ 5994) (P S 5890) (PSY 5710)	3
PHI 1110 -- Ethical Issues in Health Care	3
P S 6120 -- Administrative Law and Regulatory Politics	4
SOC 4800 -- Outsiders, Outcasts, and Social Deviants (CRJ 4800)	3
SOC 6860 -- Org. Crime: History & Social Structure (CRJ 6860)	3
SPC 5110 -- Studies of Argument	3

### Group III (not more than one course may be elected)

ACC 3510 -- Business Law I	3
ACC 5170 -- Taxes on Income	3
ACC 5190 -- Business Law II	3



C E 5810 -- Legal Aspects of Engineering Problems . . . . .	3
CRJ 4410 -- The Juvenile Justice System . . . . .	4
CRJ 6750 -- Administrative Law in Criminal Justice . . . . .	3
FPC 5020 -- Legal Environment of the Arts . . . . .	3
GEG 5810 -- Location Issues: Haz. Waste Mgt. (HWM 5810) . . . . .	3
HPR 6640 -- Legal Issues in Health, Phys. Ed. & Recreation . . . . .	3
HWM 5540 -- Law & Administration Issues in Haz. Waste Mgt. I . . . . .	2
LBS 4500 -- Applied Labor Studies: Labor Law . . . . .	3
LGS 5000 -- Legal Studies Internship . . . . .	1-3
LGS 5991 -- Directed Study . . . . .	1-4
MGT 5740 -- Collective Bargaining . . . . .	3
PPR 3120 -- Pharmacy and Jurisprudence . . . . .	2
PPR 6100 -- Legal Environment in Pharmacy . . . . .	3
P S 3170 -- The Living Constitution . . . . .	4
SPJ 5020 -- History and Law of American Journalism . . . . .	4
U P 5110 -- Urban Planning Process . . . . .	3
U P 6650 -- Planning and Development Law . . . . .	3

## UNDERGRADUATE COURSES (LGS)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### 2010 Introduction to Legal Studies. Cr. 3

Nature of legal systems and functions of law in society. Elements of American legal system and basic concepts in American law. Legal theory and its application to contemporary issues (e.g., crime, free speech, civil rights). (Y)

### 5000 Legal Studies Internship. Cr. 1-3

Prereq: LGS 2010 and consent of program director. May not be used to satisfy Group I or II requirements for Minor in Legal Studies. Students work up to twelve hours per week in internship placement with a legal studies component, such as City of Detroit Law Department or other government agency including local area courts, or with a private agency. Students meet once per week with faculty member; final project synthesizing legal studies course work. Students may not be paid for internship work. (T)

### 5991 Directed Study. Cr. 1-4

Prereq: consent of instructor. May not be used to satisfy the Group I requirement for the minor in Legal Studies. Advanced reading and research in legal studies. (T)

### 5999 Interdisciplinary Seminar in Legal Studies. Cr. 3

Prereq: LGS 2010 or consent of instructor. Primarily for juniors and seniors pursuing the Minor in Legal Studies. Application of methods from the social sciences and humanities as applied to study of contemporary legal controversies. (Y)

# LINGUISTICS

Office: Room 4025, 51 West Warren; 577-8642

e-mail: linguistics@wayne.edu

Web: <http://linguistics.wayne.edu>

Director: Ellen Barton

## Participating Faculty

Jean Andruski, *Assistant Professor, Audiology and Speech-Language Pathology*

Anthony Aristar, *Associate Professor, English*

Catherine Barrette, *Assistant Professor, Romance Languages and Literatures*

Ellen Barton, *Professor, English*

Eugenia Casielles-Suarez, *Assistant Professor, Romance Languages and Literatures*

D'Jaris Coles, *Assistant Professor, Audiology and Speech-Language Pathology*

Walter Edwards, *Professor, English*

Joel Itzkowitz, *Associate Professor, Greek and Latin*

Alexis Manaster-Ramer, *Professor, Computer Science*

T. Michael McKinsey, *Professor, Philosophy*

Bruce Morgan, *Assistant Professor, English*

Ljiljana Progovac, *Associate Professor, English*

Martha Ratliff, *Associate Professor, English*

Aleya Rouchdy, *Professor, Near Eastern and Asian Studies*

Patricia Siple, *Associate Professor, Psychology*

Rebecca Treiman, *Professor, Psychology*

Frances Trix, *Associate Professor, Anthropology*

Lee Wurm, *Assistant Professor, Psychology*

## Degree Programs

*BACHELOR OF ARTS with a major in linguistics*

*\*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. Three core courses are offered on a regular basis: introduction to linguistic theory, phonology, and syntax. The program offers concentrations in the following areas: (a) linguistics and a language, (b) syntax and semantics, (c) language variation and change, (d) language acquisition and processing, (e) sociolinguistics and discourse/pragmatics, and (f) individualized program.

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.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Arts With a Major in Linguistics

**Admission Requirements** for this program are satisfied by the requirements for general undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29), the College Group Requirements (see page 223), and the following major requirements. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15 - 46 and 223 - 227, respectively.

The bachelor of arts program consists of a basic core of general linguistics courses which all majors must complete. In addition to the core courses, the student is to pursue one of the following concentrations: (a) linguistics and a language, (b) syntax and semantics, (c) language variation and change, (d) language acquisition and processing, (e) sociolinguistics and discourse/pragmatics, and (f) individualized program.

Programs are to be planned in consultation with the linguistics program adviser. A student must complete a minimum of twenty-eight credits in core and concentration courses to satisfy the major requirements.

<b>CORE COURSES:</b>	<i>credits</i>
LIN 5700 -- Introduction to Linguistic Theory	3
LIN 5290 -- Phonology	3
LIN 5300 -- Syntax	3

### **CONCENTRATIONS:**

#### *(a) Linguistics and a Language*

The student must complete at least nine credits in advanced language skills or in the linguistics of the chosen language. The nine credits in advanced language skills should be planned in consultation with the adviser.

#### *(b) Syntax and Semantics*

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 1850 or LIN 1860	
-- Introductory Symbolic Logic	3
-- Honors Symbolic Logic	3
LIN 5720 -- Topics in Language: Semantics	3
LIN 5720 -- Topics in Language: Morphology	3
LIN 5720 -- Topics in Language: Typology	3
LIN 5730 -- Traditional Grammar	3
LIN 6710 -- Psycholinguistics	3

*Students may select from the following electives:*

LIN 2730 -- Languages of the World	3
LIN 2750 -- African American English	3
LIN 3080 -- Cognitive Psychology	3
LIN 5050 -- Advanced Symbolic Logic	4
LIN 5200 -- Modal Logic	4
LIN 5230 -- Structure of Arabic	3
LIN 5570 -- Philosophy of Language	4

#### *(c) Language Variation and Change*

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 2730 -- Languages of the World	3
LIN 2750 -- African American English	3
LIN 5720 -- Topics in Language: Historical Linguistics	3
LIN 5720 -- Topics in Language: History of English	3

LIN 5720 -- Topics in Language: Typology	3
LIN 5720 -- Topics in Language: Language Variation	3
LIN 5760 -- American Dialects	3
LIN 5770 -- Sociolinguistics	3

*Students may select from the following electives:*

LIN 5310 -- Language and Culture	3
LIN 5320 -- Language and Societies	3
LIN 5720 -- Topics in Language: Morphology	3
LIN 5720 -- Topics in Language: Field Methods	3

#### *(d) Language Acquisition and Processing*

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 3080 -- Cognitive Psychology	3
LIN 5080 -- Phonetics	3
LIN 5360 -- Normal Language Acquisition and Usage	3
LIN 5750 -- Theories of Second Language Acquisition	3
LIN 6710 -- Psycholinguistics	3

*Students may select from the following electives:*

LIN 2750 -- African American English	3
PSY 3010 -- Statistical Methods in Psychology	4
PSY 3090 -- Cognitive Psychology Laboratory	2
PSY 3120 -- Brain and Behavior	3
SLP 5300 -- Intro. to Speech-Language Pathology	3-4
LIN 5310 -- Language and Culture	3
ARB 5100 -- Teaching Arabic as a Foreign/Second Language	3
LIN 5760 -- American Dialects	3

#### *(e) Sociolinguistics and Discourse/Pragmatics*

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 2750 -- African American English	3
LIN 5310 -- Language and Culture	3
LIN 5320 -- Language and Societies	3
LIN 5720 -- Topics in Language: Pragmatics	3
LIN 5720 -- Topics in Language: Language Variation	3
LIN 5720 -- Topics in Language: Language and Gender	3
LIN 5760 -- American Dialects	3
LIN 5770 -- Sociolinguistics	3

*Students may select from the following electives:*

LIN 2730 -- Languages of the World	3
PSY 3010 -- Statistical Methods in Psychology	4
LIN 5210 -- Arabic Sociolinguistics	3
ANT 5210 -- Anthropological Methods	3
LIN 5720 -- Topics in Language: Historical Linguistics	3
LIN 5730 -- Traditional Grammar	3

#### *(f) Individualized Program*

A student may design a concentration to meet an individualized program. The special concentration must be approved by the adviser before the student has completed a maximum of nine credits in the major.

## Minor in Linguistics

A minor consists of the three core courses (LIN 5700, 5290, 5300) plus nine additional credits in the Linguistics program. Programs should be planned in consultation with an adviser.

## UNDERGRADUATE COURSES (LIN)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### **1700 (ENG 1700) English Grammar. Cr. 3**

Intensive course in the rules of English grammar, especially those rules needed for written work in college. Explication of the linguistic principles inherent in the rules of usage. (I)

### **1850 (PHI 1850) Introductory Symbolic Logic. Cr. 3**

The logic of propositions; the general logic of predicates and relations. (Y)

### **1860 (PHI 1860) Honors Symbolic Logic. Cr. 3**

Open only to Honors students. See LIN 1850. (Y)

### **2720 (ENG 2720) (PL) Basic Concepts in Linguistics. Cr. 3**

Prereq: ENG 1020 or equiv. Analysis of the structure and use of language, focusing on English, from the standpoint of current linguistic practice. Topics include: phonetics and sound structure, word structure, syntax, semantics, language origin and history, dialects, language learning, animal communication, and language in social interaction. (T)

### **2730 (ENG 2730) Languages of the World. Cr. 3**

Prereq: ENG 1020. Survey of structure of major language families of the world, western and non-western; interrelationships of language and culture; universals and variations of universals in language and culture. (Y)

### **2750 (SLP 2750) African American English. Cr. 3**

Structure, content, use, and history of African American English (also known as Ebonics) from its origins to the present. (W)

### **3080 (PSY 3080) Cognitive Psychology: Fundamental Processes. Cr. 3**

Prereq: PSY 1010 or equiv. Fundamental theories, concepts, and empirical findings in study of human cognition. Topics include: thinking, problem solving, language comprehension and production, memory and attention. (Y)

### **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. (SED 5320) Cr. 3**

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiological approaches. (F)

### **5200 (PHI 5200) Modal Logic. Cr. 4**

Prereq: PHI 1850 or PHI 1860 or consent of instructor. The logic of necessity, possibility, and other modal notions as they occur in episodic and deontic contexts. (B)

### **5210 (ARB 5210) Arabic Sociolinguistics. (N E 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. (N E 5230) Cr. 3**

No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

### **5290 (ENG 5710) Phonology. Cr. 3**

Prereq: 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. (B)

### **5300 (ENG 5740) Syntax. Cr. 3**

Prereq: 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. (B)

### **5310 (ANT 5310) Language and Culture. Cr. 3**

Prereq: ANT 2100 or ANT 5200 or SOC 2010 or consent of instructor. Interconnections of language and culture in distant and local communities, in contexts where languages are declining or developing anew, and in life cycle and ordinary contexts of daily life. Students explore their own language and cultural backgrounds and those to which they are drawn. (F)

### **5320 (ANT 5320) Language and Societies. Cr. 3**

Contemporary linguistic anthropologists see language as a form of social action. How this understanding of language in society has evolved: classic works in linguistic anthropology and contemporary studies. Research in language in society. (W)

### **5360 (SLP 5320) Normal Language Acquisition and Usage. (SED 5360) Cr. 3**

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (Y)

### **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 or consent of instructor. 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, semantics, sociolinguistics, and pragmatics. Introduction to selected disciplinary and interdisciplinary topics: typology and universals, communication systems, psycholinguistics, sociolinguistics, historical linguistics, anthropological linguistics. (T)

### **5720 (ENG 5720) Topics in Language.**

Topics such as morphology, semantics, pragmatics, historical linguistics, history of English, pidgins and creoles, language variation, to be announced in Schedule of Classes. (T)

### **5730 (ENG 5730) Traditional Grammar. Cr. 3**

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (T)

### **5750 (ENG 5750) Theories of Second Language Acquisition. (CLA 5750) (FRE 5750) (GER 5750) (ITA 5750) (SPA 5750) (N E 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (Y)

**5760 (ENG 5760) American Dialects. Cr. 3**

Survey of chief social and geographic dialects of American English and introduction to theories 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)

**5993 (WI) Writing Intensive Course in Linguistics. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: LIN 5210, 5290, 5300, 5720, 5750, 5760, or 5770. 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. Intensive training in literature search, linguistic analysis, and the preparation of scholarly written work. (T)

**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)

# NEAR EASTERN and ASIAN STUDIES

*Office:* 437 Manoogian; 577-3015

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*Professor*

Aleya A. Rouchdy

*Associate Professor*

Muneer Fareed, May Seikaly

*Assistant Professor*

Salim Kaldieh

*Lecturers*

Edith Covensky, Rie Masuda

*Adjunct Faculty*

Dallas Kenny

*Emeritus Professor*

Ivan Starr

## Degree Programs

*BACHELOR OF ARTS with a major in Near Eastern languages*

*BACHELOR OF ARTS with a major in Near Eastern studies*

*\*MASTER OF ARTS with a major in Near Eastern languages*

This department offers programs and courses of instruction which acquaint students with the languages and civilizations of the modern Middle East as well as the classical traditions of that locale. In addition to reading texts in the original languages, the student may elect courses from a wide range of offerings for which no language other than English is required. A student who wishes to major in the Department should plan a program with the departmental adviser as soon as possible after entering the University. Each program is arranged individually to combine the most varied advantages consistent with the student's interests and purposes.

## Bachelor of Arts Degrees

**Admission Requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements of one of the following major degree programs. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Major Requirements

**Near Eastern Languages:** A major in Near Eastern languages consists of: (a) a concentration in either Arabic or Hebrew; or (b) joint study of both languages.

*The major with a concentration in Arabic or Hebrew* requires twenty-four credits in language or language-related courses (i.e., linguistics or literature) beyond first year proficiency. In addition, the student must take twelve credits in elective courses in ancient Near Eastern, Judaic, or Arab/Islamic culture/civilization, or Islamic and modern Middle East history.

*The major with a joint study in both Arabic and Hebrew* requires first-year proficiency in both Arabic and Hebrew. Beyond that, the student must take twelve credits in elective courses in either Arabic or Hebrew language or language-related courses and eight credits in such courses in the other language. In addition, the student must take nine credits in elective courses in ancient Near Eastern, Judaic, or Arab/Islamic culture/civilization, or Islamic and modern Middle Eastern history.

**Near Eastern Studies:** A major in Near Eastern Studies consists of eleven credits beyond first year proficiency in Arabic or Hebrew. In addition, the student must take twenty-seven credits in elective courses with no less than six credits in three of the following four subject areas: ancient Near Eastern civilization; Judaic culture/civilization; Arab/Islamic culture/civilization; Islamic and modern Middle East history.

## Minor Requirements

**Arabic:** A minor in Arabic consists of a minimum of twenty-two credits. These include eleven credits in Arabic language, literature, or language-related courses (for example, linguistics) beyond Arabic 1010 and 1020. They also include at least three units in cognate courses in related areas such as N E 2000, 2030, 2040, or 3550.

**Hebrew:** A minor in Hebrew consists of a minimum of twenty-two credits. These include eleven credits in Hebrew language or literature courses beyond Hebrew 1010 and 1020. They also include at least three units in cognate courses in related areas such as N E 2010, or 2020.

**Near Eastern Studies:** A minor in Near Eastern Studies consists of a minimum of twenty-five credits. These include at least sixteen credits in either Arabic or Hebrew, taking the 1010-1020, 2010-2020 sequence in either language. In addition, the student must take at least nine credits in cognate courses offered by the Department in the fields of ancient Near Eastern, Judaic, or Arab/Islamic and Middle Eastern history, anthropology, or civilization.

## Honors Program

The Honors Program in Near Eastern and Asian Studies is open to students of superior academic ability who are majoring in near eastern and asian studies. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/she must accumulate at least fifteen credits in honors-designated course work and must demonstrate the ability to do independent study and an original Honors Thesis during the senior year. For information about the requirements of the department's honors curriculum, contact the Chairperson of the Department, or the Director of the Honors Program (577-3030).

## Kape Memorial Scholarship

This scholarship is open to any full-time undergraduate or graduate student in the Department who has demonstrated a serious and sustained interest in the study of Hebrew, and who has demonstrated financial need. The amount of the award varies depending on funds available; contact the Department for details.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### Arabic (ARB)

#### 1010 Elementary Arabic I. Cr. 4

Vocabulary, forms, syntax, graded readings. Material fee as indicated in the Schedule of Classes. (F)

#### 1020 Elementary Arabic II. Cr. 4

Prereq: ARB 1010 or consent of instructor. Continuation of ARB 1010. Material fee as indicated in the Schedule of Classes. (W)

#### 2010 (FC) Intermediate Arabic I. Cr. 4

Prereq: ARB 1020 or consent of instructor. Continuation of grammar, readings in classical and modern prose. Material fee as indicated in the Schedule of Classes. (F)

#### 2020 Intermediate Arabic II. Cr. 4

Prereq: ARB 2010 or consent of instructor. Continuation of ARB 2010. (W)

#### 3010 Business Arabic. Cr. 3

Prereq: ARB 1010. Introduces learners of Arabic to language functions associated with business and travel. Communication for immediate use; emphasis on educated spoken Arabic. Situational dialogues built around units to address topics related to business such as job interview, airplane ticket purchase, and the like. (W)

#### 3210 Spoken Arabic. Cr. 4

Introduction to authentic spoken arabic; language of everyday life; phonology and script. Communication for immediate use. (F)

#### 3990 Directed Study. Cr. 3-6 (Max. 9)

Prereq: consent of chairperson or instructor. Readings, periodic reports and consultations. (T)

#### 5010 Medieval Arabic Texts. Cr. 3

Prereq: ARB 2010 or consent of instructor. Reading and translation of Arabic Medieval texts. (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 Teaching of Arabic as a Foreign/Second Language (TAFL). (N E 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 Advanced Arabic. Cr. 3

Prereq: ARB 2020 or equiv. Introduction to reading material related to language and literature: short story, poetry. (W)

#### 5140 Readings in Modern Arabic Literature. Cr. 3

Prereq: knowledge of Arabic above ARB 2020. Advanced readings in modern Standard Arabic. (Y)

**5210 Arabic Sociolinguistics. (LIN 5210) (N E 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 Structure of Arabic. (LIN 5230) (N E 5230) Cr. 3**

No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

**5990 Directed Study. Cr. 3-6 (Max. 9)**

Prereq: Undergrad., consent of chairperson; grad., consent of chairperson or instructor. Readings; periodic consultations and reports. (T)

## Asian (ASN)

**3540 Intensive Japanese. Cr. 4-6 (Max. 12)**

Prereq: acceptance in Japanese Center for Michigan Universities Program. Open only to JCMU Program participants. Introduction to the linguistic patterns, sound system, and writing system of the Japanese language. (F,W)

## Chinese (CHI)

**1010 Elementary Chinese I. Cr. 4**

Introduction to the written and spoken forms of Chinese.

**1020 Elementary Chinese. Cr. 4**

Prereq: CHI 1010. Continuation of CHI 1010.

**2010 (FC) Intermediate Chinese. Cr. 4**

Prereq: CHI 1020 or consent of instructor. Completion of Chinese language sequence; insights into Chinese culture. (Y)

**2020 Intermediate Chinese II. Cr. 4**

Prereq: CHI 2010 or consent of instructor. Continuation of CHI 2010. (W)

## Hebrew (HEB)

**1010 Elementary Hebrew I. Cr. 4**

Grammar, vocabulary, graded readings, discussions. Material fee as indicated in the Schedule of Classes. (F)

**1020 Elementary Hebrew II. Cr. 4**

Prereq: HEB 1010 or consent of instructor. Continuation of HEB 1010. Material fee as indicated in the Schedule of Classes. (W)

**2010 (FC) Intermediate Hebrew I. Cr. 4**

Prereq: HEB 1020 or consent of instructor. Review of grammar, readings in modern Hebrew texts. Material fee as indicated in the Schedule of Classes. (F)

**2020 Intermediate Hebrew II. Cr. 4**

Prereq: HEB 2010 or consent of instructor. Continuation of HEB 2010. (W)

**3120 Readings in the Old Testament: A Historical and Literal Interpretation. (N E 3120) Cr. 3**

Class taught in English; texts are available in both Hebrew and English. Emergence of Israel's United Monarchy starting with King Saul. Emphasis on text interpretations (in English) from historical and literary perspectives. (F)

**3990 Directed Study. Cr. 1-4**

Prereq: consent of chairperson. Readings; consultations and reports. (T)

**5240 Survey of Modern Hebrew Literature in English. (N E 5240) Cr. 3**

From nineteenth century to present; authors include: Bialik, Tchernichovsky, Schlonsky, Alterman, Zach, Amichai, Appelfeld, Agnon, S. Yizhar, A.B. Joshua, Anton Shammas. (Y)

**5990 Directed Study. Cr. 3-6 (Max. 9)**

Prereq: undergrad., consent of chairperson; grad., consent of chairperson and graduate officer. Readings; consultations, reports. (T)

## Japanese (JPN)

**1010 Elementary Japanese I. Cr. 4**

Introduction to written and spoken Japanese. (F)

**1020 Elementary Japanese II. Cr. 4**

Prereq: JPN 1010, placement or consent of instructor. Continuation of ASN 1010. (W)

**2010 (FC) Intermediate Japanese I. Cr. 4**

Prereq: JPN 1020, placement or consent of instructor. Continuation of ASN 1020. Focus on language and Japanese culture. (F)

**2020 Intermediate Japanese II. Cr. 4**

Prereq: JPN 2010 or equivalent proficiency. Continuation of JPN 2010. Language and culture learned through situational activities with tasks to develop language proficiency. Enhancement of Kanji (ideograph writing system) learning to help students develop higher reading proficiency. (Y)

**3010 Advanced Japanese I. Cr. 4**

Prereq: JPN 2020 or equiv. Introduction to high intermediate grammar. Three thematic units: body and health; life and careers; communication and media. Emphasis on communication for business. (Y)

**3020 Advanced Japanese II. Cr. 4**

Prereq: JPN 3010 or equiv. Introduction to language pertinent to media communication, using written, visual, and/or audio materials. (Y)

**3030 Japanese Reading and Writing. Cr. 4**

Prereq: JPN 1010, 1020, 2010, 2020, 3010. Various writing styles. Emphasis on expanding the vocabulary and Kanji characters. (W)

**4010 Business Japanese I. Cr. 4**

Prereq: JPN 1010, 1020, 2010, 2020, 3010, 3020, or proficiency examination. Expansion of vocabulary and grammar knowledge especially used for business settings. Acquisition of business language and etiquette, role-playing of conversation patterns, reading business memos and documents. Classes are all task-oriented for business. (Basic.) (F)

**4550 (FC) Japanese Culture and Society I. Cr. 4**

Prereq: acceptance in Japanese Center for Michigan Universities Program. Open only to JCMU Program participants. Examination of significant social institutions and cultural aspects of modern Japanese society, including their historical development. (F)

**4560 (FC) Japanese Culture and Society II. Cr. 4**

Prereq: acceptance in Japanese Center for Michigan Universities Program. Open only to JCMU Program participants. Significant social institutions and cultural aspects of modern Japanese society, including their historical development. (W)

**4850 Studies in Japanese Culture. Cr. 4 (Max. 8)**

Prereq: acceptance in Japanese Center for Michigan Universities Program. Open only to JCMU Program participants. Selected topics, themes, subjects on modern Japanese society, to be announced in Schedule of Classes. (F,W)

## Near Eastern Studies (N E)

### 1900 Comparative Religion. Cr. 3

Origins of religion: its social importance, its structure (fetish, totemism, myth, ritual). Pre-historic religion and the major religious traditions. (W)

### 2000 (FC) Introduction to Islamic Civilization of the Near East. Cr. 3

The origin of Islam; growth of Islamic institutions. (Y)

### 2010 The Bible and Ancient Mythology. Cr. 3

The Bible and Biblical religion in the context of its antecedents in the ancient world. (Y)

### 2020 Survey of Jewish History and Civilization. (HIS 2320) Cr. 3

History of the Jewish people from their origins to the contemporary period. Development of the Jewish community and the Jewish religion in relation to the hegemonic cultures of those regions in which there was major Jewish settlement. (I)

### 2030 (HS) The Age of Islamic Empires: 600-1600. (HIS 1800) Cr. 3

Historical evolution of the Islamic world from birth of Islam to height of Ottoman Empire. Islamic history and civilization in a world-historical context; developments indigenous to specific regions, such as Islamic Spain. (Y)

### 2040 (HS) The Modern Middle East. (HIS 1810) Cr. 3

Survey of Middle East history in modern era, focusing on the nineteenth and twentieth centuries. Ottoman history from 1600: impact of European imperialism and nationalist movements, resulting in development of modern state systems, regional/national conflicts, Islamic response to modernization. (Y)

### 2700 Topics in Middle Eastern Studies. Cr. 1-8 (Max. 8)

Specialized topics related to the Middle East: language, literature, etc. (Y)

### 3040 Twentieth Century Middle East. (HIS 3320) Cr. 3

The contemporary Middle East; emphasis on social and economic development. Investigation of issues that identify the region, such as oil, gender issues, fundamentalism, and regional conflicts. (Y)

### 3060 Ancient Near East Literature. Cr. 3

Concentration on wisdom literature and the wisdom teacher. (F)

### 3120 (HEB 3120) Readings in the Old Testament: A Historical and Literal Interpretation. Cr. 3

Class taught in English; texts are available in both Hebrew and English. Emergence of Israel's United Monarchy starting with King Saul. Emphasis on text interpretations (in English) from historical and literary perspectives. (F)

### 3210 Muslim Personal Law. Cr. 3

History and structure of Islamic law; current application in many parts of the world. Classic form of law; its contemporary application. (F)

### 3225 Modern Israeli Culture: A Pluralistic Perspective. Cr. 3

Israeli society and culture in the 20th century: education, archaeology and science; sacred texts; modern literature, visual arts, theatre, music and dance; Israeli cinema, radio and television. (W)

### 3310 History and Civilization of the Ancient Near East I. (HIS 3310) Cr. 3

Survey of history of the ancient Near East from the beginning of civilization to Cyrus the Great; emphasis on history of Mesopotamia and Egypt, rise and fall of their dynasties and empires, and their impact on the rest of the Near East, especially Ancient Israel. (I)

### 3320 Muhammad: Life of the Prophet. Cr. 3

Introduction to the historical Muhammad in context of religious, political, social and economic life of seventh century Arabia. Aspects of his career, from religious to secular, including his relationship with other religious communities. (B)

### 3520 Women and Gender in Middle East History. (W S 3520) Cr. 3

Women's role in Middle East history; impact of religion, culture, social and economic change on construction of gender in the Middle East. (Y)

### 3550 (ANT 3550) (FC) Arab Society in Transition. Cr. 3

Distinctive social and cultural institutions and processes of change in the Arab Middle East. Regional variations; background and discussion of current political and economic systems and their relations to international systems. (I)

### 3990 Directed Study. Cr. 3-6 (Max. 9)

Prereq: consent of chairperson. Readings; consultations and reports. (T)

### 4700 Islam and the Challenge of Modernity. Cr. 3

Analysis of encounter between Islam and modernity: how the modern experience has affected Muslims' understanding of Islam and the world around them, including their impact on and relationship with the West. (B)

### 4750 Africa: The Example of Algeria. (AFS 4750) Cr. 3

European (French) colonization in North Africa with emphasis on Algeria. Theoretical principles of nineteenth century colonization; emergence of national liberation movements. Socio-economic impact of colonization on Algeria through the 1990s. (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)

### 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)

### 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)

### 5240 (HEB 5240) Survey of Modern Hebrew Literature in English.) Cr. 3

From nineteenth century to present; authors include: Bialik, Tchernichovsky, Schlonsky, Alterman, Zach, Amichai, Appelfeld, Agnon, S. Yizhar, A.B. Joshua, Anton Shammas. (Y)

### 5700 Topics in Middle Eastern Studies. Cr. 1-4 (Max. 8)

Specialized and topical studies in Middle East events, language, and literature. (Y)

### 5750 (ENG 5750) Theories of Second Language Acquisition. (CLA 5750) (FRE 5750) (GER 5750) (ITA 5750) (LIN 5750) (SPA 5750) Cr. 3

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)

**5810 (FRE 5810) Teaching Foreign Languages: Receptive Skills. (CLA 5810) (CLA 7810) (FRE 7810) (GER 5810) (GER 7810) Cr. 3**

Prereq: N E 5850 or 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 receptive skills. (B)

**5820 (FRE 5820) Teaching Foreign Languages: Productive Skills. (CLA 5820) (CLA 7820) (FRE 7820) (GER 5820) (GER 7820) Cr. 3**

Prereq: N E 5850 or 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 (GER 5830) Technology in the Foreign Language Classroom. (CLA 5830) (CLA 7830) (FRE 5830) (FRE 7830) (GER 7830) Cr. 3**

Prereq: N E 5850 or 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 (GER 5850) Second Language Instruction: Theory and Methods. (CLA 5850) (CLA 7850) (FRE 5850) (FRE 7850) (GER 7850) 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 testing. (B)

**5860 (GER 5860) Foreign Language Testing. (CLA 5860) (CLA 7860) (FRE 5860) (FRE 7860) (GER 7860) Cr. 3**

Prereq: N E 5750 or 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)

**5990 Directed Study. Cr. 1-6 (Max. 16)**

Prereq: undergrad., consent of chairperson; grad., consent of chairperson and graduate officer. (T)

**5993 (WI) Writing Intensive Course in Near Eastern and Asian Studies. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 3000-level or higher course in the department. 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 designated 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)

**6030 Poetry of Yehuda Amichai in English Translation. Cr. 3**

Reading and analysis of characteristics, themes and forms in the poetry of Yehuda Amichai from 1956 to the present. Class is taught in English. (W)

**6120 Arab Women Through Literature. Cr. 3**

Prereq: N E 2040 or 3040 or consent of instructor. Arabic literature by women, expressing gender vision of society, history, and women's role in Arab world and North Africa. (B)

# PHILOSOPHY

Office: 51 West Warren; 577-4583; 577-2474

Web: <http://www.langlab.wayne.edu/Philosophy/Philosophy.html>

Chairperson: Lawrence B. Lombard

## Professors

Richard B. Angell (Emeritus), Herbert Granger, Lawrence B. Lombard, T. Michael McKinsey, Bruce Russell, Robert J. Yanal

## Associate Professors

Lawrence Powers, William D. Stine, Robert J. Titiev, Susan Vineberg

## Senior Lecturer

John Corvino

## Lecturer

Alessandro Giovannelli

## Degree Programs

*BACHELOR OF ARTS with a major in philosophy*

*\*MASTER OF ARTS with a major in philosophy*

*\*DOCTOR OF PHILOSOPHY with a major in philosophy*

Courses in this department are designed for four types of service:

1. They contribute to the liberal education of any student, whatever his/her predominant interest, by their emphasis on clear and cogent thought, by consideration of the interrelations of fact and value, by training in logic and the methodology of inquiry, and by a study and analysis of major philosophical outlooks.
2. They supply a minor and cognate courses to students majoring in other departments who wish to study their major subject in its wider philosophical implications.
3. They give departmental majors a wide and intensive training in philosophy. The major appeals to those who wish to take graduate work in philosophy and to those who wish a broad background from which to study and understand the emergence and conflict of ideas in relation to contemporary problems.
4. They supply a relevant major and minor for students who plan a career in such fields as the law or the ministry.

## Bachelor of Arts

### With a Major in Philosophy

**Admission Requirements** for the College of Liberal Arts are satisfied by the general requirements for undergraduate admission to the University; see page 15. Students who are planning to major in philosophy or who simply wish advice or consultation concerning course offerings and programs should see the Director of Undergraduate Studies in Philosophy. The Department offers a regular major and an honors major.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223 -227, respectively.

\* For specific requirements , see the Wayne State University Graduate Bulletin.



**Major Requirements:** A candidate for the regular major must complete a minimum of nine courses in philosophy, including the following courses or selections from course groups (found in the Courses of Instruction section below).

1. PHI 2100 (or 5400 or 5410 or 5420) and PHI 2110 (or 5440 or 5450 or 5460) from the History of Philosophy group;
2. one course from the Theory of Value group;
3. one course from the Philosophical Problems group
4. Symbolic Logic (PHI 1850 or 1860 or 5050);
5. three courses at the 5000-level or above (other than PHI 5993); and
6. PHI 5993 (Writing Intensive Course in Philosophy).

NOTE: Rather than taking a 2000- or 3000-level course in satisfying any of requirements (2) or (3), one may take a 5000-level course from the same group instead; however, the student should consult the instructor before doing so. Courses taken at the 5000-level which are used to satisfy any of requirements (1) through (4) may also be used to satisfy requirement (5), though the nine-course minimum must be met.

## Honors Program

**Admission** to the honors program in philosophy is determined on the basis of the student's overall record. The student will normally be required to have (a) a minimum grade point average of 3.3, (b) credit in at least three philosophy courses, and (c) a 'B' or better average in philosophy courses. To remain in the philosophy honors program, the student must maintain a 'B' or better average in philosophy courses.

**Honors Requirements:** To receive an Honors Degree, the candidate must

- a) complete the course requirements for the regular major, plus PHI 4870 and 4890 (to be taken during the candidate's senior year),
- b) pass comprehensive examinations in philosophy,
- c) write an Honors Essay of sufficiently high quality on a topic to be chosen by the candidate in consultation with his/her instructor in PHI 4870,
- d) complete a 4000-level seminar offered through the College Honors Program, and
- e) accumulate at least fifteen credits in honors-designated course work, including PHI 4870 and 4890 and the 4000-level Honors Program Seminar.

At graduation, the overall grade point average must be at least 3.3. If at any point the student fails to maintain Honors standards, his or her credits will automatically be counted towards the regular major. Students interested in becoming candidates for the Honors Degree in philosophy should consult the Director of Undergraduate Studies in Philosophy as soon as possible.

## Minor in Philosophy

A candidate for a minor in philosophy must complete a minimum of five courses (generally eighteen credits) selected from the philosophy course listings below, including the following courses or selections from course groups (found in the Courses of Instruction section beginning on page 289).

1. History of Philosophy group: PHI 2100 (or 5400 or 5410 or 5420) or PHI 2110 (or 5440 or 5450 or 5460).
2. Symbolic Logic group: PHI 1850 or 1860 or 5050.
3. Value Theory group or Philosophical Problems group: one course from either group.
4. One course at the 5000 level or above from any group.

5. One additional course at the 2000 level or above from any group.

Courses taken in compliance with requirement (4) may be used to satisfy any of requirements (1), (2), (3), or (5); however, students wishing to do so must consult with the instructor; the five course minimum must still be met.

Students who are planning to minor in philosophy should consult the Director of Undergraduate Studies in the Philosophy Department.

## UNDERGRADUATE COURSES (PHI)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### Introductory Courses

#### **1010 (PL) Introduction to Philosophical Systems. Cr. 3-4 (LCT: 3; OR LCT: 3;DSC: 1)**

No credit after PHI 1030. Introduction to philosophy and the main schools of philosophical thought, through examination of some of the great philosophers of the past. Selected texts of writers such as Plato, Augustine, Aquinas, Descartes, Hume, Kant, Hegel, Nietzsche, James, and Russell will be discussed. (T)

#### **1020 (PL) Honors Introduction to Philosophical Systems. Cr. 3-4**

Open only to Honors students. See PHI 1010. (I)

#### **1030 (PL) Introduction to Philosophical Problems. Cr. 3-4**

No credit after PHI 1010. Survey and discussion of some of the enduring and most pressing issues that have occupied philosophers: Does God exist? What is a good person? Do we have free will? Is the mind the same as the brain? What is the universe really like? What do we really know? Course will acquaint students with techniques for discussing such questions and for evaluating proposed answers to them. (T)

#### **1040 (PL) Honors Introduction to Philosophical Problems. Cr. 3-4**

Open only to Honors students. See PHI 1030. (I)

#### **1050 (CT) Critical Thinking. Cr. 3**

Knowledge and skills relevant to the critical evaluation of claims and arguments. Topics will include: the formulation and identification of deductively and inductively warranted conclusions from available evidence; the assessment of the strengths of arguments; the assessment of consistency, inconsistency, implications, and equivalence among statements; the identification of fallacious patterns of inference; and the recognition of explanatory relations among statements. (T)

#### **1100 (PL) Contemporary Moral Issues. Cr. 3 (Max. 9)**

Critical discussion of contemporary moral issues including pornography, adultery, incest, and homosexuality; abortion; preferential treatment; obligations to the poor; capital punishment; terrorism; ethics in the professions. (Y)

#### **1110 Ethical Issues in Health Care. Cr. 3**

Survey of moral issues that arise in the practice of medicine and in pursuit of medical knowledge: abortion, euthanasia, experimentation on human subjects, informed consent, rights to health care, genetic engineering, the concepts of death, health and disease. (Y)

**1850 Introductory Symbolic Logic. (LIN 1850) Cr. 3**

The logic of propositions; the general logic of predicates and relations. (Y)

**1860 Honors Introductory Symbolic Logic. (LIN 1860) Cr. 3**

Open only to Honors students. See PHI 1850. (Y)

## History of Philosophy

**2100 (PL) Ancient and Medieval Philosophy. Cr. 3**

Introduction to the Western philosophical tradition from its origins in Ancient Greece through the medieval period. Unifying themes and important contrasts between the two eras will be stressed. Readings from the pre-Socratics, Plato, Aristotle, Augustine, and Aquinas. (B)

**2110 (PL) Seventeenth and Eighteenth Century Philosophy. Cr. 3**

A survey of the views concerning knowledge and reality of the major European philosophers of the seventeenth and eighteenth centuries. Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant. (B)

**5400 Presocratic Philosophy. Cr. 3**

Prereq: any philosophy course at the 2000-level or above; or Classics major; or consent of instructor. 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, or consent of instructor. Selected readings on topics in Plato. (B)

**5420 Aristotle. Cr. 4**

Prereq: any philosophy course at the 2000 level or above, or classics major, or consent of instructor. Selected readings on topics in Aristotle. (B)

**5440 Continental Rationalism. Cr. 4**

Prereq: any philosophy course at the 2000 level or above, or consent of instructor. Topics concerning Descartes, Spinoza or Leibniz. (I)

**5450 British Empiricism. Cr. 4**

Prereq: any philosophy course at the 2000 level or above, or consent of instructor. Topics concerning Locke, Berkeley or Hume. (I)

**5460 Kant. Cr. 4**

Prereq: any philosophy course at the 2000 level or above, or consent of instructor. Selected topics or readings in Kant's philosophy. (B)

**5510 Special Topics in the History of Philosophy. Cr. 4 (Max. 8)**

Prereq: any course from the History of Philosophy group or consent of instructor. Topics to be announced in Schedule of Classes. (I)

## Theory of Value

**2320 (PL) Introduction to Ethics. Cr. 3-4**

Only Honors students may register for four credits. An introduction to some classical and modern views concerning such questions as: What determines the rightness and wrongness of actions? What is the nature of moral reasoning? What constitutes a moral life? (T)

**2330 Introduction to Social and Political Philosophy. Cr. 3**

Introduction to the basic issues of political philosophy, such as the nature of the state, the ways of justifying its power and authority over its citizens; a philosophical analysis of central concepts like those of freedom, justice, and equality. Selected readings from some of the following: Plato, Aristotle, Hobbes, Locke, Rousseau, Mill, Marx, and Rawls. (I)

**3270 Foundations of Law. Cr. 3**

Prereq: upper division undergraduate status. No credit after PHI 5270. The legal system we live under commands, forbids, punishes, and defines responsibilities and harm. Common-sense morality: what is it, and what is its relation to law? Statutory interpretation: do judges create new law? Punishment: why do we have it, and what rights do the accused have? What is the legal concept of harm and responsibility? (B)

**3700 (PL) Philosophy of Art. Cr. 3**

What are art works? Why are they so moving? What is the nature of the experience they offer? This course introduces the student to some of the schools of thought on these issues. It also attempts to deal with the specific natures of the various artistic media, such as: drama, literature, film, painting, photography, music and opera. (T)

**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 or consent of instructor. Selected topics and readings from major social and political philosophers. Topics to be announced in Schedule of Classes. (I)

**5270 Philosophy of Law. Cr. 4**

Prereq: one philosophy course at the 2000 level or above or pre-law or law student standing or consent of instructor. 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 or consent of instructor. A survey and discussion of historically important moral philosophers from Plato to Mill. (B)

**5300 Twentieth Century Analytic Ethics. Cr. 4**

Prereq: any philosophy course at the 2000 level or above or consent of instructor. Important twentieth century moral philosophers in the analytic tradition, such as G.E. Moore, W.D. Ross, Hare, Stevenson, Baier and Rawls. (B)

## Philosophical Problems

**2400 Introduction to the Philosophy of Religion. Cr. 3**

Religious beliefs provide subject matter for philosophical study: Are the traditional arguments for the existence of God credible? Does the existence of evil conflict with a belief in God's omnipotence and omnibenevolence? What is the value of religious experience? Discussion of these questions will assist in evaluating a pervasive element within religious experience. (I)

**3500 (PL) Theory of Knowledge. Cr. 3**

The distinction between knowledge and belief is germane to every field of inquiry. What is the difference between knowledge and belief? Do we know anything at all? If so, how? Are we ever in a position of being certain about beliefs pertaining to an objective world? Is our belief in an objective world based on our subjective experiences? (T)

**3550 (PL) Metaphysics. Cr. 3**

Survey and examination of some of the enduring questions of metaphysics concerning the nature of reality. Topics include: the nature of physical objects, abstract entities, the concepts of time and change, the relation between mind and body, causation, the nature of metaphysics. (Y)

**3600 Space, Time, and the Philosophy of Physics. Cr. 3**

Prereq: one course in philosophy or in a physical science or consent of instructor. Survey of some principal problems concerning the concepts of space and time and their relation to physical theories. Topics include: our knowledge of the geometric features of the world, the existence of space and time, time without change, the passage of

time, the philosophical foundations and implications of Einstein's Special Theory of Relativity, and the explanation of motion and the General Theory of Relativity. No prior knowledge of modern physics will be presupposed. (B)

**5230 Philosophy of Science. (SOC 6080) Cr. 4**

Prereq: PHI 1850 or 1860 or any course from the Philosophical Problems group or consent of instructor. 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)

**5500 Topics in Metaphysics. Cr. 4**

Prereq: any course from the Philosophical Problems group or consent of instructor. Intensive investigation and discussion of special topics or particular authors in metaphysics. Topics and authors to be announced in Schedule of Classes . (Y)

**5530 Topics in Epistemology. Cr. 4**

Prereq: any course from the Philosophical Problems group or consent of instructor. Intensive investigation and discussion of special topics or particular authors in the theory of knowledge. Topics and authors to be announced in Schedule of Classes . (I)

**5550 Philosophy of Mind. Cr. 4**

Prereq: any course from the Philosophical Problems group or consent of instructor. Intensive investigation and discussion of special topics or particular authors concerned with the nature and status of the mental and theories about the mental. Topics and authors to be announced in Schedule of Classes . (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 or consent of instructor. 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 or consent of instructor. Major works, movements, and writers in the analytic tradition in the twentieth century up to the 1940s. Frege, Russell, Moore, the early Wittgenstein, Carnap. (I)

**5640 Twentieth Century Analytic Philosophy II. Cr. 4**

Prereq: PHI 1850 or 1860 and any philosophy course from the Philosophical Problems Group or consent of instructor. Major works, movements, and writers in the analytic tradition from the 1940s to the present. Quine, Austin, Ryle, the later Wittgenstein. (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 or consent of instructor. 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 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. (I)

**5390 Logical Systems II. (MAT 5390) Cr. 4**

Prereq: PHI 5350 or MAT 5350 or consent of instructor. Detailed proofs of Godel's incompleteness results, Tarski's Theorem and Church's Theorem; formal axiomatic treatment of set theory and selected applications. (I)

## Special Courses

**3800 Topics in Philosophy. Cr. 3 (Max. 6)**

Topics to be announced in Schedule of Classes . (I)

**4870 Honors Directed Reading. Cr. 4**

Prereq: philosophy honors candidate. Research on topic of honors essay and research for comprehensive examinations. (F)

**4890 Honors Proseminar. Cr. 4**

Prereq: PHI 4870. Continuation of PHI 4870. (W)

**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)

**5993 (WI) Writing Intensive Course in Philosophy. Cr. 0**

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor and departmental undergraduate adviser; coreq: any 3000- or 5000-level philosophy course except PHI 5200, 5370, and 5390. Offered for S and U grades only. No degree credit. Required for all majors. Disciplinary writing assignments under direction of 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. Directed practice in rewriting assignments for the concurrently-elected course, for the purpose of perfecting skills in philosophical writing. (T)

# POLITICAL SCIENCE

Office: 2040 Faculty/Administration Building; 577-2630

Chairperson: Richard C. Elling

## Professors

Philip R. Abbott, Timothy Bledsoe, Rondal G. Downing, Charles D. Elder, Peter Eisinger, Richard C. Elling, Otto Feinstein, Susan P. Fino, Michael Goldfield, Wesley L. Gould (Emeritus), Charles J. Parrish, Frederic S. Pearson, Murray B. Seidler (Emeritus), T. Lyke Thompson, Maurice Waters (Emeritus)

## Associate Professors

Ronald E. Brown, James T. Chalmers, Errol Henderson, Mary Herring, Marjorie E. Sarbaugh-Thompson, John M. Strate

## Assistant Professors

Kevin D. Krause, Brad R. Roth

## Degree Programs

*BACHELOR OF ARTS with a major in political science*

*BACHELOR OF PUBLIC AFFAIRS*

*\*MASTER OF ARTS with a major in political science*

*\*MASTER OF ARTS / JURIS DOCTOR*

*\*MASTER OF PUBLIC ADMINISTRATION*

*\*DOCTOR OF PHILOSOPHY in Political Science*

The study of political science is aimed at understanding the nature and problems of government and the role of politics in contemporary society. This is accomplished through systematic exploration of the structure and processes of government at different levels and across nations, through study of individual and collective political behavior, and through analyses of policy problems and the processes through which public policies are formulated and administered. Political science contributes to the goals of general education by promoting civic literacy and cultivating an awareness of the opportunities and obligations of citizenship at local, state, and national levels. It also provides opportunities for study and training directed toward specific career objectives.

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.
3. Teaching of political and social science at the secondary, junior college and university levels.
4. Positions in the diplomatic service and in foreign and overseas programs of the U.S. Government and of other organizations doing business abroad.
5. Leadership, research, and staff roles in citizen organizations, political parties, campaign organizations, economic and social interest groups, municipal research bureaus, and nonprofit organizations.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

6. Positions associated with mass communications, such as radio, television and newspapers, where basic 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.

## Bachelor of Arts

Political science majors are afforded the opportunity to develop programs of study that complement their particular interests and career goals. The major may be used to structure a broad general program or a highly concentrated and specialized one. The following requirements pertain to all B.A. majors.

**Admission Requirements** for the College are satisfied by general undergraduate admission to the University; see page 13. To enter the Bachelor of Arts degree program in political science, students must have a grade point average of at least 2.0 and must declare their major in accordance with the rules of the College (see page 200).

**Transfer Credits:** Students wishing to apply transfer credits toward the major should consult the political science undergraduate adviser regarding departmental policies and restrictions on the use of these credits.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively.

**Major Requirements:** A political science major must satisfactorily complete at least thirty-two credits of course work in the department. This course work must include:

1. One introductory course in American government (P S 1010 or 1030).
2. At least one course from the following: P S 2510, 2710, 2810, 2820.
3. At least four courses at the 3000 level or higher. (P S 5993 does not count toward fulfillment of this requirement.)
4. Course work in more than one of the following fields: American Government/Public Law (courses numbered with a second digit of 0 or 1), Urban Politics (second digit of 2), Public Policy/Public Administration (second digit of 3 or 4), Political Philosophy (second digit of 5), Research Methods (second digit of 6), and World Politics/Comparative Politics (second digit of 7 or 8). P S 1010, 1030, 2510, 2710, 2810, and 2820 do not count toward fulfilling this requirement.
5. A Writing Intensive course in political science with co-registration in P S 5993, in order to satisfy the Writing Intensive Course in the Major requirement. Any political science course at the 3000-level or higher, except P S 5630 and 6640, may be used to fulfill this requirement. To satisfy the requirement, the student must demonstrate proficiency in writing on disciplinary subject matter in a form and style that conform to disciplinary standards. To use a course for this purpose, the student must obtain approval from the instructor and follow the guidelines established by the instructor to demonstrate the required proficiency. The student must also co-register in P S 5993, a zero-credit course for which the student will receive a grade of Satisfactory ('S') upon certification by the instructor that the writing requirement has been fulfilled.

**Recommended Course:** It is recommended that majors include P S 3600, Methods of Political Inquiry, in their programs of study; but this is not a required course.

## -- Fields of Study

In developing their specific programs of study, students should consult with the political science undergraduate adviser. They may pursue a general program or choose to concentrate in a particular field or subfield. The following are fields in which a student may choose to concentrate. Other areas of concentration and more specialized programs may be developed in consultation with the undergraduate adviser.

**American Government and Politics:** Public opinion, electoral politics, and participation in the political process; the role of political parties and interest groups; the workings of Congress, the Presidency, and other governmental institutions. Courses relevant to this area of concentration include (but are not limited to): P S 3010, 3020, 3025, 3030, 3040, 3050, 3060, 3070, 3430, 5040, 5050, 6050, and 6070.

**Public Law/Legal Studies:** Judicial interpretation of the Constitution; civil liberties and constitutional rights; law enforcement and the operations of the judicial system; international dimensions of law. Relevant courses include: P S 3100, 5110, 5120, 5850, and 6120.

**Urban Politics and Policy:** Governing cities in a federal system; economic conditions and urban problems; local policy-making and the constraints under which policy is made. Relevant courses include: P S 2000, 2240, and 6020.

**Public Administration:** The nature and functions of public agencies; techniques of public management; public bureaucracy in its social setting. Relevant courses include: P S 2310, 2992, 3430, and 6340.

**Public Policy:** How policy is formulated, decided, implemented, and evaluated; moral and political standards for making policy. Relevant courses include: P S 2410, 2420, 2992, 3430, 3450, 3840, 4460, 5850, and 6430.

**Political Philosophy and Ethics:** The justification and application of ethical standards to politics; history and analysis of authority and rebellion, individualism and community, justice and equality; modern ideologies such as communism, socialism, liberalism, and conservatism. Relevant courses include: P S 2420, 2510, 3510, 3520, 3530, 5510, 5560, and 5850.

**Quantitative Political Analysis:** Methods of analysis used to assess alternatives and evaluate the impact of government policy; methods of empirical political research including data collection, statistical description and inference, and the use of computers to organize and interpret data. Relevant courses include: P S 3600, 4460, 5630, and 6640.

**Comparative Politics:** The study of government and politics of western, non-western, and third world countries in their historical, cultural, and economic settings; problems of comparison across cultural and national boundaries. Relevant courses include: P S 2710, 3710, 3715, 3735, and 4780.

**World Politics:** Conflict and cooperation among nations; causes of war and the pursuit of peace; international organizations and multinational corporations; North-South relations and issues of development, imperialism, and dependency; East-West relations and the changing world order; American foreign policy and issues of disarmament, intervention, and economic competition. Relevant courses include: P S 2810, 2820, 3811, 3830, 3840, 4810, 5740, 5820, and 5850.

Undergraduate majors may take a prescribed set of courses that entitle them to receive a 'recognition of specialization' in either Comparative Politics or World Politics from the Department. Students should consult with the Department's undergraduate adviser for more

information on the specific courses to be taken to qualify them for such recognition.

## -- Pre-Law Curriculum

Political science provides a useful major for students who anticipate applying to law school. For students choosing the Bachelor of Arts program, a Public Law/Legal Studies concentration drawing upon courses such as P S 3100, 5110, 5120, 5850, and 6120 is recommended along with courses in American Government and public policy (numbered with second digits of 0 and 4, respectively). Specific programs of study under either degree option should be developed in consultation with the department's pre-law adviser.

## Bachelor of Public Affairs

The Bachelor of Public Affairs (B.P.A.) degree program prepares qualified students for professional and technical careers in the public service or for advanced study in public affairs and administration, the social sciences and related disciplines.

The program is a structured professional curriculum that builds on the foundation of a general liberal arts education. The curriculum incorporates the fundamentals of social science theory and applications of that theory to public management and policy analysis. The B.P.A. provides students with skills needed for working in city, county, state and national government, in other public and non-profit agencies, and in positions in private enterprise that deal with governmental relations. Internships afford students an opportunity to apply what they have learned in public service settings. Students interested in this program should consult the political science undergraduate adviser as early as possible in their college careers. Ideally, students begin B.P.A. course work in their sophomore year and should declare their major as early as possible.

**Admission Requirements** for the College are satisfied by general undergraduate admission to the University; see page 15. To declare the B.P.A. as a major, a student must have a grade point average of 2.25 and follow the procedures set forth by the College of Liberal Arts for declaring a major (see page 224).

**Transfer Credits:** Students wishing to apply transfer credits toward the B.P.A. major should consult the political science undergraduate adviser regarding departmental policies and restrictions on the use of these credits.

**DEGREE REQUIREMENTS:** Candidates for the B.P.A. degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) excepting the foreign language requirement, and the University General Education Requirements (see page 29), as well as the requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15 - 46 and 223-227, respectively.

**Major Requirements:** A Bachelor of Public Affairs major must complete twenty to twenty-three credits in prescribed foundation course work, twenty-four credits in B.P.A. core and elective courses in political science, and thirteen to sixteen credits including a cognate course in an approved area of concentration.

A Writing Intensive course in political science with a co-registration in P S 5993 is also required, in order to satisfy the Writing Intensive Course in the Major requirement. Any political science elective or concentration course at the 3000-level or higher, except P S 5630 and 6640, may be used to fulfill this requirement. To satisfy the requirement, the student must demonstrate proficiency in writing on disciplinary subject matter in a form and style that conform to disciplinary standards. To use a course for this purpose, the student must obtain approval from the instructor and follow the guidelines established by the instructor to demonstrate the required proficiency. The

student must also co-register in P S 5993, a zero-credit course for which the student will receive a grade of Satisfactory ('S') upon certification by the instructor that the writing requirement has been fulfilled.

**Basic Knowledge and Skills Requirements:** Students must satisfy the following course requirements and should do so primarily in their first two years of study. Some of these courses may also be used in partial fulfillment of University General Education Requirements.

**Mathematics (4 credits):** MAT 1500 or 1800 required. This requirement should be satisfied as early as possible.

**Computing (3 credits):** ISM 2630.

**Economics (8 credits):** Two introductory principles courses (Economics 2010 and 2020).

**American Government (3-4 credits):** Political Science 1010 or 1030.

**B.P.A. Core Requirements:** Candidates for the Bachelor of Public Affairs degree must take two courses in the fundamentals of policy analysis and public management and two courses in research methods and techniques of data analysis.

1. Fundamentals	credits
P S 2410 -- Introduction to Public Policy . . . . .	4
P S 2420 -- Ethics and Politics of Public Policy . . . . .	4
P S 2460 -- Politics and Rationality . . . . .	4
2. Techniques and Methods	
P S 4460 -- Techniques of Policy Analysis . . . . .	4
P S 5630 -- Statistics and Data Analysis I . . . . .	4

**Political Science Electives:** Students must take one additional political science course (3-4 credits) beyond those needed to satisfy the B.P.A. Area of Concentration requirements described below.

## -- Areas of Concentration

In addition to the core and elective course work, students must select an area of concentration in which they take three political science courses and one non-political science cognate course. Students should consult with the political science undergraduate adviser in selecting their cognate course. Areas of Concentration include:

**Public Management:** The following are required for students choosing the Public Management concentration:

**Political Science Requirements (10-12 credits):** three courses selected from P S 2310, 3430, 6020, 6120, and 6340, dealing with basic public management processes, problems, and techniques.

**Cognate Course (3-4 credits):** one course relating to organizational and managerial behavior, management techniques and financial management, chosen from disciplines such as accounting, economics, business management, psychology and sociology.

**Public Policy Analysis:** The following are required for students in the Public Policy Analysis concentration:

**Political Science Requirements (10-12 credits):** three courses selected from P S 2310, 3030, 3430, 3450, 6430, 6440, and 6640, courses dealing with policy development, implementation, and evaluation.

**Cognate Courses (3-4 credits):** one course from another discipline on a subject such as health and welfare policy, transportation policy, housing policy, environmental policy, population policy, economic regulation and criminal justice.

**Urban Policy and Management:** The following are required for students choosing the Urban Policy and Management concentration:

**Political Science Requirements (11-12 credits):** Three courses selected from P S 2240, 2310, 3250, and 6020, dealing with urban political systems, urban policy, and urban management.

**Cognate Course (3-4 credits):** One course selected from another discipline such as urban planning, sociology, economics, geography, criminal justice, and history, relating to the problems and processes of urban policymaking and management.

**Other Concentrations:** With approval of the undergraduate adviser, an area of concentration may be specially designed consisting of courses related to the student's particular educational and career objectives. A plan of study for such concentrations must be filed and approved before the student registers for course work in the junior year.

## Honors Programs

Bachelor of Arts and Bachelor of Public Affairs majors with strong academic records are encouraged to pursue departmental honors. To be eligible to enter the honors program, a major must have a cumulative grade point average of 3.3. To graduate with honors, students must:

1. Maintain a 3.3 grade point average.
2. Under the direction of one or more members of the department, complete a senior honors paper (P S 4995).
3. Complete all requirements for the Bachelor of Arts or Bachelor of Public Affairs degree.
4. Complete one 4000-level Honors seminar offered through the Liberal Arts Honors Program (consult the Liberal Arts section of the University Schedule of Classes under 'Honors Program').
5. Accumulate at least twelve credits in honors-designated course work, including P S 4995, and the Honors Program seminar. These honors credits can be obtained from any department within the College, including Political Science. For information on additional honors-designated course work, consult the undergraduate adviser or the Director of the Honors Program (577-3030).

Students interested in participating in the program should contact the department's undergraduate adviser no later than the second semester of their junior year.

## 'AGRADE' -- Accelerated Graduate Enrollment

Bachelor of Arts and Bachelor of Public Affairs majors with superior academic records (top twentieth percentile overall, with at least a 3.6 g.p.a. in the major) are eligible in their senior year to participate in accelerated graduate enrollment ('AGRADE') programs leading to either a Master of Arts degree with a major in political science or a Master of Public Administration degree. The 'AGRADE' programs enable students to pursue graduate and undergraduate degrees simultaneously and to apply twelve to fifteen credits of approved course work to both degrees. To participate, students must apply and be accepted into the 'AGRADE' program by the Departmental Graduate Committee and secure the approval of the Graduate Officer of the College of Liberal Arts in accordance with rules and procedures established by the College (see page 226). Students should contact the Department's undergraduate adviser for further details.

## Minors in Political Science

Students majoring in other subjects may obtain a minor in political science by completing a minimum of twenty credits in course work. Information on combinations of courses which emphasize particular subfields of political science (public administration, urban politics, public policy, international affairs, etc.) is presented in the listing of Bachelor of Arts concentrations (see above). For information on courses of particular relevance to such majors as economics, journalism, history, sociology, psychology, philosophy, criminal justice, or urban planning, students are encouraged to consult the department's

undergraduate adviser. A suitable sequence for pre-law students can be provided by the undergraduate adviser.

## Internships

Internships in government, political campaigns, political advocacy groups, civic organizations, or public agencies provide valuable work-educational experience that enables students to relate knowledge acquired in the classroom to the world-at-large. They also provide practical training that enhances future job prospects. Academic credit may be earned for an internship through enrollment in P S 2992, Political Science Internship, a course that helps to assure the educational relevance of the internship by requiring interns to prepare papers and reports based on their experiences. Interested students should consult the department's undergraduate adviser.

## Exchange Program with The University of Windsor

Through an exchange program with the University of Windsor in Windsor, Ontario, students may take political science classes at the University of Windsor for credit toward their degrees; enrollment for this political science credit is made at Wayne State University. The arrangement between the universities serves to enhance the range of course offerings available to students, as well as providing opportunities for cultural enrichment. Information on courses offered at Windsor is available from the department prior to registration each semester. Students should consult the department's undergraduate adviser for further details.

## Study Abroad Exchange Program with The University of Salford

Students may study for one or two semesters at the University of Salford in Salford, England, and earn Wayne State credits through an exchange agreement between the two universities. Applications may be obtained from the Office of the Dean, College of Urban, Labor and Metropolitan Affairs. Interested majors or prospective majors should also consult with the Department's undergraduate adviser.

## Scholarships, Awards and Honorary Societies

Also see page 227, above, and the section on the Office of Scholarships and Financial Aid, page 20. For further information, contact the Department Office.

*The Stephen B. Sarasohn Award* is given annually to the outstanding graduating senior majoring in political science.

*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.

## UNDERGRADUATE COURSES (P S)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **1000 (SS) Introduction to Political Science. Cr. 3**

Introduction to the scope and method of political science. Overview of politics, political systems, nature and role of political institutions. Empirical political theory; practice in conducting political research. (Y)

### **1010 (AI) American Government. Cr. 4**

No credit after P S 1030. Politics and functions of American governmental institutions. Policy processes and the role of citizens in the political process. (T)

### **1030 (AI) The American Governmental System. Cr. 3**

No credit after P S 1010. Structure and functions of the American political system. Governmental institutions and processes. (T)

### **2000 (U S 2000) (SS) Introduction to Urban Studies. (GPH 2000) (HIS 2000) (SOC 2500) Cr. 4**

Urban phenomena, past and present; quality and nature of urban life; major concerns of urban areas; perspectives and techniques of various urban-related disciplines. (Y)

### **2240 (SS) Introduction to Urban Politics and Policy. Cr. 4**

Influences on politics and problems of cities, forms of local political involvement, role of local public officials, impact of state and federal policies. Overview of current issues and problems in specific policy areas. (Y)

### **2310 Introduction to Public Administration. Cr. 4**

Prereq: P S 1010 or 1030. Governmental and administrative structures and organizations. Concepts and techniques of public management. Impact of public bureaucracies on modern society. (Y)

### **2410 Introduction to Public Policy. Cr. 4**

Prereq: P S 1010 or 1030. Public policy-making institutions and processes. Emphasis on theory and practice of policy formation, implementation and evaluation. Various models of political decision making. (T)

### **2420 Ethics and Politics of Public Policy. Cr. 4**

Moral and political standards for policy-making, relation of major political and social theorists to policy issues such as economic inequality, racial and sexual discrimination, the enforcement of morals, and violence and social change. (Y)

### **2440 (PHY 2020) Science, Technology, and War. (HIS 2510) (PCS 2020) Cr. 4**

Prereq: P S 1010 or 1030. Modern weapons, nuclear and otherwise, becoming increasingly available and dangerous; people with grievances eager to use them. Science and technology behind weapons development and use; impact of technologies on prospects and results of war and peace. Constraints of career, bureaucracy and society on development, deployment and use of weapons. History of humanity and its tools of war. (Y)

### **2460 Policy and Rationality: Dilemmas of Choice. Cr. 4**

Individual decision-making and limitations on human cognition; collective choice; implications for policy development. (Y)

**2510 Introduction to Political Ideologies. Cr. 4**

Comparison of ideologies, political institutions, and economic systems. Democracy and authoritarianism, capitalism, socialism and communism contrasted. (Y)

**2550 (PCS 2050) The Study of Non-Violence. (HIS 2530) (SOC 2050) Cr. 3**

Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. (Y)

**2700 Introduction to Canadian Studies. (ENG 2670) (GPH 2700) (HIS 2700) Cr. 3**

Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. (Y)

**2710 Introduction to Comparative Politics. Cr. 4**

Comparison of the political cultures, politics, and political institutions of Eastern, Western, and Southern European political systems. Similarities and differences in public policies; European influence; parallels in developing nations. (B)

**2810 World Politics. Cr. 4**

Role of power, methods of resolving international conflict, economic relations between industrialized and Third World countries, multinational corporations, terrorists, and other non-state actors. (Y)

**2820 (PCS 2000) Introduction to Peace and Conflict Studies. (HIS 2500) Cr. 3**

Required for the peace and conflict studies co-major. A variety of approaches to the origins, processes and resolution or management of conflict in all human systems, from the individual to the nation-state. (Y)

**2830 (PCS 2010) Topics in Peace and Conflict Studies. (HIS 2520) Cr. 1-4**

Special topics relating to peace and conflict studies. (Y)

**2992 Political Science Internship. (U S 2992) Cr. 1-4 (Max. 6)**

Prereq: consent of undergraduate adviser. Open only to political science majors or minors, urban studies co-majors, or students with twelve credits or more in political science. Offered for S and U grades only. Internship in a public or quasi-public organization, agency, civic or voluntary group, or campaign organization. Collateral reading, written work and arranged conferences with faculty supervisor. (T)

**3010 Public Opinion and Political Behavior. Cr. 4**

Prereq: P S 1010 or 1030 or consent of instructor. Factors that shape public opinion; patterns of political participation and electoral politics. Impact of public opinion and popular participation on the political system. (Y)

**3020 Political Parties and Elections. Cr. 4**

Prereq: P S 1010 or 1030. Development, structure, functions and operations of American political parties; their electoral and governmental roles; comparison with other systems; possible reforms. (B)

**3025 Political Campaigns in America. Cr. 4**

Nature and dynamics of campaigns for public office in the U.S. Campaign techniques and strategies in an era of candidate-centered American politics. (B)

**3030 Political Interest Groups. Cr. 4**

Prereq: P S 1010 or 1030. Structure, techniques and internal politics of interest groups, their roles in policy-making and relationship with other groups such as political parties, legislatures and administrative agencies. (B)

**3040 The Legislative Process. Cr. 4**

Prereq: P S 1010 or 1030. Function, structure, procedures and politics of American legislative bodies with special attention to Congress.

Relationships with other political institutions, especially the executive branch, and comparisons with foreign legislative institutions. (Y)

**3050 Politics of the American Presidency. Cr. 4**

Prereq: P S 1010 or 1030. Constitutional, historical, and political bases of the presidency. Influence of courts, Congress, interest groups, the news media, and personality on the office. (B)

**3060 State Government and Politics. Cr. 4**

A comparison of states in the United States in terms of their governmental structures, functions and response to changes in national and local relationships. (Y)

**3070 (ULM 3070) Michigan Politics. Cr. 4**

History and overview of Michigan politics: structure, process, current issues. (B)

**3080 Gender and Politics. Cr. 4**

Genesis and perpetuation of gender roles; feminist movements to modify these roles; impact of gender on public policy; gender-differentiated impact of public policy. (Y)

**3100 American Legal Systems and Processes. Cr. 4**

Analysis of the institutional structure, processes and policy-making of the American judicial system, including the recruitment of lawyers and judges, the influence of legal rules on policy-making, and selected areas of judicial policy-making. Emphasis on federal and state appellate courts. (Y)

**3120 (CRJ 3120) Politics of the Criminal Justice Process. Cr. 4**

Prereq: sophomore standing. Political aspects of criminal justice; politics of crime legislation, police function, prosecution, adjudication, and corrections; Federal role in criminal justice. (Y)

**3250 Detroit Politics: Continuity and Change in City and Suburbs. (HIS 3240) (ULM 3250) Cr. 4**

Detroit area political systems and processes; historical, economic, and social influences on local politics. Traditions, changes, and future challenges in Detroit and metropolitan area. (B)

**3430 Bureaucracy and Public Policy. Cr. 4**

Prereq: P S 1010 or 1030. Theory and development of modern governmental bureaucracy. Bureaucratic politics and its significance for decision making and program implementation. Normative aspects of bureaucracy, including accountability to the public and the role of bureaucrats in helping to define rational, efficient policies. (B)

**3450 Environmental Policy and Politics. Cr. 4**

Introductory course; primary focus on United States. Discussion of major environmental problems and their causes; environmental politics and the policy process. (I)

**3510 (PL) Law, Authority and Rebellion. Cr. 4**

Analysis of major theories of law, authority, freedom, and political obligation; justifications of disobedience, resistance and revolution. (B)

**3520 (PL) Justice. Cr. 4**

Analysis of major theories of justice; social, economic and political justice. (B)

**3530 Great Political Thinkers. Cr. 4**

Great political thinkers including Plato, Machiavelli, Wollstonecraft, Marx, and Arendt. Focus on themes of class, gender, violence, and power. (B)

**3600 Methods of Political Inquiry. Cr. 4**

Techniques of political science research: data gathering techniques, especially survey design; data processing and analysis using computers; and the interpretation and reporting of statistical results. (Y)



**3710 Politics of Western Europe. Cr. 4**

Western Europe: driving force in world politics over centuries; lofty principles and gruesome conflict. Origins of European political systems; twentieth-century crises; ongoing process of creating a united Europe. (Y)

**3715 Politics of Central and Eastern Europe. Cr. 4**

Central and eastern Europe: crossroads of many world civilizations and birthplace of the movements that shaped the modern world. Rise and fall (and rise?) of nationalism, communism, and democracy in the region. (Y)

**3735 Politics of Latin America. Cr. 4**

Political, social, economic and cultural foundations, the structure and function of institutions, and political processes in Latin America. (B)

**3811 Theory of World Politics. Cr. 4**

Prereq: P S 2810 recommended. Major theoretical approaches. Evaluation of the extent to which theories that devolve from realist, idealist, globalist, culturalist, feminist and decision-making approaches allow the explication of phenomena in world politics. (B)

**3820 (AFS 3420) Pan Africanism: Politics of the Black Diaspora. Cr. 4**

Interplay of Pan Africanism as a cultural and socio-political movement in world politics from its origins as a concept to organizing practice worldwide. (Y)

**3830 War. Cr. 4**

Prereq: P S 2810 recommended. Major theoretical and methodological approaches to study of international conflict. Analysis of impact of domestic, state, and global system factors in explicating international war. Aspects of civil wars that have become internationalized. (B)

**3840 American Foreign Policy and Administration. Cr. 4**

Shaping and administering United States foreign policy; influences of Congress and interest groups on the White House; secrecy; and the foreign service. (B)

**3991 Directed Study: WSU-Salford Exchange. Cr. 3-9**

Prereq: consent of undergraduate adviser. Open only to students admitted to Salford Exchange Program. Credit earned through approved upper-division course work at the University of Salford, England, as part of the W.S.U.- Salford Exchange Program. (F,W)

**4460 Techniques of Policy Analysis. Cr. 4**

Introduction to several major techniques used by policy analysts to measure and evaluate the effectiveness, efficiency, and equity of public policies and programs. Approaches and methodologies considered will include systems analysis, benefit-cost analysis, and simulation. Material fee as indicated in the Schedule of Classes. (Y)

**4710 Democracy. Cr. 4**

"The worst form of government except for all the others?" How democracy has evolved from ancient Athens until today. What makes democracy work. How democratization is proceeding in Latin America, Europe, Africa, Asia. (B)

**4780 Contemporary African Politics. (AFS 4780) Cr. 4**

Nature of African politics; impact of African politics on international relations. (B)

**4810 Foreign Policies of Major Powers. Cr. 4 (Max. 8)**

Major issues and trends in the foreign policies of Russia, China, Japan, and the European economic community. (B)

**4990 Directed Study. Cr. 1-4**

Prereq: consent of chairperson and undergraduate adviser. (T)

**4995 Senior Honors Paper. Cr. 4**

Prereq: admission to political science honors program. Completion of an extended examination of a topic or research question in political science, under the direction of one or more members of the departmental faculty. (T)

**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: P S 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: P S 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)

**5510 Political Culture in Modern North America. Cr. 4**

American political culture and thought through modern history from 1930 to the present. Variety of interpretations of American political culture including conservative, liberal, Marxist, and post-modernist. (B)

**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)

**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)

**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)

**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)

**5991 Directed Study: W.S.U.- Salford Exchange. Cr. 3-9**

Prereq: consent of undergraduate adviser. Open only to students admitted to WSU-Salford Exchange Program. Credit earned through approved upper-division course work at the University of Salford, England, as part of W.S.U.- Salford student exchange program. (F,W)

**5992 Political Science AGRADE Internship. Cr. 4**

Prereq: consent of undergraduate adviser and graduate adviser. Open only to students in B.A./M.A. or B.P.A./M.P.A. AGRADE Program. Internship to supplement classroom course work with practical experience gained through substantial involvement in a responsible capacity in a public or quasi-public agency or civic organization. (T)

**5993 (WI) Writing Intensive Course in Political Science. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any P S course numbered 3000 or higher except P S 3600, 4460, 5630 and 6640. 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 designated 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)

**5999 Special Topics in Political Science. Cr. 1-4 (Max. 16)**

Prereq: consent of instructor. Open only to juniors, seniors and graduate students. Topics to be announced in Schedule of Classes. (T)

**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 (ULM 6100) Class, Race, and Politics in America. (AFS 6100) (HIS 5110) (SOC 7330) (U P 7030) Cr. 3**

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

**6070 Labor and American Politics. (I R 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)

**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 (I R 7430) Public Sector Labor Relations. Cr. 3**

Prereq: graduate standing. 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 (ULM 6210) Regional, State, and Urban Economic Development: Policy and Administration. (ECO 6650) (U P 6550) Cr. 3**

Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

**6640 Statistics and Data Analysis in Political Science II. Cr. 3**

Prereq: P S 5630 or equiv. Modern statistical theory applied to the study of politics, administration, and public policy. Multivariate analysis: analysis of variance, multiple regression and correlation, path analysis, factor analysis, and discriminate function analysis. Material fee as indicated in the Schedule of Classes. (Y)

**6899 Topics in World Politics. Cr. 3 (Max. 9)**

Prereq: graduate standing. Coverage of compelling and emerging issues, ranging from global public policy to detailed analysis of global organization and international political economy; issues of globalization. (B)

# ROMANCE LANGUAGES and LITERATURES

Office: 487 Manoogian Hall; 577-3002

Chairperson: Charles J. Stivale

Academic Services Officer: Terrie Pickering

## Professors

Vincent C. Almazan (Emeritus), Fernande Bassan (Emerita), Manuela M. Cirre (Emerita), Jorgelina Corbatta, Andrea di Tommaso, Jesus Gutierrez (Emeritus), Francisco J. Higuero, Donald E. Schurknight, E. Burrows Smith (Emeritus), Donald C. Spinelli, Charles J. Stivale, Richard Vernier (Emeritus)

## Associate Professors

Michael J. Giordano, Louise M. Jefferson, Louis Kibler, Charlotte Lemke (Emerita), Sol Rossman (Emeritus), A. Monica Wagner (Emerita)

## Assistant Professors

Sergio Ayala-Rivera, Catherine Barrette, Eugenia Casielles, Anne E. Duggan, Thomas Edison, Marie-Chantal Kalisa, Kate Paesani, Lisa Vollendorf

## Lecturers

Raffaele DeBenedictis, Connie Green, Marilyn Rashid, Carole Verhelle

## Adjunct Professor

Robert Holley

## Director of Foreign Language Laboratories

Dallas Kenny

## Degree Programs

*BACHELOR OF ARTS with a major in French, Italian, or Spanish*

*\*MASTER OF ARTS with a major in French, Italian, or Spanish*

*\*DOCTOR OF PHILOSOPHY with a major in modern languages*

## Bachelor of Arts Degrees

**Admission Requirements** for the Bachelor of Arts programs of this department are satisfied by the general requirements for undergraduate admission to the University; see page 15. Students who wish to major in one of the programs offered by the Department should consult with the adviser for that program as soon as possible.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements of one of the following programs. All course work must be completed in accordance with the academic procedures of the University and the School governing undergraduate scholarship and degrees; see pages 15-46 and 223-227.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Major Requirements

All majors in Italian and Spanish are required to take a minimum of two cognate courses approved by the adviser. They are encouraged to take as much work as possible in the literatures of other languages, both ancient and modern, as well as in history, philosophy, linguistics, art, and music.

**Major Requirements in French:** As of Fall Term 2000, there is one French major offered by the Department, with an optional course selection at the 6000 level, for either French literature or French culture.

A French major consists of: French 2100, 2110, 2600, either 2710 or 2720, 3610, 3620, 4100, either 5100 or 5310, either 5400 or 6400, and a choice of one course in Option A or Option B: Option A (Culture Studies) -- one course from FRE 6450, 6460, or 6470; Option B (Literary Studies) -- one course from FRE 6510, 6630, 6650, 6770, 6810, 6840, 6860, 6991.

French majors are required to take at least three cognate courses to be selected in consultation with the undergraduate major adviser.

**Major Requirements in Italian:** A major in Italian must complete eleven courses including: Italian 3100, 3200, 3600 and 3610; 6610; 6680; two courses in the post-Renaissance period; and two cognate courses.

**Major Requirements in Spanish:** A student majoring in Spanish is required to take Spanish 2200, 3100; any two of Spanish 3610, 3620, or 3630; Spanish 5100, 5200, either 5550 or 5560, and three literature courses at the 6000 level (at least one peninsular and at least one Latin American), and one elective course in Spanish numbered 2030 or above in either language or literature. Six credits must also be elected in cognate courses.

**Teacher Preparation Curricula:** Students who are preparing to teach French, Italian, or Spanish in the secondary schools and who wish to obtain a B.A. degree with a major in one of these languages must complete the appropriate major as defined above. For information regarding this curriculum see page 229.

**Preparation for Careers in Business:** Foreign language majors who do not plan to teach may wish to consider a series of courses in the School of Business Administration which will provide some background for potential employment with multinational corporations. These courses will also prepare them for entrance into the Master of Business Administration degree program after completion of the B.A. For information, contact the Associate Dean of the School of Business Administration, 226 Prentis Building, telephone: 577-4503.

## Honors in Romance Languages

The Honors Program in Romance languages is open to students of superior academic ability who are majoring in Romance languages. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/she must accumulate at least fifteen credits in honors-designated course work from any of the departments of the College, including at least one 4000-level seminar given by the Honors Program. (For seminar topics, see the Schedule of Classes, under 'Honors Program.')

For information about the specific curricular requirements of the department's honors program, contact the Chairperson of the Department, or the Director of the Honors Program (577-3030).

## Minors and Cognate Study

**Minor Requirements in French:** A French minor requires the completion of eighteen to twenty credits in French 2010; 2710 or 2720; 2100, 2110; 2600 or 4100; 3610 or 3620; and one 5000- or 6000-level course. A student who places out of French 2010 through the

placement examination or advanced placement may opt to take French 2710 or 2720.

**Minor Requirements in Italian:** An Italian minor requires the completion of eighteen credits in Italian courses including: 2020, 3100 or 3200, 3600 or 3610, any 6000 level course, and one additional course at the 3000 or 6000 level. Substitutions can be made after consultation with the undergraduate adviser.

**Minor Requirements in Spanish:** A minor in Spanish requires the completion of 2200 and five other courses for a minimum of nineteen credits. With the guidance of the undergraduate adviser, courses may be chosen from the following: (language) 2030, 3040, 3050, 3100, 3200, 5100, 5200, 5300, 5400, 6400; (culture) 5550, 5560; (literature) 3610, 3620, 3630, any 6000-level literature course.

## -- Foreign Language Group Requirement

This requirement may be satisfied by passing the first three courses in one language or by proficiency examination; see page 224.

**Courses:** The student should elect a language as early as possible and continue it without interruption. The courses numbered 1010, 1020, and 2010 are essentially a continuum designed to give the student command of the basic elements of the language. The 'target' language is the preferred language of the classroom. There are several hour examinations in each course; group finals are given. The learning of a foreign language requires: (a) regular class attendance; (b) class participation; (c) two hours of concentrated study for each hour in class; (d) laboratory attendance. Frequent short visits to the language laboratory are preferable to occasional long cramming sessions.

**Placement:** The main guide to placement for students who wish to continue the study of a language begun in high school is the number of years of high school language study. Students with one year of high school study are advised to enroll in 1010 for Italian, and 1020 or 1060 for French and Spanish; those with two years, in 1020, those with three years, in 2010. Those with four years of study may elect 2010 in order to satisfy the foreign language requirement or may choose to write the Proficiency Examination administered by the Department. Students with a sufficiently high proficiency score will be deemed to have satisfied the Foreign Language Group Requirement. For information on the Proficiency Examination, contact the Department at 577-3002. Examinations are scheduled by appointment at the Department Office, 487 Manoogian Hall. (A fee is charged.)

## 'AGRADE' -- Accelerated Graduate Enrollment

The Department encourages academically-superior majors to petition for admission into the College's 'AGRADE' program. Qualified seniors may apply a maximum of fifteen credits toward both a bachelor's and a master's degree in French, Italian, or Spanish. Students electing the 'AGRADE' Program may expect to complete the bachelor's and master's degrees in five years of full-time study. For more details, contact the graduate adviser in the major of your choice (French, Italian, or Spanish): 577-3002. Students should consult with their advisers in their junior year regarding this opportunity.

## Financial Aid and Awards

*Claude and Samuel Astrachan Foreign Study Annual Scholarship Fund:* Annual award or awards made to students accepted for study at the Wayne Au Soleil Summer Study Program, based on academic excellence and need.

*Himmel Fund:* Provides financial assistance in support of the humanities, to graduate and undergraduate students, primarily in the form of awards, travel, books, and scholarships. Preference is given to students of high academic achievement.

*Dr. D.L. Pucci Memorial Award:* Annual award made to an advanced student of Italian language, based on academic excellence.

*Carosello Italiano Scholarship for Canadian Students:* Annual award or awards made to Canadian students in advanced Italian courses, based on academic excellence and need.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### -- Offered in English

*No knowledge of a foreign language is presumed or required for the following courses, which are conducted in English with all readings in English. They will not count toward a major in the foreign language from which the translations are derived.*

### French in English Translation (FRE)

**2700 (GER 2700) (PL) Anguish and Commitment: European Existentialist Literature. (ITA 2700) (RUS 2700) (SPA 2700) Cr. 3-4**

Only students in Honors Program may register for four credits. A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Svevo, Sartre, Camus and Sabato. (B)

**2710 (FC) Introduction to French Civilization I. Cr. 3**

An overview of France's great contributions to world culture, from the time of the Gauls to the French Revolution. French history, thought, art, architecture, society, geography, and institutions; illustrated with slides and films; includes visits to Detroit Institute of Arts. (B)

**2720 (FC) Introduction to French Civilization II. Cr. 3**

From the French Revolution to contemporary times. French way of life, its moral and intellectual foundations, its culture and institutions; their transformation under the stress of the twentieth century. (B)

**2990 Topics in Romance Studies: in English Translation. (ITA 2990) (SPA 2990) Cr. 3**

Individual themes, critical issues, special problems, or trends in interdisciplinary studies. Course may be team-taught. (F,W)

**6991 Contemporary French Criticism and Literary Theory. Cr. 4**

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)

### Italian in English Translation (ITA)

**2700 (GER 2700) (PL) Anguish and Commitment: European Existentialist Literature. (FRE 2700) (RUS 2700) (SPA 2700) Cr. 3-4**

Only students in Honors Program may register for four credits. A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Svevo, Sartre, Camus, and Sabato. (B)

**2710 (FC) Italian Culture and Civilization I. Cr. 3**

Overview of development of Italian culture and civilization from their origins to 1500; emphasis on those aspects that prepared the politi-

cal, social, cultural and intellectual groundwork of Humanism and the Renaissance. Taught in English. (Y)

**2720 (FC) Italian Culture and Civilization II. Cr. 3**

Prereq: ITA 2710 recommended. Overview of Italian culture and civilization from 1500 to 1947: the Renaissance, Italian contributions to science, Unification of Italy, the Fascist era, the new republic. Taught in English. (Y)

**2990 (FRE 2990) Topics in Romance Studies: in English Translation. (SPA 2990) Cr. 3**

Individual themes, critical issues, special problems, or trends in interdisciplinary studies. Course is team-taught. (F,W)

**5150 (Italian Cinema since 1942. (FLM 5150) 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. 4**

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)

## Spanish in English Translation (SPA)

**2400 (CBS 2100) Chicano Literature and Culture. Cr. 3**

Examination of Chicano literature. Themes and figures in a social and historical context. (B)

**2500 (CBS 2110) Puerto Rican Literature and Culture. Cr. 3**

Examination of Puerto Rican literature. Themes and figures in a social and historical context. (B)

**2700 (GER 2700) (PL) Anguish and Commitment: European Existentialist Literature. (FRE 2700) (ITA 2700) (RUS 2700) Cr. 3-4**

Only students in Honors Program may register for four credits. A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Svevo, Sartre, Camus and Sabato. (B)

**2990 (FRE 2990) Topics in Romance Studies: in English Translation. (ITA 2990) Cr. 3**

Individual themes, critical issues, special problems, or trends in interdisciplinary studies. Course is team-taught. (F,W)

## FOREIGN LANGUAGE INSTRUCTION

### FRENCH (FRE)

**1010 Elementary French. Cr. 4**

Training in pronunciation, aural comprehension, oral and written expression. Laboratory work is part of class preparation. Material fee as indicated in the Schedule of Classes. (T)

**1020 Elementary French. Cr. 4**

Prereq: FRE 1010 or placement. Continuation of FRE 1010. Material fee as indicated in the Schedule of Classes. (T)

**1060 Elementary French I and II. Cr. 6**

Prereq: one year of high school French or one semester college French. Training in pronunciation, aural comprehension, oral and written expression, with a review of material normally covered in FRE 1010, followed by in-depth presentation of material covered in FRE 1020. (T)

**2010 (FC) Intermediate French. Cr. 4**

Prereq: FRE 1020 or placement. Continuation of FRE 1020. Material fee as indicated in the Schedule of Classes. (T)

**2100 Intermediate Grammar, Conversation and Composition I. Cr. 3**

Prereq: FRE 2010. Special attention to development of language skills. Conducted entirely in French; discussion based on reading from contemporary materials. (T)

**2110 Intermediate Grammar, Conversation and Composition II. Cr. 3**

Prereq: FRE 2100. Continuation of FRE 2100. (Y)

**2600 Introduction to the Reading of Literature. Cr. 3**

Prereq: FRE 2010. An initiation into the reading of various literary genres. Methods and vocabulary to discuss and analyze the essays, poems, short novels, and plays under consideration. (T)

**3610 Introduction to Literary Textual Analysis. Cr. 3**

Prereq: any two of FRE 2100, 2110, 2600. Major genres and periods of French and francophone literatures; strategies of reading drawn from contemporary critical approaches. (F)

**3620 Introduction to Sociocultural Analysis. Cr. 3**

Prereq: any two of FRE 2100, 2110, 2600. Initiation into reading a range of different media, verbal and visual, in French and francophone cultural texts, from poetry to prose (fictional and non-fictional), to painting, photography, architecture, and other media. (W)

**4100 Intermediate Conversation, Composition, and Contemporary and Francophone Readings. Cr. 3**

Prereq: FRE 2100 or 2110. Discussion and composition based on readings in contemporary French social and cultural topics. (Y)

**5100 (WI) Advanced Speaking and Writing. Cr. 4**

Prereq: any two of FRE 2100, 2110, 4100. Spoken French in the context of French civilization. Readings and writing skills based on contemporary French texts, translations. (F)

**5200 Phonetics and Diction. Cr. 3**

Prereq: any two of FRE 2100, 2110, 4100. A systematic study of French sounds, phonetic transcriptions; practice in the language laboratory; intensive drills in accurate pronunciation and intonation. (F)

**5310 Writing Culture Issues. Cr. 4**

Prereq: any two of FRE 2100, 2110, 4100. Composition and explication de textes utilizing texts related to Provence. Taught only at the Wayne Au Soleil Summer Study Program in Sophia Antipolis - Cannes, France. (S)

**5400 Advanced Grammar Review. Cr. 3**

Prereq: any two of FRE 2100, 2110, and 4100 or consent of instructor. Advanced French grammar. Translation exercises from English to French; study of appropriate grammar rules. (W)

**5750 (ENG 5750) Theories of Second Language Acquisition. (CLA 5750) (GER 5750) (ITA 5750) (LIN 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)

**5810 Teaching Foreign Languages: Receptive Skills. (CLA 5810) (CLA 7810) (FRE 7810) (GER 5810) (GER 7810) Cr. 3**

Prereq: FRE 5850 or 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)

**5820 Teaching Foreign Languages: Productive Skills. (CLA 5820) (CLA 7820) (FRE 7820) (GER 5820) (GER 7820) Cr. 3**

Prereq: FRE 5850 or 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 (GER 5830) Technology in the Foreign Language Classroom. (CLA 5830) (CLA 7830) (FRE 5830) (GER 7830) Cr. 3**

Prereq: FRE 5850 or 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 (GER 5850) Second Language Instruction: Theory and Methods. (CLA 5850) (CLA 7850) (FRE 5850) (GER 7850) 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 testing. (B)

**5860 (GER 5860) Foreign Language Testing. (CLA 5860) (CLA 7860) (FE 7860) (GER 7860) Cr. 3**

Prereq: FRE 5750 or 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)

**5998 Honors Thesis in French. Cr. 3-6**

Prereq: consent of French undergraduate adviser. Open only to Honors students in French. (T)

**6400 The Structure of French. Cr. 3**

Prereq: FRE 5200 or written consent of instructor. Study of various linguistic systems at work in the French language: phonology, morphology, syntax, semantics. (F)

**6450 French Civilization. Cr. 4**

Prereq: any two of FRE 3610, 3620 and 4100 or consent of instructor. 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)

**6460 Understanding Culture Issues. Cr. 4**

Prereq: any two of FRE 3610, 3620, and 4100 or consent of instructor. Aspects of modern French civilization in Provence through daily readings and direct contact with the region. Taught only in at the Wayne Au Soleil Summer Study Program in Sophia Antipolis - Cannes, France. (S)

**6470 Contemporary French Society and Institutions. Cr. 4**

Prereq: any two of FRE 3610, 3620, and 4100 or consent of instructor. 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. 4**

Prereq: FRE 3610 or 3620 or consent of instructor. 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. 4**

Prereq: FRE 3610 or 3620 or consent of instructor. Historical background, religious and literary movements. Development of the Classi-

cal 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. 4**

Prereq: FRE 3610 or 3620 or consent of instructor. 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. 4**

Prereq: FRE 3610 or 3620. 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. 4**

Prereq: FRE 3610 or 3620 or consent of instructor. Romanticism, Realism, Naturalism, Parnassian poetry, and the theatre of the second half of the nineteenth century. Chateaubriand, Hugo, Flaubert, Zola, Leconte de Lisle, Becque, 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. 4**

Prereq: FRE 3610 or 3620 or consent of instructor. 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. 4 (Max. 8)**

Prereq: FRE 3610 or 3620 or consent of instructor. 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)

## Special Courses (FRE)

**5000 Minor Language Practicum. Cr. 3 (Max. 9)**

Prereq: consent of graduate adviser. Offered for S and U grades only. No degree credit toward Ph.D. Controlled application of active language skills for students electing a Ph.D. minor in French. (T)

**5990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: consent of adviser. (T)

## ITALIAN (ITA)

**1010 Elementary Italian. Cr. 4**

Ear training, grammar, reading, writing, speaking; emphasis on ability to speak and read Italian. Material fee as indicated in the Schedule of Classes. (T)

**1020 Elementary Italian. Cr. 4**

Prereq: ITA 1010 or placement. Continuation of ITA 1010. Composition, conversation, reading of simple modern prose. Material fee as indicated in the Schedule of Classes. (T)

**2010 (FC) Intermediate Italian. Cr. 4**

Prereq: ITA 1020 or placement. Grammar review, composition, conversation, reading, discussion of contemporary Italian culture. Material fee as indicated in the Schedule of Classes. (T)

**2020 Intermediate Italian. Cr. 4**

Prereq: ITA 2010 or placement. Continuation of ITA 2010 with readings in modern Italian literature and culture. (T)

**3100 Italian Conversation. Cr. 3**

Prereq: ITA 2020 or placement. Conversation based on current topics and reading materials. (T)

**3200 Italian Grammar and Composition. Cr. 3**

Prereq: ITA 2020 or placement. Advanced study of Italian grammar, phonetics, and syntax. Practice in writing themes and translations. (T)

**3600 Masterpieces of Italian Literature I. Cr. 4**

Prereq: ITA 2020 or consent of department. Representative works or selections from the writings of the major authors from the thirteenth through seventeenth centuries. (F)

**3610 Masterpieces of Italian Literature II. Cr. 4**

Prereq: ITA 2020 or consent of department. Representative works or selections from the writings of the major authors from the eighteenth through twentieth centuries. (W)

**5750 (ENG 5750) Theories of Second Language Acquisition. (CLA 5750) (FRE 5750) (GER 5750) (LIN 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)

**5810 (FRE 5810) Teaching Foreign Languages: Receptive Skills. (CLA 5810) (CLA 7810) (FRE 7810) (GER 5810) (GER 7810) Cr. 3**

Prereq: ITA 5850 or 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)

**5820 (FRE 5820) Teaching Foreign Languages: Productive Skills. (CLA 5820) (CLA 7820) (FRE 7820) (GER 5820) (GER 7820) Cr. 3**

Prereq: ITA 5850 or 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 (GER 5830) Technology in the Foreign Language Classroom. (CLA 5830) (CLA 7830) (FRE 5830) (FRE 7830) (GER 7830) Cr. 3**

Prereq: ITA 5850 or 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 (GER 5850) Second Language Instruction: Theory and Methods. (CLA 5850) (CLA 7850) (FRE 5850) (FRE 7850) (GER 7850) 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 testing. (B)

**5860 (GER 5860) Foreign Language Testing. (CLA 5860) (CLA 7860) (FRE 5860) (FRE 7860) (GER 7860) Cr. 3**

Prereq: ITA 5750 or consent of instructor. Means of assessing students' knowledge of a foreign language. Topics include: ACTFL Oral Proficiency Interview; testing of reading, writing speaking and listen-

ing skills; means of testing grammar and culture; testing as it relates to program goals. (Y)

**5993 (WI) Writing Intensive Course in Italian. Cr. 0**

Prereq: junior standing, consent of instructor; coreq: any 3000- or 6000-level Italian literature course. 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 designated 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. (F,W)

**6610 Dante: Divine Comedy. Cr. 4**

Prereq: ITA 3600 or consent of instructor. A close reading of Dante's *Commedia*, with attention to sources, background, and interpretation. (B)

**6680 Studies in Renaissance Literature. Cr. 4 (Max. 12)**

Prereq: ITA 3600 or consent of instructor. 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)

**6790 Studies in the Italian Theatre. Cr. 4 (Max. 12)**

Prereq: ITA 3600 and 3610 or consent of instructor. The development of the Italian theatre in the Middle Ages and Renaissance; the modern Italian theatre, or study of a single movement. Topics to be announced in Schedule of Classes. (B)

**6830 Studies in Modern Italian Poetry. Cr. 4 (Max. 12)**

Prereq: ITA 3610 or consent of instructor. Selected studies of movements, themes, periods or poets. Topics to be announced in Schedule of Classes. (B)

**6870 Studies in Modern Italian Fiction. Cr. 4 (Max. 12)**

Prereq: ITA 3610 or consent of instructor. Study of a genre, movement, theme, or period. Topics to be announced in Schedule of Classes. (Y)

**Special Courses (ITA)****5000 Minor Language Practicum. Cr. 3 (Max. 9)**

Prereq: consent of graduate adviser. Offered for S and U grades only. No degree credit toward the Ph.D. Controlled application of active language skills for students electing a Ph.D. minor in Italian. (T)

**5990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: consent of adviser. (T)

**SPANISH (SPA)****1010 Elementary Spanish. Cr. 4**

Ear training, grammar, reading, writing, speaking. Material fee as indicated in the Schedule of Classes. (T)

**1020 Elementary Spanish. Cr. 4**

Prereq: SPA 1010 or placement. Continuation of SPA 1010. Material fee as indicated in the Schedule of Classes. (T)

**1060 Elementary Spanish I and II. Cr. 6**

Prereq: one year of high school Spanish or one semester of college Spanish. Placement recommended. Training in pronunciation, aural comprehension, oral and written expression; review of material normally covered in SPA 1010 followed by in-depth presentation of material covered in SPA 1020. (T)

- 2010 (FC) Intermediate Spanish. Cr. 4**  
Prereq: SPA 1020 or placement. Grammar review; emphasis on compositions, reading, conversation. Material fee as indicated in the Schedule of Classes. (T)
- 2030 Intermediate Spanish. Cr. 3**  
Prereq: SPA 2010. Continuation of SPA 2010. More intensive review of Spanish grammar; linguistic preparation for reading of literature; oral practice in the language. (T)
- 2200 Intermediate Spanish: Readings in Hispanic Literature and Culture. Cr. 4**  
Prereq: SPA 2010 or placement. Discussion of literary and cultural readings from Spain and Spanish America; vocabulary building; speaking and reading emphasized. (T)
- 3040 Commercial Spanish. Cr. 3**  
Prereq: SPA 2200. Commercial Spanish for basic business, legal and banking transactions and correspondence; terminology used in banking, commerce, accounting and marketing; emphasis on translation and format of commercial documents and letters. (I)
- 3050 Medical Spanish. Cr. 3**  
Prereq: SPA 2200. Basic medical vocabulary in Spanish; taught entirely in Spanish. Conversation, dialogue, writing medical reports, role playing, mock medical situations. Videotapes and lectures on specific medical topics. (B)
- 3100 Intermediate Grammar. Cr. 4**  
Prereq: SPA 2010 or placement. Study and utilization of grammar in speech and writing; pronunciation and intonation. Conducted entirely in Spanish. (Y)
- 3200 Intermediate Conversation. Cr. 3**  
Prereq: SPA 2200. Informal class conversations, debates and oral reports to reinforce grammatical principles and to improve pronunciation through practice and imitation. (B)
- 3610 Survey of Spanish Literature I. Cr. 3**  
Prereq: SPA 2200. Spanish literature from the Middle Ages. (F)
- 3620 Survey of Spanish Literature II. Cr. 3**  
Prereq: SPA 2200. Spanish literature from 1700 to the present. (W)
- 3630 Survey of Spanish American Literature. Cr. 3**  
Prereq: SPA 2200. Survey of Spanish American literature from colonial period to the present. (Y)
- 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 or consent of instructor. 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 Technical and Literary Translation. Cr. 3**  
Prereq: SPA 3100. English-Spanish and Spanish-English translations, literary and technical. Idioms in technical, business and legal contexts. Computerized translation technology. (B)
- 5550 Spanish Culture and Its Tradition. Cr. 3**  
Prereq: SPA 3610, 3620, or 3630. Spain's cultural history: painting, sculpture, architecture and music, through films, records, newspapers, and other texts. (B)
- 5560 Spanish American Cultures and their Traditions. (CBS 5560) Cr. 3**  
Prereq: SPA 3610, 3620, or 3630. 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. Cr. 3**  
Prereq: SPA 3610, 3620, or 3630. Specific themes or aspects such as: New Spanish Cinema and the emergence of oppositional voices in film within the Francoist regime. (Y)
- 5750 (ENG 5750) Theories of Second Language Acquisition. (CLA 5750) (FRE 5750) (GER 5750) (ITA 5750) (LIN 5750) Cr. 3**  
Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (B)
- 5810 (FRE 5810) Teaching Foreign Languages: Receptive Skills. (CLA 5810) (CLA 7810) (FRE 7810) (GER 5810) (GER 7810) Cr. 3**  
Prereq: SPA 5850 or 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)
- 5820 (FRE 5820) Teaching Foreign Languages: Productive Skills. (CLA 5820) (CLA 7820) (FRE 7820) (GER 5820) (GER 7820) Cr. 3**  
Prereq: SPA 5850 or 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 (GER 5830) Technology in the Foreign Language Classroom. (CLA 5830) (CLA 7830) (FRE 5830) (FRE 7830) (GER 7830) Cr. 3**  
Prereq: SPA 5850 or 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 (GER 5850) Second Language Instruction: Theory and Methods. (CLA 5850) (CLA 7850) (FRE 5850) (FRE 7850) (GER 7850) 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 testing. (B)
- 5860 (GER 5860) Foreign Language Testing. (CLA 5860) (CLA 7860) (FRE 5860) (FRE 7860) (GER 7860) Cr. 3**  
Prereq: SPA 5750 or 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)
- 6400 The Structure of Spanish. Cr. 3**  
Prereq: SPA 5200 or consent of instructor. Principles of linguistics and their application to Spanish. (B)
- 6410 Spanish Medieval Literature: Origins to 1500. Cr. 4**  
Prereq: SPA 3610, 3620 or 3630. Main currents and masterworks of Spanish literature from its origins to 1500. (Formerly SPA 6500.) (B)



**6420 Spanish Literature of the Renaissance. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. Literary genres of the sixteenth century (poetry and narrative: picaresque, pastoral, morisco, and chivalric). (Formerly SPA 6510.) (B)

**6430 Spanish Literature of the Baroque Period. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. 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. 4**

Prereq: SPA 3610, 3620 or 3630. 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. 3-4**

Prereq: SPA 3610, 3620 or 3630. 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. 4**

Prereq: SPA 3610, 3620 or 3630. Representative works of the Realist and Naturalist movements. (Formerly SPA 6993.) (B)

**6470 The Spanish Novel of the Twentieth Century. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. Novelists of the Generation of 1898, and representative authors before and after the Civil War; includes such trends as Tremendismo, Social Realism, and the contemporary experimental novel. (Formerly SPA 6993.) (B)

**6490 Spanish Poetry of the Nineteenth and Twentieth Centuries. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. Representative figures and trends in Modern and contemporary Spanish poetry. Post-Romantics, Symbolists, the Generations of 1898 and 1927, and the more contemporary poets. (B)

**6560 Cervantes. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. A detailed study of Don Quijote . Other short works of Cervantes. (B)

**6570 The Comedia. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. 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 3610, 3620 or 3630. Topics such as modern Spanish theatre, Generation of 1898, to be announced in Schedule of Classes. (B)

**6600 Spanish American Colonial Literature. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. Major figures from the sixteenth to the nineteenth centuries. Poetry, prose, and theatre; the literature of the conquest; conflicts and tension of the dominant and the conquered societies. (B)

**6620 The Spanish American Novel II. Cr. 4**

Prereq: SPA 3610, 3620 or 3630. 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. (Formerly SPA 6860.) (B)

**6630 Spanish American Poetry. Cr. 4**

Prereq: SPA 3610 or 3620 or 3630. Major poets and their texts from the period of Independence through the early stages of Modernism and Vanguard, to contemporary poetry. (B)

**6670 Latin American Novel to 1900. Cr. 3**

Prereq: SPA 3610, 3620 or 3630. Late colonial period to 1900. (B)

**6690 Genres and Topics in Spanish American Literature. Cr. 3**

Prereq: SPA 3610, 3620 or 3630. 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 3610, 3620 or 3630. Writers of first three decades of twentieth century; current narratological theories applied to intertextual maneuvers and philosophical concepts. (I)

**6710 Unamuno's Existential Fiction. Cr. 3**

Prereq: SPA 3610, 3620 or 3630 Important novels of Miguel de Unamuno; emphasis on characters and their agonization in a circumscribed area. (I)

## Special Courses (SPA)

**5000 Minor Language Practicum. Cr. 3 (Max. 9)**

Prereq: consent of graduate adviser. Offered for S and U grades only. No degree credit toward Ph.D. Controlled application of active language skills for students electing a Ph.D. minor in Spanish. (T)

**5990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: consent of adviser. (T)

# SOCIOLOGY

Office: 2228 Faculty/Administration Building; 577-2930

Chairperson: David W. Britt

## Professors

Joseph Albin (Emeritus), David W. Britt, J. Ross Eshleman, Donald E. Gelfand, Janet R. Hankin, Mel J. Ravitz (Emeritus), Raye A. Rosen (Emeritus), Mary C. Sengstock, Leon H. Warshay

## Associate Professors

Clifford J. Clarke, Thomas Duggan (Emeritus), Anne W. Rawls, Mary J. Van Meter (Emerita), Leon Wilson

## Assistant Professors

Chishamiso Rowley, Robert Silverman

## Adjunct Faculty

Diane Brown, *Center for Urban Studies*; Elizabeth Chapleski, *Institute of Gerontology*; David Fasenfest, *Center for Urban Studies*; Heidi Gottfried, *Center for Urban Studies*; Kelly Patterson, *Center for Urban Studies*; Rosalie Young, *Community Medicine*

## Degree Programs

*BACHELOR OF ARTS with a major in sociology*

*\*DOCTOR OF PHILOSOPHY with a major in sociology*

The courses in sociology are designed for various groups of students: (1) those desiring scientific knowledge of social relationships as a part of their general education; (2) those planning to enter a public service profession such as social and urban planning, public administration, nursing, medicine, dentistry, or law; (3) those expecting to engage in work that will require a broad grasp of the nature of society, of public opinion, and of social change such as public affairs, journalism, public relations, communications, marketing, etc.; (4) those anticipating a career in social and statistical research and planning; (5) those looking forward to the teaching of social studies and sociology; (6) those preparing for a career in international studies or for service in foreign affairs; (7) those majoring in sociology as a preparation for graduate professional training in social work; (8) those planning to pursue graduate studies in sociology.

Students concerned with sociology as preparations for these careers are encouraged to consult with the undergraduate adviser and with members of the faculty.

## Bachelor of Arts with a Major in Sociology

**Admission Requirements** for these programs are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29), as well as the major requirements of one of the following programs. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 223-227, respectively. It is expected that Group Requirements will be fulfilled during the freshman and sophomore years. Language Group Requirements should normally be fulfilled before election of the major.

**Major Requirements:** Students majoring in sociology are required to elect a minimum of thirty credits in the field, including Sociology 2000, 3300, 4050 (or 6050 or 6060), 4100, 4200. Students may not elect more than forty-five credits in course work within the Department. All core courses must be completed with a grade of 'C' or better, with a minimum of thirty credits with a grade of 'C' or better.

### Model Plan for Majors

**Junior Year:** Sociology 3300, 4200, 4050 (or 6050 or 6060), 4100; elective courses. Students are urged to take Sociology 4200 and 4050, in particular, in the junior year.

**Senior Year:** Sociology 3820, 5400; elective courses; remaining requirements not taken in junior year.

## Honors Program

An honors major in sociology is available to students who fulfill all requirements for the major, and who maintain a cumulative grade point average of at least 3.3 and at least 3.3 in sociology courses. Honors majors must demonstrate the ability to do original work by writing an Honors Thesis during their senior year. The Sociology Honors Program leads to a degree designation 'With Honors in Sociology'.

*Requirements for the Honors Degree are:*

1. satisfaction of all requirements for a major in sociology;
2. overall g.p.a. of 3.3;
3. sociology g.p.a. of 3.3;
4. an approved honors thesis;
5. at least one 4000-level seminar offered through the Honors Program of the College of Liberal Arts. and
6. an accumulation of at least fifteen credits in honors-designated course work. For additional information on honors-designated courses available each semester, consult the University Schedule of Classes, or the Director of the Honors Program (577-3030).

## 'AGRADE' -- Accelerated Graduate Enrollment

The Department of Sociology permits academically superior majors to petition for admission into the College's 'AGRADE' Program. 'AGRADE' procedures enable qualified seniors in the Department to enroll simultaneously in the undergraduate and graduate programs of the College and apply a maximum of fifteen credits towards both a bachelor's degree and a master's degree in the major field. Students electing 'AGRADE' programs may expect to complete the bachelor's and master's degrees in five years of full-time study.

For more details about the 'AGRADE' Program, contact the Director of the College's Honors Program (577-3030), the Chairperson of the Sociology Department, or the Graduate Office of the College of Liberal Arts (577-2690).

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Minor and Cognate Study

**Minor Requirements:** A minor in sociology is offered for students majoring in other fields. The minor requires at least twenty credits including a core of:

SOC 2000 . . . . . (SS) Understanding Human Society  
SOC 4050 . . . . . Basic Sociological Theory  
SOC 4200 . . . . . (WI) Methods of Social Research

All core courses must be completed with a grade of 'C' or better, with a minimum of twenty credits with a grade of 'C' or better.

**Sociology as a Career Component:** A good background in Sociology can be a valuable component of preparation for a variety of careers, professions, and occupations. The following information summarizes some of these opportunities. Faculty Advisers in Sociology can provide additional information on these and other areas as well.

1. *Human Services Work:* Students whose occupational aspirations include working with families, or with men and women in various types of human services or therapeutic settings (Social Work, Nursing, Education, Psychology, Law, Medicine) might consider electing one or more of the following courses: Sociology 3400 (Exploring Marriage and Other Intimate Relationships), 4460 (Women in Society), 5400 (The Family), 5410 (Marriage and Family Problems), 5870 (Violence in the Family).

2. *Business:* Students who are preparing for a career in business might consider electing Sociology 3300 (Social Institutions and Social Structure).

3. *Inter-Group Relations:* Any student whose future occupation will entail working with peoples of diverse ethnic and racial groups might be advised to consider taking the following course: Sociology 5570 (Race Relations in Urban Society).

4. *Crime and Criminal Justice:* Students whose career goals are in the areas of criminal justice, police work, corrections, probation, law, or related fields might be advised to select their elective courses from among the following: Sociology 2020 (Social Problems), 3820 (Criminology), 3840 (Penology), 4800 (Outsiders, Outcasts and Social Deviants), 5810 (Law in Human Society), 5870 (Violence in the Family), or 6860 (Organized Crime: Its History and Social Structure).

5. *Work with Health Agencies or the Aged:* Students who plan to work with the aged or in health care fields (social gerontology) might consider taking one of more of the following courses: Sociology 5360 (Introduction to Medical Sociology) or 5760 (Society and Aging).

## Awards and Scholarships

**Frank Hartung Award:** Dr. Frank Hartung was a distinguished criminologist and a faculty member of the Wayne State University Sociology Department through the 1970s. An award in his memory is given once a year to either undergraduate or graduate students. Students applying for the award must write a paper in the area of criminology. A committee of three faculty members reviews the entries and selects the awardee. A plaque and check for \$100 are awarded, and the winner's name is included on the plaque in the Department Office.

**Shirley Falconer Slayman Memorial Scholarship:** This scholarship is provided by the family of Shirley Falconer Slayman in memory of her attendance at Wayne State University and activity in the City of Detroit. Applications are accepted from full-time undergraduate students, or from students accepted for study at Wayne State University who are majoring or co-majoring in sociology. Recipients are selected on the basis of financial need, scholastic achievement, qualities of leadership, and commitment to contribute to community improvement, with financial need being the primary consideration. Selected recipients receive the award for two academic years. The

award alternates between undergraduate and graduate students every two years.

## UNDERGRADUATE COURSES (SOC)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 2000 (SS) Understanding Human Society. Cr. 3

Analysis of basic sociological concepts and principles to give the student an understanding of the perspective that sociology brings to the study of human society. (T)

### 2020 (SS) Social Problems. Cr. 3

Consideration of major contemporary social problems which reveal structural strains, value conflicts, deviations and changes in society. Analysis of socio-cultural factors creating problems and of possible solutions. (T)

### 2050 (PCS 2050) The Study of Non-Violence. (HIS 2530) (P S 2550) Cr. 3

Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. (Y)

### 2100 Topics in Sociology. Cr. 3 (Max. 9)

Specialized and topical studies of sociological themes. Topics to be announced in Schedule of Classes. (T)

### 2360 Women and Health. Cr. 4

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. (T)

### 2500 (U S 2000) (SS) Introduction to Urban Studies. (GPH 2000) (HIS 2000) (P S 2000) Cr. 4

Urban phenomena both past and present, including the quality and nature of urban life; major concerns of urban areas; perspectives and techniques of various urban related disciplines. (Y)

### 2600 (AFS 2600) Race and Racism in America. Cr. 3

Examination of the nature and practice of racism in American society from its historical foundations to its contemporary institutional forms. (B)

### 3300 (SS) Social Institutions and Social Structure. Cr. 4

Prereq: upper division standing. Structure and process in society, institutions, communities, and organizations. Scientific analysis of organization, conflict, and change in the economy, government, religion, education, and family. (Y)

### 3350 Cults, Myths, and Religions in Society. Cr. 3

Objective analysis of the interrelations between religious phenomena and social institutions, social structure and behavior. (B)

### 3400 Exploring Marriage and Other Intimate Relationships. Cr. 3

Students examine, from a sociological perspective, issues concerning intimate relationships. Major emphasis on description and analysis of changes in monogamous marriage. Non-traditional marital forms also examined. Focus upon the intimate relationships as they relate to personal, functional concerns of the student. (B)

**3510 (SS) The Nature and Impact of Population on Society. Cr. 3**

Birth, death and migration investigated with respect to their social causes and consequences for society and human behavior. The population explosion and its implication for government policy. Recommended for students interested in urban studies, medicine, nursing, political science and history. (B)

**3820 Criminology. Cr. 3**

Review and critique of explanations of criminal behavior. Criminal behavior patterns, sources of crime statistics, social structure of criminality, crime typologies, and other theoretical issues regarding crime and delinquency. (T)

**3840 (CRJ 4300) Corrections. Cr. 4**

No credit after former SOC 5840. Description and analysis of legal, social and political issues affecting contemporary correctional theory and practice. Topics include: history of corrections, function and social structure of correctional institutions, institutional alternatives including diversion, probation and parole. Field trips to institutions and community correctional settings normally required. (T)

**3860 (AFS 3860) Race, Class and the Criminal Justice System. Cr. 3**

Prereq: upper division standing or criminal justice majors or minors. Survey of race and class in the criminal justice system: police, courts, jails and prisons. Socio-economic environment of offenders, and effects of criminal justice process on their ability to function positively within that environment. (T)

**3880 Serial Killers. Cr. 3**

Types of men and women who commit multiple murders and what compels them to do so. Interdisciplinary and sociological factors in serial killings; response to these killings. (Y)

**3990 Directed Study. Cr. 1-3 (Max. 6)**

Prereq: written consent of full time sociology instructor. Open only to juniors and seniors with not less than sixteen credits in sociology, with a grade of A or B. For students who show evidence of ability and interest, and desire to do advanced reading. Part-time and student instructors are ineligible to supervise directed study. (T)

**3991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. Directed study at University of Salford, England. (F,W)

**4050 Basic Sociological Theory. Cr. 4**

Introduction to sociological theory from a general conceptual framework. Major concepts, theoretical positions and recent trends in theoretical sociology will be considered. (Y)

**4100 (SS) Social Psychology. Cr. 4**

An introduction to the major issues in social psychology. Topics such as socialization, social perception, self-conceptions and social definitions of selves and situations. (T)

**4200 (WI) Methods of Social Research. Cr. 4**

An elementary research methods course that covers the process of doing social research, including research design, data collection techniques, processing and analysis of data, as well as the interpretation of data. (Y)

**4460 Women in Society. Cr. 3**

In-depth investigation of the living and working conditions of women in the world today, with a particular emphasis on the impact of socio-economic changes on the lives of women (including their relationships with men). (Y)

**4800 Outsiders, Outcasts and Social Deviants. (CRJ 4800) Cr. 3**

Definition and characteristics of behaviors which have, at times, been considered deviant, such as: criminality, mental illness, alcoholism, drug addiction, abortion, prostitution, and pornography. Interdisciplinary theories introduced to facilitate understanding of those behaviors, their diagnosis, management, control, and prevention. (T)

**5010 Selected Sociological Topics. Cr. 1-3**

Topics to be announced in Schedule of Classes. (I)

**5280 (STA 1020) Elementary Statistics. Cr. 3**

Prereq: one and one-half years high school algebra. Not to be counted as a mathematics course by mathematics majors. Descriptive statistics, correlation and regression, notions in probability, binomial and normal distributions, testing hypothesis. (T)

**5360 Introduction to Medical Sociology. Cr. 3**

Sociological and social psychological examination of health and illness behavior, health care providers, patient-provider-hospital relations, and health policy both in the United States and cross-culturally. Detroit area data and sex roles in medicine are discussed. This course is appropriate for non-sociology students with an interest in health issues (nursing, pre-medicine, and others), as well as for sociology and psychology students. (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 or consent of instructor. 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. (I)

**5580 (AFS 5580) Law and the African American Experience. Cr. 4**

Prereq: upper division standing. Offered for undergraduate credit only. In-depth examination of the African American experience with law in the U.S.; historical development of the U.S. Constitution; legal barriers to equality and the influence of race on the law; use of law as a political instrument; participation of blacks in the legal process; comparisons with other countries. (B)

**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)

**5870 Violence in the Family. Cr. 3-4**

Open for four credits to Liberal Arts Honors students only. 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)

**5880 Family Violence: Intervention. (S W 5880) Cr. 1-2**

Prereq. or coreq: SOC 5870. Open to PACT students; others by consent of instructor. Application of theory and intervention techniques in the family experience of maltreatment. (Y)

**5991 Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**

Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. Directed study at University of Salford, England. (F,W)

**6050 Sociological Theory Before 1920. Cr. 4**

Prereq: SOC 2000 and 4050 or consent of instructor. 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 2000 and 4050 or consent of instructor. 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 or consent of instructor. 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**

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**

Prereq: SOC 6280. 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)

**6460 Family-Based Intervention Techniques. (S W 6460) Cr. 4**

Appropriate theories and strategies for working with families on an in-home basis to change family interaction, child-rearing patterns, health practices and management behavior. Focus on high-risk, urban families. (Y)

**6580 Applied Sociology I: Research and Theory in Applied and Clinical Settings. Cr. 4**

Prereq: graduate students or advanced social science undergraduates. The logic of applied sociological theory and research design. Ethical issues in applied and clinical social science projects, and of contributions of related social science disciplines. Development of writing skills in applied and clinical research and theory. (Y)

**6590 Applied Sociology II: Strategies for Changing Social Behavior. Cr. 3**

Prereq: graduate students or advanced social science undergraduates. Analysis of theoretical and practical strategies for promoting the change of social behavior. Focus on behavior of the individual, small group, and community structural levels. Means of evaluating effec-

tiveness of change strategies. Materials drawn from theory and practice in sociology and related social sciences. (Y)

**6750 (ULM 6350) Sociology of Urban Health. Cr. 3**

Prereq: graduate standing; undergraduates by consent of instructor. Review of theories and research on health status and health care delivery issues in urban communities. (Y)

**6850 (ULM 6150) Political Economy of the Urban Ghetto. (ECO 6810) (U P 6670) Cr. 3**

Prereq: graduate standing; upper division undergraduates by consent of instructor. Examination of the economic, social and political transformation of U.S. cities; particular attention to the formation, dynamics, economics and social sub-systems of urban ghettos and their relationship to broader contexts. (B)

**6860 Organized Crime: Its History and Social Structure. (CRJ 6860) Cr. 3**

Prereq: SOC 3820. Open only to juniors, seniors and graduate students. Analysis of the history and social structure of organized crime. Contemporary national and international forms of criminal enterprises. (B)

# WOMEN'S STUDIES

Office: Room 3226, 51 West Warren; 577-6331  
Web: <http://www.cla.wayne.edu/womensstudies>

Director: Jennifer A. Sheridan

## Participating Faculty

Effie Ambler (History), Barbara Aswad (Anthropology), Jane Blocker (Art and Art History), Jackie Byars (Communication), Jorgelina Corbatta (Romance Languages and Literatures), Elizabeth Faue (History), Christopher Johnson (History), Marlyne Kilbey (Psychology), Gisela Labouvie-Vief (Psychology), Donna Landry (English), Ruth Ray (English), Andrea Sankar (Anthropology), May Seikaly (Near Eastern and Asian Studies), Mary Sengstock (Sociology), Jennifer Sheridan (Classics, Greek and Latin), Olga Tsoudis (Criminal Justice), Chris Tysh (English), Anca Vlasopolos (English)

## Co-Major Program

The Women's Studies Program provides an interdisciplinary undergraduate curriculum designed to give students the theoretical bases and methodological skills for analyzing the historical, social, cultural, economic, and political contexts which influence women's lives. The aims of the program are:

1. to instruct students in current scholarship on women and gender issues;
2. to explore the multicultural and international contexts of women's lives;
3. to introduce students to the social, cultural, economic, and political contributions of women to the societies in which they live;
4. to provide an intellectually coherent curriculum for students to explore their individual investments in gender issues.

The program offers co-major and minor concentrations of study. The co-major is designed for students who wish both the diversity of a wide array of gender-related courses reflecting the range of university disciplines and the specialization to be derived from a substantial project utilizing gender theory and methods. The minor is intended for students whose programs are too demanding to accommodate the co-major requirements but who wish to pursue a significant amount of work in women's and gender studies.

*Students wishing to pursue a co-major or minor in women's studies should meet with a program director for advising.*

**CO-MAJOR REQUIREMENTS** consist of thirty-two credits as cited below. At least three courses must address race/ethnicity and gender as an integral issue and at least one course must address international issues.

*credits*

- W S 2700 -- Interdisciplinary Topics in Women's Studies (Cr. 3) . . . 6  
W S 3010 -- (SS) Interdisciplinary Introduction to Women's Studies 3-4  
W S 5010 -- Women's Studies Theories . . . . . 3  
W S 5990 -- Senior Project Seminar . . . . . 4  
Group One Electives (see below) -- at least eight credits . . . . . 8  
Additional electives from Group One or Group Two (see below) . . . 3-8

**MINOR REQUIREMENTS** consist of eighteen credits distributed as follows:

- W S 2700 -- Interdisciplinary Topics in Women's Studies . . . . . 3  
W S 3010 -- (SS) Interdisciplinary Introduction to Women's Studies 3-4  
W S 5010 -- Women's Studies Theories . . . . . 3  
Electives from Group One or Two (see below) . . . . . 9

## Group One Electives

These courses are informed by current debates in feminist theory regarding the nature of feminism as perceived by women from different races and ethnicities -- an issue central to women's studies programs, departments, and organizations throughout the United States. The courses make use of feminist scholarship, interrogate the construction of gender, and address issues of concern to women.

- AFS 5110 -- Black Women in America. . . . . 3  
AFS 5300 -- African -American Women's Literature . . . . . 3  
ANT 5240 -- Cross Cultural Study of Gender . . . . . 3  
ENG 2570 -- (IC) Literature By and About Women: Literature & Writing . . . . . 3  
ENG 5030 -- Topics in Women's Studies . . . . . 3  
HIS 3250 -- The Family in History . . . . . 3-4  
HIS 5200 -- Women in American Life and Thought . . . . . 3  
PSY 3250 -- Psychology of Women . . . . . 4  
SOC 2360 -- Women and Health . . . . . 3  
SOC 4460 -- Women in Society. . . . . 3  
SOC 5410 -- Marriage and Family Problems. . . . . 3

## Group Two Electives

These courses raise questions about their particular discipline from a feminist perspective and have a substantial component devoted to gender issues. Many of these entries are variable topics courses in which different specific contents are offered either in different sections or in different terms as reflected in the Schedule of Classes. For use as Women's Studies co-major or minor credit all such courses are cited below as applicable only when approved by the Program Director.

- A H 5750 -- Contemporary American Art (when approved). . . . . 3  
A H 6730 -- Contemporary Theory and the Visual Arts (when approved). . . . . 3  
CLA 3190--Women in Classical Antiquity . . . . . 3  
ENG 5150 -- Shakespeare (when approved) . . . . . 3  
GER 5400 -- Cultural Studies and Criticism (when approved). . . 3-4  
HIS 5390 -- Europe in the Age of the Reformation (when approved) 3  
ISP 6110 -- Seminar in Historical and Cultural Studies . . . . . 4  
SOC 5870 -- Violence in the Family . . . . . 3-4  
SPF 5020 -- Studies in Film History (when approved). . . . . 4  
SPR 3010 -- Media Analysis and Criticism (when approved) . . . . . 3

Courses cited in the women's studies curriculum which are resident in other departments and count toward those departmental majors and/or group requirements may also count toward women's studies co-major or minor credit. Each semester the Program Director prepares a course list of offerings for the subsequent term in order to help students make selections. This list is available in the office of the Women's Studies Program and is listed on the Women's Studies Website: <http://www.cla.wayne.edu/womensstudies>

## UNDERGRADUATE COURSES (W S)

*The following courses are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 2700 Interdisciplinary Topics in Women's Studies. Cr. 3 (Max. 9)

Topics addressed from a variety of disciplinary approaches, such as: women and representation, women and violence, women's roles around the globe. Multicultural and international issues of concern to women, based in contemporary women's studies scholarship. (F,W)

### 3010 (SS) Interdisciplinary Introduction to Women's Studies. Cr. 3-4

Topics addressed from variety of approaches, such as: women and representation, women and violence, women's roles around the

globe, multicultural and international issues of concern to women.  
(W)

**3520 (N E 3520) Women and Gender in Middle East History. Cr. 4**

Women's role in Middle East history; impact of religion, culture, social and economic change on construction of gender in the Middle East.  
(Y)

**3750 (CRJ 3750) Gender Issues for Criminal Justice Professionals. Cr. 4**

Becoming aware of gender issues faced by criminal justice professionals; explanation of issues through sociological theory; research studies; suggested system improvements.  
(F,W)

**3990 Directed Studies. Cr. 1-3**

Prereq: W S 3010, consent of program director. Individually-designed research projects, developed with a supervising professor and approved by program director.  
(T)

**4030 (SPC 4030) Gender and Communication. Cr. 3**

Analysis of gender communication issues within interpersonal, group, organizational, intercultural, public, and mass mediated contexts.  
(Y)

**5010 Women's Studies Theories. Cr. 3**

Prereq: W S 3010 or written consent of instructor. Investigation of what is defined as theory in the women's movement and within the discipline of women's studies; focus on current debates within women's studies and their relationship to grassroots politics. Attention given to race, class, sexuality, colonialism, and the construction of gendered categories.  
(Y)

**5020 Interdisciplinary Topics in Women's Studies. Cr. 3**

Prereq: W S 3010 strongly recommended.  
(Y)

**5030 (ENG 5030) Topics in Women's Studies. Cr. 3 (Max. 9)**

Prereq: 12 credits in ENG above the 1000 level. Thematic, critical or generic study of women and literature. Topics to be announced in Schedule of Classes.  
(Y)

**5110 (AFS 5110) Black Women in America. Cr. 3**

Social, cultural, artistic and economic development of Black women in America; topics include: racism, sexism, marriage, motherhood, feminism, and the welfare system.  
(Y)

**5300 (AFS 5300) African American Women's Literature. Cr. 3**

Prereq: upper division standing. History of African American women writers from the colonial period to the present. Emphasis on the aesthetic, cultural, and political dimensions of African American literary texts and the problematics of an African American 'canon'.  
(Y)

**5990 Senior Project Seminar. Cr. 4**

Prereq: W S 2700, 3010, 5010; consent of instructor and program director. Scholarly research project or internship combined with scholarship, resulting in substantial paper. Students meet with instructor several times during semester.  
(Y)





# LIBRARY AND INFORMATION SCIENCE PROGRAM

INTERIM DEAN: Robert Holley  
DIRECTOR: Dian Walster

# Foreword to the Library and Information Science Program

## Information Profession, The

The field of library and information service is experiencing dramatic growth and change. For those entering the information field, the future holds challenging prospects. Undergraduates may prepare themselves for the challenges of the information age by enrolling in library and information science courses. These courses will help students gain library and research skills during their undergraduate studies and provide preparation for graduate work in and admission to the graduate Master of Library and Information Science (M.L.I.S.) degree program. The ALA-accredited M.L.I.S. degree is internationally recognized as the first professional degree in the field.

Engaged in challenging careers, qualified information professionals are working in varied settings all over the globe. In the United States alone, approximately 150,000 of these professionals are employed in 125,000 libraries; others are using their library and research skills in information services outside of traditional library settings. With more than fifty per cent of today's gross national product related to the management of information, career opportunities for individuals trained in library and information science are abundant and diverse.

In this new century and beyond, information professionals will have a wider than ever choice of where and how to apply their knowledge and abilities. Exciting career opportunities will exist in both the public and private sectors, including business, law, medicine, publishing, government, archives and museums, communications and media, engineering, and academic environments.

## Background

The Library and Information Science Program is under the administrative jurisdiction of the Dean of University Libraries and Library and Information Science, with degrees granted by the Graduate School of the University. Since the first library courses were offered in 1918, the program has experienced many changes, but its mission has remained constant: to prepare men and women for challenging service in the dynamic field of library and information science.

The Library and Information Science Program at Wayne State University traces its origins to 1918, at which time courses in school librarianship were offered to elementary teachers in the Detroit Public Schools by the Detroit Normal Training School. The Training School later became the Detroit Teachers College, and the library program was expanded. In the 1930s, a bachelor's degree with a minor in library science was offered, designed for the preparation of elementary and secondary school librarians. Subsequently, the Detroit Teachers College united with several other institutions to become the University's College of Education; and courses in library science were offered through that unit.

By 1940, a master's degree program (Master of Education) had been implemented for library science majors. In 1956, Wayne University became Wayne State University; the Department of Library Science expanded its program to provide graduate education for a wide range of specializations, and a Master of Science degree program in Library Science (M.S.L.S.) was established.

Through the 1960s and 1970s, the Department of Library Science broadened and diversified its program to include not only undergraduate and graduate courses, but also a series of continuing education programs. The Department became the Library Science Program, and the Specialist Certificate in Library Science was created to serve those practicing librarians who wished to update their knowledge and professional skills. In 1993 the Library Science Program, by Board of Governors' action, changed its name to the Library and Information Science Program, and the master's degree was changed to Master of Library and Information Science (M.L.I.S.) The Library and Information Science Program also offers a certificate program in archival administration, in conjunction with the History Department of the College of Liberal Arts.

**ACCREDITATION:** The Library and Information Science Program first received accreditation for its master's degree by the American Library Association in 1967; the M.L.I.S. degree was again accredited by the Committee on Accreditation of the ALA in 1996 for a seven-year period.

## Mission Statement

The mission of the Wayne State University Library and Information Science Program is to educate individuals from diverse backgrounds to be lifelong learners, effective problem solvers, and professionals prepared to assume leadership roles in meeting current and emerging information needs of individuals, organizations and communities and in championing people's rights to intellectual participation in the information society.

Essential to its mission is the Program's commitment to: maintaining a national leadership role in research that addresses urban library and information needs; preparing professionals to work successfully in culturally rich and complex urban regions; participate in collaborative professional service in Michigan and the Detroit region; and provide specialized and continuing education opportunities for information professionals.

## Goals and Objectives

The goals of the Library and Information Science Program are to

1. Prepare students to assume professional roles in varied library and information careers.
2. Prepare students to become critical thinkers, problem solvers, and effective communicators.
3. Prepare students to understand how societal and technological developments affect the information environment.
4. Prepare students to be leaders within their communities and their profession.

5. Prepare people for work in urban libraries and information centers.

## Facilities

University Libraries: Wayne State University has six libraries with a total of three million books and 18,500 current subscriptions to periodicals, plus a wide selection of electronic resources. The Purdy/Kresge Library complex houses all materials in the fields of business, education, humanities, and social sciences, as well as all general periodicals. This complex also contains Media Services; and the offices of the Library and Information Science Program.

The David Adamany Undergraduate Library serves as a state-of-the-art facility for first- and second-year undergraduates. Resources include computer laboratories for teaching, over 700 computers for student usage, a 24-hour study area plus individual study rooms, the Media Center for films and videotapes, the WSU Writing Center, and lab facilities for the Computing and Information Technology Division (C&IT).

Computer science, engineering, life sciences, nursing, and physical science materials are housed in the Science and Engineering Library. Legal documents and related materials are located in the Neef Law Library. Health science materials are located in the Shiffman Medical Library.

The Walter P. Reuther Library of Labor and Urban Affairs is a rich source of archival materials. It includes the personal papers of many urban leaders and is an important source of original data regarding Detroit, the auto industry, and unionization.

The location of Wayne State University in the heart of Detroit's cultural center provides additional advantages to the library and information science student. Readily available to the University student are the main branch of the Detroit Public Library, the professional research library of the Detroit Institute of Arts, and the Detroit Historical Museum.

Computer Laboratories:

The Library and Information Science (LIS) Program's computer laboratories are intended for LIS Program students, faculty and staff. Students can access the University Libraries' computer, a variety of common library databases, and Internet-accessible resources. Located in the Kresge Library, the laboratories provide hands-on experience in accessing a variety of information retrieval systems, as well as other computer applications in library and information service. Library and information science students also have access to the computing facilities located in the Media Lab of the Purdy Library and in the David Adamany Undergraduate Library.

## Undergraduate Program (LIS)

Undergraduates interested in enrolling in library and information science courses should consult with an adviser in the Library and Information Science Program regarding admission requirements, sequence of courses, the curriculum, career planning, professional development, job opportunities, and Senior Rule requirements.

## Library and Information Science Degrees and Certificates

*\*MASTER OF LIBRARY AND INFORMATION SCIENCE*

*\*SPECIALIST CERTIFICATE in Library and Information Science*

*\*GRADUATE CERTIFICATE in Archival Administration*

## Directory, Program

Interim Dean of University Libraries and Library and Information Science:  
Robert P. Holley; 3100 Adamany Library; 577-4020

Director of Library and Information Science Program:  
Dian Walster; 106 Kresge Library; 577-9822

Assistant Director: Nancy Johnson; 106 Kresge Library; 577-8541

Office: 106 Kresge Library (313) 577-1825;  
Toll-free: (877) 263-2665; Fax: (313) 577-7563

Web: <http://www.lisp.wayne.edu>

## Professors

Genevieve M. Casey (Emerita), Carol A. Doll, Robert P. Holley, Michael Keresztesi (Emeritus), Philip Mason, Joseph J. Mika, Edith Phillips (Emerita), Vern Pings (Emeritus), Ronald R. Powell, Peter Spyers-Duran (Emeritus), Dian Walster

## Associate Professors

Lynda M. Baker, Betty Maurstad (Emerita), Gordon B. Neavill

## Assistant Professors

Hermine Anghelescu, Kalyani Ankem, Christopher Brown-Syed, Ronald A. Day, Virginia Papandrea, Xiangmin (Sherman) Zhang

## Senior Lecturer

Judith J. Field

## Interdisciplinary Faculty and Staff

Dee Callaway, Purdy Library, University Libraries; Ann Blake, College of Education; Anaclore F. Evans, Technical Services, University Libraries; Douglas Haller, Walter P. Reuther Library of Labor and Urban Affairs; Nancy Becker Johnson, LIS Program, University Libraries; Cynthia H. Krowlikowski, Purdy Library, University Libraries; William LeFevre, Walter P. Reuther Library of Labor and Urban Affairs; Sandra Martin, Shiffman Medical Library, University Libraries; Howard S. McMinn, Science and Engineering Library, University Libraries; Rita Richey, College of Education; R. Craig Roney, College of Education; Kathleen E. Schmeling, Archivist I, Walter P. Reuther Library of Labor and Urban Affairs; Suzanne C. Schuelke, Human Resources; Janice K. Selberg,

Neef Law Library, University Libraries; Jacqueline Tilles, College of Education

## Adjunct Faculty and Part-Time Faculty

Roger S. Ashley, Executive Director, MAME, Bloomfield Hills, MI; Mary Ann Bowman, Consultant, Kalamazoo, MI; Ricki Chowning, Ottawa Area ISD, Holland, MI; Kenneth A. Cory, Consultant, China, MI; Bonnie A. Dede, Head of Special Cataloging, University of Michigan Library, Ann Arbor, MI; Charlaine Ezell, The Extra Edge, Lansing, MI; Robert Fraser, Mardigian Library, University of Michigan - Dearborn; Deborah Gallagher, Ann Arbor District Library, Ann Arbor, MI; Charles D. Hanson, Grosse Pointe Farms, MI; Cynthia Kleinheksel, REMC 7, Holland, MI; Eileen Lane, Delphi Automotive Systems; Marianne Maher, Manager, Library and Information Services, Plunkett and Cooney, Detroit, MI; Marianne Martin-Weldon, Village Art Conservation, Detroit, MI; Jennifer L.S. Moldwin, Head Librarian, Detroit Institute of Arts, Detroit, MI; Blaine V. Morrow, Michigan State University, East Lansing, MI; Brian M. Owens, University Archivist, University of Windsor, Windsor, Ontario, Canada; Robert E. Raz, Director, Grand Rapids Public Library, Grand Rapids, MI; Sherry M. Schmidli, Macomb County Library, Clinton Township, MI; Kimberly Schroeder, General Motors Media Archives, Detroit, MI; Dawn Olmstead Swanson, Librarian, Kettering University

*\* For specific requirements, see the Wayne State University Graduate Bulletin.*

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## Financial Aid, Awards and Activities

### Financial Aid

Students are invited to inquire about special fellowships and scholarships, as well as general financial aid. Contact the Director of the Library and Information Science Program, and/or the University Office of Scholarships and Financial Aids, 2 East, Helen Newberry Joy Student Services Center (also see Scholarships and Financial Aid, Office of).

### Assistantships and Library Employment Opportunities

The University Libraries offer employment opportunities to Library and Information Science (LIS) students. These positions provide students with an excellent opportunity to gain practical skills while supplementing their income. Students are encouraged to take advantage of these learning opportunities. Assignments involve relevant work experience at the pre-professional level in a number of areas within the University Library system. These include the Purdy/Kresge Library (for business, education, humanities, and social sciences), the Science and Engineering Library, the Shiffman Medical Library, the Neef Law Library, and the David Adamany Undergraduate Library.

Student Assistants assist LIS faculty in a variety of administrative duties and may be called upon to help in a faculty member's research. Student assistants are paid an hourly rate.

In addition to these WSU placements, several area libraries offer paid and valuable pre-professional experiences. Part-time employment is also available in other institutions in the metropolitan Detroit area. For information on current opportunities, consult the Director of the Library and Information Science Program.

## Placement Services

Library and information science students may use the University Placement Services. In addition, the Library and Information Science Program offers resume and employment counseling, sponsors a Job Fair, and maintains an extensive listing of currently available positions in all types of libraries and information centers throughout the United States.

## Activities

Student Organizations of the Library and Information Science Program: recognized by the University as the organization of students in the Library and Information Science Program. Students enrolled in the Program automatically become members of the Association. Meetings are held throughout the academic year.

American Library Association-Student Chapter: Chartered by the ALA in 1988, the Chapter sponsors professional activities, promotes professionalism, and is open to all student ALA members.

American Society for Information Science and Technology - 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. The Chapter has a LISTSERV and a Home Page on the World Wide Web. Membership is interdisciplinary and is open to all student ASIS members.

Society of American Archivists -Student Chapter: Chartered by the Society of American Archivists 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.

Special Libraries Association - Student Group Chartered by the S.L.A. in 1989, the Group promotes professionalism, sponsors professional activities in special librarianship, and is open to all student S.L.A. members.

Library and Information Science Alumni Association: 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 Library and Information Science Program to sponsor alumni gatherings at professional conferences.

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## Library and Information Science Courses (LIS)

The following courses, numbered 0900-6999, are offered for undergraduate credit and are available to undergraduates with junior- or senior-level standing. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see Signs and Abbreviations Used in this Bulletin.

### ***6010 Introduction to the Information Profession. Cr. 3***

The development and place of libraries in society; objectives, functions of and trends in major types of libraries. Core course. (T)

### ***6080 Information Technology. Cr. 3***

Storage and retrieval problems as approached by conventional and nonconventional methods. Computer applications in libraries. Core course. (T)

### ***6120 Access to Information. Cr. 3***

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***

Characteristics of recorded knowledge; identification and description of recorded information; principles of physical description, authority control, and subject access; creation of catalogs and databases. Material fee as indicated in the Schedule of Classes. Core course. (T)

### ***6350 (I T 6110) Foundations of Instructional Systems Design. Cr. 4***

Alternative systems models of instructional design; basic design principles, methods and techniques of pre-design analysis; instructional strategy selection and sequencing. (T)

### ***6360 (I T 5110) Technology Applications in Education and Training. Cr. 3***

Technological applications to education, training, and instruction within educational, industrial, and human services settings. Students examine, develop, and/or evaluate unique instructional programs. For educators and non-educators interested in exploring technological applications in education. (Y)

### ***6370 (I T 5120) Producing Technology-Based Instructional Materials. Cr. 2-3***

Design and development of instructional media and materials for use in educational, industrial, and/or human service programs; development of computer-generated instructional materials. (Y)

### ***6510 (RLL 7720) Current Literature for Children: Grades PS-3. Cr. 3***

Intensive examination of books appropriate for preprimary and primary school children. Analysis of the literary and extraliterary factors that affect the young child's experiences with fiction and nonfiction. (F,S)

### ***6520 (RLL 7740) Current Literature for Children: Grades 4-8. Cr. 3***

Intensive examination of books appropriate for children in grades four through eight. Analysis of literary and extraliterary factors affecting the older child's experiences with fiction and nonfiction. (W,S)

### ***6530 (EED 6310) Young Adult Literature Cr. 3***

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. (Y)

### ***6550 (RLL 7780) Storytelling. Cr. 3***

Prereq: LIS 6510. Selection of appropriate literature and materials for storytelling; guided practice in selection and presentation of literature for oral communication by reading aloud and storytelling. (I)

### ***6780 Records Management. Cr. 3***

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)



# COLLEGE OF LIFELONG LEARNING

INTERIM DEAN: Paula C. Wood

# Foreword

The College of Lifelong Learning (CLL) is principally responsible for outreach programs and off-campus course offerings of the College of Lifelong Learning and extension courses of other schools and colleges of Wayne State University. Through its Division of Metropolitan Programs and Summer Sessions (MPSS), the College administers academic off-campus course offerings and programs for most schools and colleges of the University, for undergraduate and graduate credit; the University Summer Session; and the partnership degree program at the University Center at Macomb. The MPSS Division operates five instructional centers in the Detroit metropolitan area as well as in other selected locations in Michigan, and delivers instructional programs through television broadcasting and interactive video. Through these outreach efforts, MPSS 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. MPSS also offers a variety of noncredit career development and enrichment courses, often in conjunction with University schools or colleges.

The CLL Visitor Program allows students who are not registered for credit to enroll in selected University courses on a noncredit basis at greatly reduced fees.

Through the Interdisciplinary Studies Program (ISP) the College offers an interdisciplinary curriculum in the arts and sciences leading to the Bachelor of Interdisciplinary Studies or the Bachelor of Technical and Interdisciplinary Studies degrees.

By way of assisting those whose educational background has left them underprepared for university classes, the Division of Community Education helps recent high school graduates, as well as adult students, plan a university education by evaluating their preparedness for college and providing remedial and tutorial assistance where needed. Counselors of this Division work closely with students in program planning and the selection of classes.

## CLL Advisory Board Endowed Scholarship Fund

To be eligible for awards, applicants must be admitted to CLL for the term in which the scholarship is awarded. Students must be enrolled in at least six credit hours for the term in which the scholarship is awarded.

## CLL Degree Programs

*BACHELOR OF INTERDISCIPLINARY STUDIES*

*BACHELOR OF TECHNICAL AND INTERDISCIPLINARY STUDIES*

*\*MASTER OF INTERDISCIPLINARY STUDIES*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## College Directory

(Area Code : 313)

Interim Dean: Paula C. Wood . . . . . 577-4675

### ADMINISTRATIVE SERVICES

Business Manager: Arthurine Turner . . . . . 577-6960

### ALUMNI RELATIONS

Associate Director: Howard Finley . . . . . 577-0833

### DIVISION OF COMMUNITY EDUCATION

Associate Dean/Director: Sandra E. Alford . . . . . 577-4590

Associate Director: Mary C. Dickson . . . . . 577-4591

Counseling Services . . . . . 577-4695

### DIVISION OF DEGREE PROGRAMS

#### and INTERDISCIPLINARY STUDIES PROGRAM

Associate Dean/Director: Stuart D. Henry . . . . . 577-6566

Associate Director: Howard Finley . . . . . 577-0833

Assistant to Associate Director: Linda L. Hulbert . . . . . 577-6567

Information/Advising -- Undergraduate . . . . . 577-0832

Information/Advising -- Graduate . . . . . 577-4612

Nonprofit Sector Studies Program . . . . . 577-6585

### DIVISION OF METROPOLITAN PROGRAMS

#### and SUMMER SESSIONS

Acting Assistant Dean, Programming, Instructional Services and

Summer Sessions:

Cynthia Ward . . . . . 577-4682

Director, Corporate Services:

Kristopher T. Krzyzanski . . . . . 577-6693

Director, Macomb County:

Earl Newman . . . . . 577-6261

Director, Oakland County

Bobbie Walls . . . . . 577-3592

Director, Wayne County

Keith White . . . . . 577-0613

Program Coordinators . . . . . 577-4682

Noncredit Programs . . . . . 577-4665

Visitor Program . . . . . 577-4665

Telecommunications . . . . . 577-4682

Sponsored Programs . . . . . 577-4665

### NON-MATRICULANT STUDENT SERVICES

Academic Advising . . . . . 577-4693

### RECORDS and REGISTRATION SERVICES

Registration . . . . . 577-4671

Web: <http://fls.cl.wayne.edu>

Mail address for all offices: (Department Name), College of Lifelong Learning, 5700 Cass Ave., Detroit, MI 48202



## Instructional Centers

The College of Lifelong Learning maintains comprehensive instructional centers at convenient locations throughout the Detroit metropolitan area:

**WAYNE COUNTY CENTER**  
7800 W. Outer Drive  
Detroit MI 48235  
Telephone: 313-577-0613  
Fax: 313-864-0627

**LAMPHERE CENTER**  
Lamphere High School  
610 W. Thirteen Mile Rd.  
Madison Heights, MI 48071  
Telephone: 248-585-6916;  
248-585-6935  
Fax: 248-585-6945

**HARPER WOODS CENTER**  
Bishop Gallagher High School  
19360 Harper Avenue  
Harper Woods, MI 48225  
Telephone: 248-881-2438

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

**UNIVERSITY CENTER  
AT MACOMB**  
44575 Garfield  
Clinton Township, MI 48038  
Telephone: (810) 263-6700  
Fax: 810-263-6120

# Academic Regulations

*For complete information regarding academic rules and regulations of the University, students should consult the General Information section of this bulletin, beginning on page 5. Additions and amendments in the following material pertain to the College of Lifelong Learning.*

## Academic Advising

Advising services for nonmatriculant students in the College of Lifelong Learning are provided by CLL academic advisers on the main campus, and on selected days at certain extension centers. Students who do not have matriculated status in the University especially are urged to consult with an adviser before registration. Appointments on campus or at one of the centers can be arranged by telephoning the CLL Non-Matriculant Adviser's Office: 313-577-4693.

## Records and Registration Services

*Supervisor:* Alberta Ellis

*Office:* Second floor, Academic/Administrative Building, 5700 Cass Avenue, Detroit, Michigan 48202; telephone: 313-577-4671

**Credit Registration:** Registration for off-campus academic courses is held during the regular Registration periods for each semester (see Academic Calendar, page 4). Forms for each registration period are available in person from: the CLL Student Services Office (Second floor, Academic/Administrative Building, 5700 Cass Avenue); from all extension centers; and from the Registration Office on the Wayne State campus. They are available by calling: 313-577-4597. For specific registration information, telephone: 313-577-4671.

**Fees** for credit classes offered by the College of Lifelong Learning are the regularly established fees of Wayne State University which are published each semester in the University Schedule of Classes and the CLL Class Schedule. All fees are subject to change at any time without notice by action of the Board of Governors of the University.

**Schedule of Classes:** The WSU Schedule of Classes, which includes the off-campus courses and programs, may be picked up at the CLL Student Services Office and at all extension centers, or may be obtained by mail by calling: 313-577-4597.

# DIVISION of COMMUNITY EDUCATION

*Associate Dean and Director:* Sandra E. Alford

*Associate Director:* Mary C. Dickson

## *Instructional Support*

*English:* Julie Mix; *Mathematics:* Sandra Merriweather

## *Academic Advisers*

Dannie Brown, Pamela Dale, Adrienne Elliot-Brown, Dawn Ervin, Ryan Rowe, Audrey Whitfield

## *Recruitment Support*

Daune Elston, Robert Thomas

The Division of Community Education (DCE) is an alternative educational outreach program. Founded in 1969, this program provides access into baccalaureate degree programs for individuals who often presume that their prior educational performance would deny them access to a university education. Intensive counseling, and financial aid are available for program participants.

Participants in the Community Education Program are admitted to Wayne State University through the College of Lifelong Learning and are eligible to transfer into other colleges or schools within the University after satisfactory completion of twenty-four credits with a 'B' average, or thirty credits with a 'C' average.

**Admission Requirements:** This program has no restrictions on age or previous academic performance. The minimum requirements are: a high school diploma or a General Equivalency Diploma (GED), and proficiency on the DCE English Placement Exam.

Prior to admission, participants are required to take assessment tests to evaluate their academic needs and to assist them in appropriate course selection. These results are also used to plan the tutorial and developmental support which may be recommended to enhance the student's academic performance.

**Application:** Students are admitted for the fall term. Admission applications and transcripts should be submitted no later than July 15.

**Program Requirements:** To be eligible to transfer from the Division of Community Education into other colleges within the University, students must complete either twenty-four credits with a 'B' (3.0) average or thirty credits with a 'C' (2.0) average.

**Advising** is a major component of the Division of Community Education Program. DCE students are required to utilize the counseling/advising service; failure to comply may result in dismissal from the program. Students are assigned academic advisers at the centers nearest to their residence. The advisers provide assistance with course selections needed to fulfill program and subsequent degree requirements.

**Financial Aid:** Those interested in the Division of Community Education Program may apply for federal, state, or University grants using applications available from College of Lifelong Learning centers, the DCE office, or the Office of Scholarships and Financial Aid.

The Urban Extension Scholarship Fund makes funds available to qualified students. Contact the Division of Community Education (313-577-4695).

# DIVISION of METROPOLITAN PROGRAMS and SUMMER SESSIONS

*Acting Assistant Dean for Programming, Instructional Services,  
and Summer Sessions:* Cynthia Ward

*Director, Corporate Services:* Kristopher Krzyzanski

## *Extension Directors*

*Assistant Dean for Off-Campus Sites:* Sharon O'Brien

*Macomb County:* Earl Newman; *Oakland County:* Bobbie Walls;  
*Wayne County:* Keith White

## *Academic Advising*

Center Academic Staff

## *Center Academic Staff*

Susan English, Nevein Michail, Linda Robertson, Denise Thomas, Frank X. Williams

## *Program Coordinators*

Kelli Pugh, Gail Stanford, Donna Sottile

The Division of Metropolitan Programs and Summer Sessions (MPSS) is responsible for making available off-campus the courses and degree programs offered by other Wayne State University schools and colleges and for administration of the University-wide Summer Sessions. Close coordination with University academic units assures that courses are appropriately selected, staffed, and scheduled. Courses carry full university credit and many can be used to complete Wayne State University degree and certificate requirements. Instructional extension centers are maintained at convenient locations; see page 321.

The Division also develops and offers a variety of noncredit career and professional development courses, often in conjunction with cooperating University schools and colleges. The Visitor's Program makes it possible for interested community members to enroll in a wide variety of Wayne State credit courses on a noncredit basis at reduced tuition rates.

## **Admission Requirements**

Most credit courses offered through the Division of Metropolitan Programs and Summer Sessions 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. These criteria apply regardless of whether or not the student has been formally matriculated at the University. 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 CLL 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.

Persons who wish to enroll in 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 Lifelong Learning. Students are advised to consult the non-matriculant adviser as well as the specific degree program requirements, 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

*The following degrees are offered by other schools and colleges within the University, but coursework for these programs is available through CLL credit extension services. Students should consult the Credit Extension Programs Office (577-4682) or their resident school/college for information regarding the amount of such coursework available through the College of Lifelong Learning.*

### *BACHELOR OF ARTS and BACHELOR OF SCIENCE in*

Accounting (partial)  
Finance and Business Administration (partial)  
Management and Organization Sciences (partial)  
Management Information Systems (partial)  
Marketing (partial)

### *BACHELOR OF SCIENCE in Education with a Major in*

Bilingual/Bicultural Education  
Elementary Education

### *BACHELOR OF SCIENCE in Engineering Technology (partial)*

### *BACHELOR OF SCIENCE in Nursing*

### *BACHELOR OF ARTS with a Major in*

English (partial)  
Political Science (partial)  
Sociology (partial)

### *BACHELOR OF PUBLIC AFFAIRS*

The Division of Metropolitan Programs and Summer Sessions offers entire curricula or selected courses applicable to many Wayne State University degrees and certificates at convenient times and places for adult learners. The following schools and colleges regularly schedule courses through MPSS. For current information on upcoming courses and programs off-campus, telephone: 577-4682.

**Business Administration:** Business Administration courses are offered in Oakland County at the Oakland Center in Farmington Hills.

School of Business Administration courses in the 6000-6090 series are open only to students holding matriculated graduate status at Wayne State University. Graduate courses, numbered at the 7000 level, are open only to students admitted to the M.B.A. program at Wayne State University.

**Education:** Bachelor's, master's, specialist and doctoral programs are offered at CLL extension centers and the University Center at Macomb. In-service courses and programs are offered at the request of local schools and districts. The College of Education also participates in the interdisciplinary graduate certificate programs in infant mental health and gerontology.

**Engineering:** Courses leading to a bachelor's degree with a major in electromechanical engineering technology are scheduled at the University Center at Macomb.

The Chemical Engineering Graduate Certificate in Hazardous Waste Management is offered at the Oakland Center and at selected extension locations, including Flint and Grand Rapids; nine of the thirteen credits required for this certificate may be applied towards the mas-

ter's degree. In addition, engineering courses and programs are offered on-site upon request of businesses or industries.

Periodically other courses from various departments in the College of Engineering are scheduled at CLL Extension Centers.

**Fine, Performing and Communication Arts:** Courses in art and art history, communications, dance, film studies, journalism, music, photography, public relations, radio/television, and theatre are offered at several off-campus extension centers.

**Liberal Arts:** Introductory and advanced courses for both full-time and part-time students are available in English, history, political science, and sociology at selected off-campus centers. The College of Liberal Arts also participates in the interdisciplinary graduate certificate programs in infant mental health and gerontology.

**Library and Information Science Program:** An active off-campus graduate program provides courses for most of the requirements for the Master of Science in Library and Information Science degree, accredited by the American Library Association. The program offers courses at selected extension centers including Flint, Lansing, Grand Rapids and the Oakland Center. Courses leading to the Graduate Certificate in Archival Administration are also available.

**Nursing:** Professional nursing courses are offered for RNs at the University Center at Macomb and the Oakland Center. The BSN completion program is available to nurses licensed in Michigan who have completed diploma or associate degree programs in nursing. The ADN/MSN program is another option for academically talented students who have completed an associate degree in nursing and wish to pursue graduate studies. This innovative program combines the baccalaureate and master's degree programs. Graduate courses are also available to students with a baccalaureate degree in nursing.

**Pharmacy and Allied Health Professions:** Courses are scheduled off-campus occasionally through the Clinical Laboratory Science, Mortuary Science, Occupational and Environmental Health Sciences, and the Occupational Therapy Departments.

**Science:** Courses are scheduled off-campus in nine departments: Biological Sciences, Chemistry, Communication Disorders and Sciences, Computer Science, Geology, Mathematics, Nutrition and Food Science, Physics and Astronomy, and Psychology. These courses, scheduled at most centers, may be used to fulfill University General Education Requirements.

**Social Work:** The School of Social Work offers the Bachelor of Social Work (B.S.W.) part-time program at the Wayne County Center. Additional courses leading to completion of partial degree requirements for the B.S.W. and M.S.W. degrees and for the Graduate Certificate Program in Social Work Practice with Families and Couples are offered at several extension sites.

**Urban, Labor and Metropolitan Affairs:** Off-campus courses for the Certificate Program in Labor Studies, and in the Departments of Peace and Conflict Studies; Urban, Labor and Metropolitan Affairs; Urban Planning; and Urban Studies are offered for this College at several locations.

**Alternative Delivery Modes of Instruction:** (1) *Television courses* are equivalent to their traditional campus counterparts and provide a way to earn college credits through courses broadcast on WTVS, Channel 56, and the College Cable Channel. Television courses combined televised or videotaped lessons with bi-weekly class meetings, textbook readings, and assignments to provide students with a total learning experience. (2) *Interactive video* allows for the flexible transmission and receipt of course materials, lectures and assignments. WSU's interactive compressed video system connects students and faculty at multiple sites by transmitting information via 'live two-way audio and video lines.' These electronic classrooms enable faculty and students to interact with each other although separated by many miles.

**Travel Study:** Sponsoring schools and colleges offer travel-study programs through CLL. Some are ongoing programs, and others vary each year. For current information, telephone 313-577-4682.

## TELECOMMUNICATIONS

The College of Lifelong Learning, in cooperation with the University Libraries and WTVS/Channel 56 maintains and operates a center for telecommunications at 77 W. Canfield, Detroit, Michigan 48202. This center is responsible for coordinating instructional television services provided by the College and maintains two twenty-four hour a day ITFS television channels, the College Cable Channel, and the Working Channel in conjunction with WTVS/Channel 56.

## NONCREDIT CAREER and PROFESSIONAL DEVELOPMENT PROGRAMS

The Division of Metropolitan Programs and Summer Sessions offers many personal and professional development noncredit courses which reflect and anticipate the changing nature of current society. Programs are designed to provide quality experience to members of the community; to provide a forum which allows adults to discuss topical issues of interest; to gather insight from traditional disciplines; and to present contemporary thought, practice and technology. Offerings vary widely in subject matter and length. Courses require no special University admission status and are regularly scheduled both on and off campus to meet the needs of groups and individuals. Completed courses are not listed on official University student transcripts. Many of the noncredit professional education courses award Continuing Education Units (CEUs). The CEU is a nationally-recognized unit of measurement of professional development education, and many professions require mandatory continuing education.

### VISITOR PROGRAM

Under this program, individuals 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. Registration for courses may be completed by mail, or by telephone using MasterCard or Visa credit card. For specific course information and registration, call 577-4665.

### CONTRACT PROGRAMMING

The Noncredit Programs unit specializes in the design of noncredit custom-designed training programs for business, industry, and public and private organizations. The unit also develops courses for academic credit or continuing education unit (CEU) credit in conjunction with other University schools and colleges, which may be made available to suit seminar or workshop needs of a client. For information, call 313-577-4682.

### NONCREDIT REGISTRATION

Course fees, refunds, and transfer policies vary by program. Registration for noncredit courses or for the Visitor Program may be made by telephone, using MasterCard or Visa credit card (telephone: 577-4665); or in person at the CLL Noncredit Office, 2902 Academic/Administrative Building, 5700 Cass Avenue, Detroit, MI 48202.

*Note:* A student is not considered as enrolled in a noncredit course or program until payment is received. The University reserves the right to cancel any course or program due to insufficient enrollment, in which case fees are refunded.

# UNIVERSITY CENTER at MACOMB

*Office:* 44575 Garfield Road, Clinton Township, MI 48038-1139;  
*Telephone:* 313-577-6261; 810-263-6700;  
*Fax:* 810-263-6120

*Director:* Earl Newman, Macomb County

*Academic Services Officer:* Susan Z. English

*Program Coordinator:* Nevein Michail

Wayne State University offers courses of instruction and fifteen degree completion programs on the campus of Macomb Community College. The programs give students the opportunity to complete Wayne State degrees by attending Wayne State classes at the University Center at Macomb. Students who are admitted to the program may transfer up to sixty-four credits from Macomb Community College or another institution toward a Wayne State degree. Wayne State courses offered at the University Center include upper division courses and lower division courses which do not have Macomb Community College equivalents; they are open to all Wayne State students. For the degree programs listed below, most courses necessary to complete a program are offered at the University Center with the exception of laboratory courses, which are offered on Wayne State's main campus.

All course work for degrees earned at the University Center must be completed in accordance with the regulations of the College and Department offering the degree, and of the University. See pages 15-46 of this bulletin for University regulations regarding undergraduate admission, tuition and fees, degree requirements, academic advising, and academic regulations. For descriptions of specific degree requirements of Colleges/Schools and Departments, see the School/College and Department sections of this bulletin.

## Degree Programs

The following degree programs offered by Schools and Colleges at Wayne State University may be completed in full or in part at the University Center at Macomb.

*BACHELOR OF SCIENCE in Marketing*

*BACHELOR OF SCIENCE in Education with a Major in Elementary Education*

*BACHELOR OF SCIENCE in Engineering Technology*

*BACHELOR OF ARTS with a Major in*

English  
Journalism  
Public Relations  
Political Science  
Speech Communication

*BACHELOR OF ARTS and BACHELOR OF SCIENCE with a Major in*

Mathematics  
Psychology

*BACHELOR OF INTERDISCIPLINARY STUDIES*

*BACHELOR OF SCIENCE IN NURSING*

*BACHELOR OF SOCIAL WORK (Partial)*

*BACHELOR OF TECHNICAL AND INTERDISCIPLINARY STUDIES*

## Application for Admission

Students may obtain application forms for admission to University Center programs at the University Center; completed forms may be returned to the University Center or to the Admissions Office on the main Wayne State University campus. Personnel are available at the University Center to assist potential students in completing applications.

# INTERDISCIPLINARY STUDIES PROGRAM

*Office:* Second Floor, Academic/Administrative Building,  
5700 Cass Avenue, Detroit, MI 48202

*Associate Dean and Director:* Stuart D. Henry

*Associate Director for Student Services:* Howard Finley

*Assistant to the Associate Dean/Director:* Linda L. Hulbert

### *Professors*

A. Ronald Aronson, Jerry G. Bails (Emeritus), Martin Glaberman (Emeritus), Julie T. Klein, Clifford L. Maier (Emeritus), Richard Raspa, Francis Shor, Rolland Wright (Emeritus)

### *Associate Professors*

Sandor Agocs (Emeritus), Eric A. Bockstael, David Bowen, Mary Lee Field, Gloria House (Emerita), Moti Nissani, Daphne W. Ntiri, Marsha Richmond, Roslyn Abt Schindler, Norma Shifrin (Emerita), Roland Wacker

### *Assistant Professors*

Peter Friedlander, Andre Furtado, Theodore Kotila (Emeritus), William Lynch, Penelope Majeske, James Michels

### *Lecturer*

Thomas Moeller

### *Adjunct Professor*

Guerin C. Montilus

### *Academic Advisers*

Darrell Brockway, Pynthia Caffee, Roberta DeMeyer, Ruthie Flowers, Lois Hazell, Frank Koscielski, Derrick White

## Degree Programs

*BACHELOR OF INTERDISCIPLINARY STUDIES*

*BACHELOR OF TECHNICAL AND INTERDISCIPLINARY STUDIES*

*\*MASTER OF INTERDISCIPLINARY STUDIES*

The curricula leading to the bachelor's degrees offered by CLL enable students to concentrate on a single broad theme each semester concurrent with the acquisition of a comprehensive general education. Each theme is presented by way of three distinct but coordinated types of courses using the following teaching methods:

*Workshop Courses* in the evenings provide after-work classroom opportunities for students to attend lectures and exchange ideas with professors and other students. Workshops meet one evening a week from 6:00 until 10:00 p.m. at neighborhood locations throughout southeast Michigan. Morning workshops are held on the main University campus and at selected neighborhood locations for persons wishing to study during the day. Completion of each workshop earns three to four credits.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

*Television Courses* provide opportunities to complete most of the requirements for a course at home. Programs are broadcast over WTVS, Channel 56, and on cable via the College Cable Network and The Working Channel. Each is repeated several times; many adult learners choose to record them on video tape for greater convenience or to allow repeat viewing. Sessions providing the opportunity to discuss course content are held in conjunction with workshops. Completion of each television course earns three to four credits.

*Conference Courses* are held on the main campus of the University and provide special opportunities to hear a variety of speakers, including authorities on issues of vital contemporary interest. Together, students discuss and debate issues of immediate and long-term significance. Most conferences meet throughout the day on Saturday and Sunday three times each semester and earn three credits.

Most Interdisciplinary Studies Program (ISP) students are able to complete three courses per semester, one from each of the above instructional formats, and to fulfill the requirements for a Bachelor of Interdisciplinary Studies degree in three to five years or less, or for a Bachelor of Technical and Interdisciplinary Studies degree in two or three years. Students who need reduced credit loads to accommodate scheduling problems and/or personal responsibilities are encouraged to proceed at a slower pace.

## Bachelor of Interdisciplinary Studies

This is a four-year interdisciplinary general studies degree program. The curriculum, organized to maximize related course sequences, focuses on historical, contemporary, and cross-cultural issues in the humanities, social sciences, natural sciences, and technology. Courses place special emphasis on critical thinking and analysis, writing ability, and research skills. In its concern with the development of humanistic and social consciousness, as well as science and technology literacy, this program draws upon the maturity and experience of the adult student.

**Admission Requirements:** Students must have earned a high school diploma or completed a General Equivalency Diploma (GED), and must be at least 21 years of age or have graduated from high school at least four years previously. Students who have completed an Associate of Applied Science degree are not restricted by these requirements. Admissions exceptions may be granted by the Associate Dean for Degree Programs.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Interdisciplinary Studies degree must complete 120 credits including satisfaction of the University General Education Requirements (see below and page 29) and the credit distribution requirements as stated below. (See page 33 for special requirements for students enrolled prior to Fall Term 1987.) Many requirements may be fulfilled by transfer credit earned at other accredited colleges and universities for courses in the fields of social science, humanities, and science/technology for which CLL subject area codes (GSS, GUH, and GST) are cited among the distribution requirements. Students should consult an adviser regarding the applicability of transfer credit to these general subject areas. Students may apply a maximum of sixty-four credits transferred from a community college or a maximum of eighty credits transferred from a four-year college to this degree; however, no more than eighty credits can be transferred from any combination of sources.

### *Credit Distribution Requirements*

**LOWER DIVISION:** In this phase students typically earn nine to ten credits per semester, including a weekly workshop (three to four credits), a telecourse or directed study course (three to four credits), and a weekend conference course (three credits); however, students may enroll for more or fewer credits per semester. Students need not pursue lower division course work in any specified order, but it is advisable to complete the required credits in one sequence before beginning another. Course sequences are defined as groups of three

courses numbered 2010-2030, 2310-2330, or 2710-2730 within any CLL subject area code.

*credits*

GIS 2030 --Interdisciplinary Studies Seminar . . . . .	3
Social Science Electives (GSS) . . . . .	20
Humanities Electives (GUH) . . . . .	20
Science and Technology Electives (GST) . . . . .	20

**UPPER DIVISION:** In this phase students typically earn ten to eleven credits per semester: a workshop (three to four credits), a weekend conference course (three credits), and a senior essay/project or senior seminar course (four credits). These are all CLL courses and are part of the residency requirement for which NO transfer credit is applicable.

Advanced Interdisciplinary Studies Courses (GIS, AGS, ISP, etc.) 14	
Senior Essay/Project or Seminar (AGS) . . . . .	8

**ELECTIVES (Thirty-eight Credits):** Students may choose electives for career advancement, preparation for graduate school, or for personal satisfaction. Electives may be chosen from within the CLL course offerings, from other colleges of Wayne State University, or from other accredited institutions. Students must have a minimum of thirty-seven credits at the 3000-level or above in order to graduate.

No more than twenty-nine semester credits in course work taken through the School of Business Administration may be applied toward the B.I.S. degree.

All B.I.S. students admitted to the ISP in Fall 1996 or after are required to complete GIS 3991 (four credits) after completing GIS 2030 and prior to enrolling in AGS 4760/4860 or AGS 4991/4996.

## -- Capstone Program

This program is designed to enable holders of two-year associate of applied science degrees to earn four-year degrees by providing two years of general education to supplement two years of specialized technology course work. The capstone program itself consists of sixty-four credits of interdisciplinary general education, training in fundamental skills (writing, oral communication, critical analysis, computation, and research), and opportunities for more advanced study in areas of special interest.

**Admission Requirements:** Applicants must have an associate of applied science degree from an accredited college.

**DEGREE REQUIREMENTS:** Candidates in this program leading to the Bachelor of Interdisciplinary Studies degree must complete 128 credits (forty of which must be earned as CLL resident credit), with a maximum of sixty-four credits transferable from the associate degree level. Transfer credit may be allowed for requirements in social science, humanities, and science/technology, as well as for the Advanced Interdisciplinary Studies Courses, with the exception of GIS 3080, GIS 3991, and AGS 4992. The 128 credits must include satisfaction of the University General Education Requirements (see below and page 29) and the following distribution requirements. (See page 33 for special requirements for students enrolled prior to Fall Term 1987.)

### *Capstone Program Credit Distribution Requirements*

**ASSOCIATE DEGREE TRANSFER CREDIT (Sixty-four Credits)**

**INTERDISCIPLINARY STUDIES (Forty Credits)** *credits*

GIS 3080 --Topics in Interdisciplinary Studies . . . . .	4
GIS 1510 --(BC) Written Communication Skills . . . . .	4
Social Science Electives (GSS) . . . . .	7
Humanities Electives (GUH) . . . . .	7
Science and Technology Electives (GST) . . . . .	7
Advanced Interdisciplinary Studies Courses (GIS, AGS, ISP, etc.) .	7
AGS 4992 --(WI) Senior Capstone Essay/Project . . . . .	4

**ELECTIVES (Twenty-four Credits):** Students must have a minimum of thirty-seven credits at the 3000-level or above in order to graduate.

Courses may be chosen in a technical area, general studies, or a combination of these, depending upon the student's particular interests.

All B.I.S. Capstone students admitted to the ISP in Fall 1996 or after are required to complete GIS 3991 (four credits) after completing GIS 3080 and prior to enrolling in AGS 4992.

## Bachelor of Technical and Interdisciplinary Studies

This is a capstone program designed for graduates of two-year technical, vocational, and professional associate of applied science (or equivalent) degree programs. The curriculum provides the opportunity to enhance prior technical or professional training with advanced course work from other schools and colleges of Wayne State University and to supplement specialized concentrations of study with interdisciplinary general education offered by the College of Lifelong Learning.

**Admission Requirements:** Applicants to this program must have earned an associate of applied science degree or its equivalent from an accredited college.

**DEGREE REQUIREMENTS:** Candidates for this degree must complete 128 credits (of which forty must be CLL resident credit), with a maximum of sixty-four credits transferred from an associate degree program. The 128 credits must include satisfaction of the University General Education Requirements (see below and page 29) and the credit distribution requirements cited above under the Bachelor of Interdisciplinary Studies Capstone Program, with the following exception for the twenty-four elective credits: for the technical studies degree, this elective credit must be used to develop a coherent sequence of broad, cognate, or specialized courses reflective of the student's technical, vocational, or professional field, or in an applied area which enhances prior training. Students must have a minimum of thirty-seven credits at the 3000-level or above in order to graduate.

## College of Lifelong Learning Courses Satisfying General Education Requirements

The following ISP courses have been approved to fulfill the University General Education Requirements:

### COMPETENCY REQUIREMENTS

Basic Composition . . . . . GIS 1510  
Intermediate Composition . . . . . AGS 4991, GIS 3510, GUH 2010  
Writing-Intensive Course . . . . . AGS 4860, 4992, 4996  
Oral Communication . . . . . GIS 1560  
Computer Literacy . . . . . GST 2710  
Critical Thinking . . . . . GIS 3260

### GROUP REQUIREMENTS

Life Science . . . . . GST 2310  
Physical Science . . . . . GST 2420  
Historical Studies . . . . . GIS 3160, GUH 3810  
Social Science . . . . . AGS 3480, GSS 2710  
American Society/Institutions . . . . . AGS 3420, GSS 1510  
Foreign Culture . . . . . GIS 3600, 3610, 3620  
Visual and Performing Arts . . . . . GUH 2730, 3730  
Philosophy and Letters . . . . . GUH 2710, 3710

## NONPROFIT SECTOR STUDIES PROGRAM

*Office:* 2404 Academic/Administrative Building, 5700 Cass Avenue, Detroit, MI 48202

*Coordinator:* Elizabeth Chapleski

## Academic Programs

*MINOR in Nonprofit Sector Studies*

*POST-BACCALAUREATE CERTIFICATE in Nonprofit Sector Studies*

The Nonprofit Sector Studies Program offers courses for persons who plan to work as professionals in youth, health, human services, and other nonprofit organization settings. The Program offers the Minor in Nonprofit Sector Studies for the undergraduate student, and the Post-Baccalaureate Certificate for persons who may already work in nonprofit organizations and have already earned a bachelor's degree. The objectives of the Program are: (1) to provide a quality learning experience for nonprofit organization professionals in a scholarly environment, and (2) to support professionalization opportunities for nonprofit organization leaders.

**THE MINOR** in Nonprofit Sector Studies is designed to complement a student's matriculation in a major field of study. Requirements for admission are a successful completion of the English Proficiency Examination and junior standing. A minimum of nineteen credits, completed with a minimum grade point average of 2.0, is required for completion of the Minor. Required courses for the Minor include: NPS 3000, 3500, 4000, and 4500, plus one elective selected from an approved list of courses drawn from allied fields.

**THE POST-BACCALAUREATE CERTIFICATE** in Nonprofit Sector Studies is designed for persons who wish to receive certification from faculty and experts in nonprofit management. A bachelor's degree from an accredited four-year institution is required for admission. The Certificate candidate must complete twenty-four credits in the program with a minimum grade point average of 2.5. Required courses for the Post-Baccalaureate Certificate include: NPS 3000, 3500, 4000, 4300, and 4500, plus one elective selected from an approved list of courses drawn from allied fields.

## ACADEMIC REGULATIONS

**Fees:** Students in the ISP pay tuition according to the regular University fee schedule (see page 18).

**Registration:** ISP academic advisers have established dates and times when they are at CLL extension centers to see current and new students, either for advising or registration. Refer to the ISP Course Schedule and Catalog for the current term for more information. Students can participate in telephone registration, register at CLL extension centers, or at the ISP office on the Wayne State campus.

**Orientation:** During each semester, new students are required to participate in student orientation conferences and/or seminars where the baccalaureate degree program is fully explained through lecture presentations, group discussions, films, and slides.

**Residency Requirement:** An applicant for the degree of Bachelor of Interdisciplinary Studies or Bachelor of Technical and Interdisciplinary Studies must complete at least forty credits in Interdisciplinary Studies Program courses, distributed according to specific degree requirements.

**Transfer of Credit:** Credit for courses taken at community colleges and other accredited institutions may be transferred as applicable to the bachelor's degree programs, provided that (1) the student has been admitted to the program, and (2) the grades earned for courses have been satisfactory ('C' or better). A maximum of sixty-four semester credits or ninety-six quarter credits may be transferred from a community college. A maximum of eighty credits may be transferred from a four-year college or a combination of two-year and four-year colleges. Elective credit will be granted for successful completion of CLEP tests.

**Probation:** A student whose work falls below a 2.0 grade point average will be placed on probation and an academic hold will be placed on his or her academic record. The student will then be required to obtain permission from an ISP academic adviser before registering again. Such permission will be granted only after an interview.

**Counseling:** The academic advisors in the Division of Student Services are available to provide a broad range of information and assistance concerning University programs and various academic regulations. Students in the ISP arrange programs of study and register for their courses with a counselor each semester.

**Financial Aid:** Financial assistance is available on a limited basis to help students meet educational expenses. Interested students should contact the ISP office, or the University Office of Scholarships and Financial Aids, 2 East, Helen Newberry Joy Student Services Center.

*Interdisciplinary Studies Program Women's Scholarship:* Award of partial tuition open to any woman enrolled in the Interdisciplinary Studies Program with demonstrated financial need and a minimum 3.0 g.p.a., who is registered for at least seven credits in the semester of the award. Application deadline for each semester is the first day of final registration for that semester.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.*

### GENERAL SCIENCE and TECHNOLOGY (GST)

#### **0510 Practical Mathematics: Concepts and Applications. Cr. 3**

No degree credit. Offered for S and U grades only. Review of concepts involving arithmetic, and algebra and algebraic equations, such as number systems, units conversions, ratio and proportion, exponents and radicals, and linear equations; word problems emphasized. Elementary geometry, interpretations of graphs, and probability. Suitable preparation for the Mathematics Proficiency Examination. (T)

#### **1510 History and Concepts of Mathematics: An Interdisciplinary Introduction. Cr. 3**

Prereq: Passing grade in math diagnostic test or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Historical and intercultural overview of development of mathematics, especially arithmetic algebra and geometry; conceptual framework behind common algorithms; influence of mathematics in scientific and technological development. (F,W)

#### **1830 (GUH 1830) The Sciences and Humanities: Understanding the Human Condition. (GSS 1830) Cr. 3**

Registration restricted to one time only in each area: GUH, GSS, GST. Interdisciplinary conference course, meeting periodically on weekends during the semester, concerned with issues and problems which may usefully be treated from the viewpoints of the humanities, the social and natural sciences. Topics to be announced in Schedule of Classes. (S)

#### **1990 Science and Technology: Directed Study. Cr. 2-4 (Max. 12)**

Prereq: consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Directed study supervised by a faculty member; appropriate if no course of instruction available in desired subject area. (T)

#### **2010 Health Concepts and Strategies. Cr. 3**

Coreq: GST 2010 recommended. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Conceptual treatment of individual and social components of well-being. Topics include: stress, addictive behavior, infectious and chronic diseases, sexuality, aging and death. (F)

#### **2020 Changing Life on Earth. Cr. 3-4**

Prereq: successful completion of English Proficiency Test or equiv.; coreq: GST 2010 recommended. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Introduction to some key biological concepts, including the nature of the scientific method, what processes and attributes define a living organism, how life evolved on Earth, cellular structure and function, and heredity and the genetic code. Material fee as indicated in the Schedule of Classes. (F)

#### **2030 Conference on Biomedical Issues. Cr. 3**

Semester-long course with periodic weekend sessions. Topics may include: aging and death; the delivery of health care; health and disease, and bioethics. Topics and dates announced each semester. (F)

#### **2310 (LS) Living in the Environment. Cr. 4**

For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Basic ecological concepts: interconnection



between living things and their environment; fragility and resilience of biosphere; human populations; renewable and non-renewable resources; pollution and environmental health; environmental economics, politics and ethics; fate of humanity. (W)

**2420 (PS) Atoms and Stars: A Historical Introduction to Astronomy, Physics and the Process of Scientific Discovery. Cr. 3-4**

Meets General Education laboratory requirement when elected for four credits. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Historical introduction to key concepts in astronomy and physics; scientific process, ideas and methods. Lectures, discussion, videotape, laboratory experiments. (W)

**2710 (CL) Computers and Society. Cr. 4**

Concepts, structures and operations of digital computer; common applications such as word processing, spreadsheets, elementary programming; impact of computers on society. Micro computer used in workshop activities; no previous computer experience required. (T)

**3715 Computers, the Internet, and Society. Cr. 4**

Prereq: GST 2710 or consent of instructor. Major categories of computer application software; structure and operation of the Internet; personal, academic and business uses of the Internet; designing and implementing web pages; social issues. (F)

**3720 eCommerce: Using the Web to Find and Service Customers. Cr. 4**

Prereq: GST 2710 or GST 3715 or consent of instructor. Using the World Wide Web for electronic commerce and other interactive applications. Organization, planning and implementation of an interactive website; processing and responding to online orders; and other form-based input. Online security, privacy, and other user concerns. Several approaches to responding to user concerns. (F)

## GENERAL SOCIAL SCIENCES (GSS)

**1510 (AI) American Political Development. Cr. 4**

For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Survey of major developments in American political institutions and ideas; analysis of the current operation of the national government. Workshop course. (Y)

**1530 The Politics of Contemporary America. Cr. 3**

Semester-long conference course with periodic weekend sessions. Analysis of specific political, economic, and diplomatic issues confronting contemporary America. Specific theme each semester. (Y)

**1830 (GUH 1830) The Sciences and Humanities: Understanding the Human Condition. (GST 1830) Cr. 3**

Registration restricted to one time only in each area: GUH, GSS, GST. Interdisciplinary conference course, meeting periodically on weekends during the semester, concerned with issues and problems which may usefully be treated from the viewpoints of the humanities, the social and the natural sciences. Topics to be announced in Schedule of Classes. (S)

**1990 Social Science: Directed Study. Cr. 2-4 (Max. 12)**

Prereq: consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Directed study supervised by a faculty member; appropriate if no courses of instruction are available in desired subject area. (T)

**2010 Problems in Work and Labor. Cr. 4**

For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Workshop course emphasizing problems related to the nature of work and jobs. (W)

**2710 (SS) Selected Perspectives on Ethnicity. Cr. 4**

For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Interdisciplinary social science approach to eth-

nicity and immigration, historical and contemporary. Development of analytical skills. (F)

**2720 Culture, Community, and Identity: Faces of Culture. Cr. 3**

Telecourse. Cultures from all continents examined as illustration of human adaptation to environment from species beginning to present. Topics include: language and communication; culture and personality; marriage and the family; kinship and descent; religion and magic; culture change. (F)

**2730 Conference on Contemporary Issues in Ethnic Studies. Cr. 3**

Semester-long course with periodic weekend sessions. Focus on institutions, neighborhoods, and ethnic groups; analysis of selected social problems, emphasizing the ethnic component. Dates and themes are announced each semester. (F)

**3710 Women in Development. Cr. 4**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Overview of women's roles and status in contemporary Third World societies; issues of gender relations and gender inequality in social and economic development. (B)

**5710 American Religion: An Interdisciplinary Social Science Study. Cr. 4**

Prereq: senior standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Workshop. Socio-historical structure of religious beliefs and practices in American society from early migrations of European settlers to modern time. (Y)

## GENERAL URBAN HUMANITIES (GUH)

**1830 The Sciences and Humanities: Understanding the Human Condition. (GSS 1830) (GST 1830) Cr. 3**

Registration restricted to one time only in each area: GUH, GSS, GST. Interdisciplinary conference course, meeting periodically on weekends during the semester, concerned with issues and problems which may usefully be treated from the viewpoints of the humanities, the social and the natural sciences. Topics to be announced in Schedule of Classes. (S)

**1990 Urban Humanities: Directed Study. Cr. 2-4 (Max. 12)**

Prereq: consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>) Directed study supervised by a faculty member; appropriate if no course of instruction available in desired subject area. (T)

**2010 (IC) Cultural Identity and the American Experience: Writers' Responses. Cr. 4**

Prereq: GIS 1510 or equiv. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Origins, ideals, symbols and substance of American culture and character. Critical analysis and writing on the distinguishing features of American thought and culture. (F)

**2030 Visions of America Conference. Cr. 3**

Semester-long course with periodic weekend sessions. Conference explores particular aspects of American society and culture, both as Americans and as people living in other parts of the world, past and present, have seen them. Topics and dates announced each semester. (F)

**2120 The American Adventure. Cr. 3**

Twenty-six video lessons on the human, political, and economic stories of America, from Columbian contact to the Civil War and Reconstruction; how wars and treaties, elections and legislation affected the people of the United States. (F)

**2710 (PL) Art and Aesthetics: Literature and Philosophy. Cr. 4**

For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Analysis of literary works; philosophical approaches to the meaning and nature of literature, and of the criteria for its evaluation. (W)

**2730 (VP) Meaning in the Visual and Performing Arts. Cr. 3**

Weekend conference course: meaning and experience in the visual and performing arts from the perspectives of artist and audience. Analytical, interpretative, and evaluative approaches through case studies. (W)

**3710 (PL) Significant Issues in Cultural Studies. Cr. 3-4**

Prereq: upper division standing or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Culture, including mass and popular cultures; how ideas give significance to human experience, and how they are valued and devalued. Writing of essays with emphasis on comparative method. (Y)

**3730 (VP) Music and American Culture. Cr. 3**

Prereq: upper division standing. Conference course. Study of cultural meaning focusing on one or more selected art forms: history of art, music, poetry, film, dance, theatre, or appropriate combinations of these media. (Y)

**3810 (HS) Discovering the Past. Cr. 3-4**

Prereq: upper division standing or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Methodological and philosophical considerations integral to history; the act of historical inquiry. (Y)

## GENERAL INTERDISCIPLINARY STUDIES (GIS)

**0510 Developmental Reading and Writing. Cr. 3**

No degree credit. Offered for S and U grades only. Preliminary course designed to improve reading and writing skills of underprepared students. Emphasis on reading comprehension, grammar, spelling, vocabulary, and paragraph development and organization. (Y)

**1510 (BC) Written Communication Skills. Cr. 4 (Max. 8)**

Must be taken in first 36 credits in Interdisciplinary Studies Program. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). General language awareness and written communication skills emphasized; students learn to write essays for academic success. (T)

**1560 (OC) Dimensions of Oral Communication. Cr. 4 (Max. 8)**

Students explore and give order to elements of their world, learn to establish a relationship with an audience, and develop skills in communicating ideas to have an effect on others. (T)

**2030 Interdisciplinary Studies Seminar. Cr. 3**

Required of all entering B.I.S. students. Interdisciplinary problem solving, critical thinking, writing to converse in a discipline and across disciplines, critical thinking in quantitative problem solving, multiple readings of academic discourse. Three-faceted inquiry for working adult returning students: nature, philosophy and history of interdisciplinary and general studies; writing to learn (writing as a mode of learning and thinking) as part of writing across the curriculum; assessment of educational objectives by developing a student portfolio. (Y)

**3030 Foundations of Knowledge Conference I. Cr. 3**

Prereq: upper division standing. Semester-long course with periodic weekend sessions. Selected topics, in weekend conference format, similar or related to material handled in Foundations of Knowledge Seminar courses. Dates and specific topics announced for each Fall semester. (F)

**3040 Foundations of Knowledge: Directed Study. Cr. 4 (Max. 12)**

Prereq: upper division standing or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Appropriate only when other Foundations of Knowledge courses are unavailable. Materials for the course are drawn from topics developed for the Foundations of Knowledge seminars and conferences. (T)

**3060 Foundations of Knowledge Seminar: Cross-Cultural Perspectives. Cr. 4**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Cross-cultural, pluralistic approach to knowledge as a work of civilizations across space and time; critical analysis of philosophical, social, and scientific theories as the result of dynamic interaction of the human mind and nature in a varied, pluralistic world. (F,W)

**3080 Topics in Interdisciplinary Studies. Cr. 4**

Required of all entering B.I.S. Capstone and B.T.I.S. students. Conference; examples of interdisciplinary research demonstrating the advantages, complexities, and constraints of this approach, compared with traditional single disciplinary methods. (Y)

**3130 Foundations of Knowledge Conference II. Cr. 3**

Prereq: upper division standing. Semester-long course with periodic weekend sessions. Selected topics, in weekend conference format, on issues similar or related to material handled in Foundations of Knowledge Seminar courses. Dates and specific topics announced for each Winter semester. (W)

**3160 (HS) World War I as a Turning Point: Historical Perspectives. Cr. 4**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Examination of a critical period in twentieth century history; comparative analysis of human experience as shaped by historical forces: political, social, economic, intellectual, and technological. Workshop course. (T)

**3260 (CT) Methods of Search and Critical Thinking. Cr. 4**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Analysis of various techniques for generating and validating knowledge in diverse disciplines; assessment of structure and strengths of inductive and deductive forms of argument. (Y)

**3510 (IC) Intermediate Reading and Writing. Cr. 4**

Prereq: GIS 1510 or equiv. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Continuation of GIS 1510. Analytical reading, writing, and writing revision in the humanities, sciences and social sciences. Emphasis on research. (T)

**3600 (FC) Interdisciplinary Perspectives on Foreign Culture: The Arabs. Cr. 3**

Prereq: upper division standing or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Humanistic aspects, history, socio-cultural institutions of Arab cultures; theory and methods, comparativist perspectives. (F)

**3610 (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans. (AFS 3610) Cr. 4**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Humanistic aspects, history, socio-cultural institutions of African cultures; theory, methods, comparativist perspectives. (Y)

**3620 (FC) Interdisciplinary Perspectives on Foreign Culture: The Chinese. Cr. 3**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Humanistic

aspects, history, and socio-cultural institutions of Chinese culture; theory, methods, comparativist perspectives. (W)

**3840 General Interdisciplinary Directed Study.  
Cr. 2-4 (Max. 12)**

Prereq: upper division standing and prior consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Elective. Directed study supervised by a faculty member. Appropriate if no courses of instruction are available covering desired interdisciplinary topic area. (I)

**3860 Interdisciplinary/Integrated Advanced Studies Seminar. Cr. 4-12**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Elective. Explorations of the theoretical implications of the basic course sequences in social science, science and technology, and urban humanities. Topics and dates announced each semester. (I)

**3991 Interdisciplinary Core Seminar. Cr. 4**

Prereq: GIS 2030 or 3080. Required of all ISP students admitted in Fall 1996 or thereafter; must be elected prior to AGS 4760/AGS 4860, AGS 4991/AGS 4996, or AGS 4992. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Application of theories and methods of interdisciplinary problem solving. Case study of problem involving two or more disciplinary areas; research under direction of instructor. (T)

**4770 Travel Study: Upper Division.  
Cr. 6-8 (Grad. Cr. 6; Undergrad. Cr. 8)**

Prereq: written consent of adviser. American Southwest approved for 6 credits; West Africa approved for 8 credits. Interdisciplinary examination of cultural, political, social and/or scientific/technological aspects of the destination country by accompanying instructors or guest lecturers. Assignments, papers, and projects appropriate to upper division students. (S)

**5130 (AFS 5130) The Black Family. Cr. 4**

Prereq: upper division undergraduate standing. Survey and analysis of historical and social forces relative to the study of the Black family. (Y)

**5260 (ANT 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. (B)

**5350 (AFS 5350) African American Religious History and Practice. (ANT 5350) Cr. 4**

Prereq: upper division or graduate standing. Historical role and function of religion among African Americans from slavery to the current period. Analysis of religion as the mainstay of African American survival and its contribution to African American identity. (B)

## ADVANCED GENERAL STUDIES (AGS)

**3340 Advanced Directed Study: Science and Technology.  
Cr. 2-4 (Max. 12)**

Prereq: upper division standing and consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Directed study supervised by a faculty member. Appropriate if no courses of instruction are available covering desired science and technology topic area. Elective. (T)

**3360 Science and Technology Advanced Studies Seminar. Cr. 4 (Max. 12)**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Current and

historical studies of issues and topics from interdisciplinary science and technology. Topics announced each semester. Elective. (T)

**3420 (AI) The American Constitution and the Judicial System. Cr. 4**

Prereq: GIS 1510 or equiv. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Interdisciplinary approach to phases of United States constitutional development and the relationship of the courts to American government in historical and contemporary contexts. (Y)

**3440 Advanced Directed Study: Social Science.  
Cr. 2-4 (Max. 12)**

Prereq: upper division standing and consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Advanced directed study supervised by a faculty member. Appropriate if no courses are available covering desired social science topic area. Elective. (T)

**3460 Social Science Advanced Studies Seminar.  
Cr. 4 (Max.12)**

Prereq: upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Area and period studies, problems and themes in interdisciplinary social science. Topics announced each semester. Elective. (T)

**3480 (SS) Theoretical and Practical Analysis of Work Organizations. Cr. 4**

Prereq: GIS 1510 or equiv.; upper division standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Current social science theoretical perspectives and their practical application to study of the work place. (Y)

**3540 Advanced Directed Study: Urban Humanities.  
Cr. 2-4 (Max. 12)**

Prereq: upper division standing and consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Directed study supervised by a faculty member. Appropriate if no courses of instruction are available covering desired humanities topic area. Elective. (T)

**4550 Field Studies/Practicum. Cr. 2-4 (Max. 12)**

Prereq: upper division standing and consent of instructor. Study opportunities in a non-traditional setting. Students learn by experience under the supervision of a professional. Practice is integrated with appropriate research and methods, and evaluation is based on evidence of growth and mastery of specific skills. The ratio of clock hours to credits is 15 to 1. (I)

**4760 Senior Seminar I. Cr. 4**

Prereq: upper division standing; GIS 2030 or GIS 3080; GIS 3991 for all ISP students admitted Fall 1996 or after. A seminar on topics determined by the upper division faculty is designed to draw together and reassess fundamental values and themes underlying the ISP curriculum. Core readings and a substantial paper are assigned. (T)

**4860 (WI) Senior Seminar II. Cr. 4**

Prereq: upper division standing; GIS 2030 or GIS 3080; GIS 3510 or equiv.; GIS 3991 for all students admitted Fall 1996 or thereafter. Lecture and consultation course; students complete a major research paper. Semester-long process of synthesis and analysis, writing, oral presentation and consultation with the instructor. (T)

**4991 (IC) Senior Essay Seminar I. Cr. 4**

Prereq: upper division standing; GIS 2030 or GIS 3080; GIS 3991 for all ISP students admitted Fall 1996 or after. Research for and development of a senior essay on a topic approved by the directing faculty adviser; culminates in an oral presentation for approval by faculty panel. (T)

**4992 (WI) Senior Capstone Essay/Project. Cr. 4**

Prereq: senior level standing; GIS 3080; GIS 3510 or equiv.; GIS 3991 for all ISP Capstone students admitted Fall 1996 or thereafter. One-semester senior capstone essay/project for Bachelor of Interdisciplinary Studies-Capstone and Bachelor of Technical Studies students. Intensive research for development of essay or project on topic by directing faculty adviser. Satisfies University General Education Writing Intensive Course in the Major requirement. (T)

**4996 (WI) Senior Essay Seminar II. Cr. 4**

Prereq: AGS 4991 and all AGS 4991 prereqs. Continuation of first seminar; culmination in oral presentation before faculty panel and submission of completed major research essay or project for approval. (T)

**INTERDISCIPLINARY STUDIES PROGRAM (ISP)**

**5500 Selected Topics in Interdisciplinary Studies. (ISP 7500) Cr. 2-4 (Max. 8)**

Prereq: written consent of adviser and instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Topics to be announced in Schedule of Classes. (Y)

**5660 (FPC 5660) Creativity: Building the New. Cr. 3**

Prereq: junior standing or above, or consent of instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Study of creativity with personal application. Investigations in artistic, scientific, social science, engineering, industrial, and other areas. Actual application and problem-solving skills. (Y)

**5990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: written consent of adviser and instructor. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Directed study and individual research under faculty member on a topic mutually agreed upon. (T)

**6010 Interdisciplinary Core Seminar. Cr. 4**

Prereq: admission to MIS program or consent of graduate chairperson. Must be elected only once; elect within the first two semesters. Introduction to themes, methods and objectives of advanced interdisciplinary study, and application of the interdisciplinary method to a major case study. Students will initiate an interdisciplinary research project. (Y)

**6110 Seminar in Historical and Cultural Studies. Cr. 4**

Prereq: admission to the MIS program or consent of the graduate chairperson. Must be elected within first two semesters; may elect only once. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Introduction to principles of interdisciplinary historical and cultural study while exploring the phenomenon of change. Topics of case study vary each semester. This course is to be taken within the first two semesters of the MIS program and establishes prerequisite knowledge for further study in the program. (Y)

**NONPROFIT SECTOR STUDIES (NPS)**

**3000 Non-Profit Sector Studies. Cr. 4**

Prereq: passing score on English Proficiency Exam; junior standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Management and leadership in nonprofit organizations: human service agencies; theory, practice and history. (F,W)

**3100 Survey of Philanthropy. Cr. 4**

Prereq: junior standing; passing score on English Proficiency Examination. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Relevance of philanthropy to management and fund development of nonprofit organizations; expert knowledge of Michigan and national philanthropy. (T)

**3500 Management of Volunteer Programs. Cr. 4**

Prereq: passing score on English Proficiency exam; junior standing. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Volunteerism: planning and evaluation of volunteer programs, motivation, recruitment, selection and training of volunteers. (W)

**4000 Fund Raising and Grant Seeking. Cr. 4**

Prereq: NPS 3000. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Methods and techniques of fundraising and grant proposal writing for nonprofit organizations. Theory and practice. (F)

**4100 Information Technology in Nonprofit Operations. Cr. 4**

Prereq: NPS 3000 or successful satisfaction of intermediate writing course. Hands-on course: laboratory use of fundraising, wordprocessing, spreadsheet, desktop publishing software. Comparison of major nonprofit software; how information technology is used in nonprofit organizations. (F,W)

**4300 Topics in Non-Profit Sector Studies. Cr. 4**

Prereq: NPS 3000. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). New and developing topics in nonprofit sector studies; timely and historical perspectives. (Y)

**4500 Internship and Leadership in Non-Profit Sector Studies. Cr. 4-8**

Prereq: NPS 3000; 3500 or 4000; consent of instructor. Training under professionals in a nonprofit setting; demonstration of nonprofit leadership and trainer skills at professional level. (T)

# SCHOOL OF MEDICINE

DEAN: John D. Crissman

# Foreword

The primary mission of the School of Medicine is to provide the Michigan community with medical and biotechnical resources, in the form of scientific knowledge and trained professionals, so as to improve the general health of the community.

The School offers educational programs leading to the following degrees: Doctor of Medicine, Doctor of Philosophy, Master of Science, Master of Arts, and Bachelor of Science. Graduate education in clinical fields, post-doctoral study and continuing medical education programs are also offered within the School. Two hundred fifty-six students are admitted annually to the M.D. program and approximately three hundred sixty students are enrolled in Ph.D. or Master's degree study in fourteen program areas, predominantly in the basic medical sciences. More than nine hundred students are post-graduate trainees as medical residents, post-doctoral fellows, or fellows in twenty-nine different clinical research programs. A single baccalaureate degree in radiation therapy technology is offered in the Department of Radiation Technology.

Continuing education programs, seminars and colloquiums serve the faculty and students of the School 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 which are appropriate for students in other colleges and schools of the 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 the activities in the School of Medicine. Fundamental and applied research in biomedical sciences, clinical specialties, and health care systems is directed by faculty of the School. Research programs at the School are supported by almost 100 million dollars annually through 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. The research facilities of the School are modern, well-equipped and continually growing with the pace of current technological advances.

The clinical services provided by the faculty, post-graduates and students in the School are rendered predominantly through the Detroit Medical Center institutions. Through a master affiliation between the Detroit Medical Center (DMC) and Wayne State University, the DMC serves as the University's academic health center. The DMC owns and operates seven hospitals, two nursing centers, and more than 100 outpatient facilities throughout southeastern Michigan, and is affiliated with the Barbara Ann Karmanos Cancer Institute. The chairpersons of our departments or their designees serve as heads of departments or divisions within each of the Medical Center hospitals. In addition, the School conducts clinical training for its students through a consortium of teaching hospitals located throughout metropolitan Detroit. The School also perceives 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 medical care.

## History of the School

The School of Medicine of Wayne State University has been operating and granting degrees as a college of medicine since 1868. Originally called The Detroit Medical College, it was founded by Detroit native Dr. Theodore A. McGraw.

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 known then, 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 the American Revolutionary War hero, General Anthony Wayne. Wayne University became a State institution in 1956.

The School of Medicine entered its second century with a period of substantial growth and the creation of a totally new campus in the Detroit Medical Center. With the opening of the Gordon H. Scott Hall of Basic Medical Sciences in 1971, the size of the entering class increased to 256 students, making the Wayne State University School of Medicine the largest single campus medical school in the country, and the fourth largest overall.

## Wayne State University Medical School Facilities

*Gordon H. Scott Hall* is the main education building for the School of Medicine. It provides facilities for pre-clinical and basic science education, basic science departments, research laboratories for basic and clinical programs and the administrative offices of the School.

*The Helen Vera Prentis Lande Medical Research Building* houses research laboratories for clinical and basic science faculty.

*The Vera P. Shiffman Medical Library*, located adjacent to Scott Hall, houses a full medical reference library, as well as computer instruction facilities.

*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.

*The C. S. Mott Center for Human Growth and Development* provides research space for programs in human reproduction, growth and development.

*The Hudson-Webber Cancer Research Center* is the translational facility research flagship for WSU cancer research in partnership with the Barbara Ann Karmanos Cancer Institute.

The School of Medicine is closely affiliated with the John D. Dingell Veterans' Administration Medical Center. In addition to training at the DMC, medical students may train at eighteen other medical facilities as well as hundreds of local physician's offices.

The School is an active partner in nationally- and regionally-recognized research programs and has defined several areas of noted excellence, including cancer, women's, and children's medicine, cardiology and cardiovascular health, the neurosciences, and ophthalmology.

## Detroit Medical Center Facilities

The Detroit Medical Center includes:

*Children's Hospital of Michigan*, which specializes in medical research and treatment for infants and children — in particular, pediatric hematology, oncology, cardiac surgery, and the treatment of renal disease; and houses a major 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;

*Sinai-Grace Hospital*, a full-service hospital which offers a wide range of outpatient services;

*Harper Hospital*, which specializes in oncology, cardiology, general surgery and a number of additional surgical specialties and subspecialties;

*Huron Valley-Sinai Hospital*, located in a northern suburb, is also operated by the DMC, and provides community hospital inpatient and outpatient services;

*Hutzel Hospital*, which includes among its areas of excellence: obstetrics, gynecology, gynecologic oncology, ophthalmology, neonatology, perinatology, and orthopedic surgery;

*Rehabilitation Institute of Michigan*, which uses an interdisciplinary approach to help physically disabled persons reach their maximum level of independence;

*Kresge Eye Institute* of Wayne State University, housed in Hutzel Hospital, which is a major center for research and treatment of eye diseases;

*Barbara Ann Karmanos Cancer Institute*, which provides comprehensive cancer prevention, screening, diagnostics, treatment and supportive care to more than 10,000 new patients annually, and is one of only thirty-two federally-designated comprehensive cancer centers in the country.

*Gershenson Radiation Oncology Center*, which provides technologically advanced radiation oncology services for all Medical Center facilities. Unique services include neutron therapy, Gamma Knife procedures, and total body irradiation.

## Shiffman Medical Library — School of Medicine Learning Resource Centers

*Director:* Ellen B. Marks

*Assistant Director:* Sandra Martin

*Web site:* <http://www.lib.wayne.edu/shiffman/>

Hours:

*Monday - Thursday* . . . . . 7:00 a.m. - 11:00 p.m.

*Friday* . . . . . 8:00 a.m. - 9:00 p.m.

*Saturday* . . . . . 9:00 a.m. - 9:00 p.m.

*Sunday* . . . . . 12:00 n. - 11:00 p.m.

The Shiffman Medical Library serves the School of Medicine and the College of Pharmacy and Allied Health Professions, and is the research library for the Detroit Medical Center. For services for undergraduate users of the medical library, see 'Additional University Services' in the General Information section of this Bulletin. All students are welcome at this library, where many types of health information may be obtained.

The School of Medicine and the Shiffman Medical Library offer the Medical Students' Study, which provides a twenty-four-hour, seven day per week quiet study location. Two learning resource centers with sixty-five networked computers and an array of computer-based instructional software are available in support of School curricula. A student advisory group solicits ideas and advice. Faculty place course material on reserve at the Library's circulation desk, which also maintains copies of textbooks, software manuals, and media. A variety of study materials for the USMLE are available on reserve. Students are encouraged to obtain accounts to MEDLINE and other dial-access databases and to sign up for workshops focused on accessing health sciences databases, the Internet, and other topics which are offered at various times each month.

## Office of Student Affairs

*Assistant Dean for Student Affairs:* Jane R. Thomas, Ph.D.

This office is under the supervision of an assistant dean. It includes: academic, career, and personal counseling services; financial aid counseling; tutorial services; a special study skills consultation service; and support for student government and organization activities. 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

**Health Services:** Acute health care for medical students is available in the Primary Care Center of the University Health Center.

**Counseling:** Appointments for academic, personal and career counseling can be arranged through the Office of Student Affairs.

**Academic Resources Counseling:** A specialist in techniques designed for the medical curriculum is available to all students seeking to improve and/or enhance their academic performance. Individual tutoring services are available as well as group review sessions.

## Development and Alumni Affairs

*Office:* 101 E. Alexandrine

*Telephone:* 313-577-1495; *Alumni Telephone:* 313-577-3587

*Director of Development and Alumni Affairs:* Priscilla J. Khoury

*Manager of Alumni Affairs:* Lori H. Robitaille

*The Development 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 over a century ago.

The Development Office's fund-raising programs are 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.

Each year the *W.S.U. Medical Alumni Association* conducts a Clinic Day and Alumni Reunion where discussions by leading scientists and an awards program are held. The Association provides scholarships and awards which are announced at commencement. In addition, the School sponsors reunions at several medical specialty conventions around the country. Alumni and former residents (now numbering over 11,400, and house officers numbering 5,200) and their spouses are encouraged to maintain close ties with the School. The alumni office carries out the decisions and plans made by the *W.S.U. Medical Alumni Association Board of Governors*.

## Office of Public Affairs and Publications

*Office:* 101 E. Alexandrine

*Director:* Kathleen M. Wedemire

The Office of Public Affairs and Publications is responsible for the communications and public relations programs for the School. The Office publishes alumni and faculty newsletters, a research magazine, an annual report and a variety of collateral publications. In addition, the Office 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.

## UNDERGRADUATE DEGREE

*BACHELOR OF SCIENCE in Radiation Therapy Technology*

## 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 specialization in:*

- Anatomy and Cell Biology
- Biochemistry and Molecular Biology
- Cancer Biology
- Cellular and Clinical Neurobiology
- Immunology and Microbiology
- Medical Physics
- Molecular Biology and Genetics
- Pathology
- Pharmacology
- Physiology

#### *\*MASTER OF SCIENCE with specialization in:*

- Anatomy and Cell Biology
- Biochemistry and Molecular Biology
- Cancer Biology
- Community Health Services
- Genetic Counseling
- Immunology and Microbiology
- Molecular Biology and Genetics
- Pharmacology
- Physiology
- Psychiatry
- Radiological Physics
- Rehabilitation Sciences

#### *\*MASTER OF SCIENCE in Basic Medical Sciences*

#### *\*MASTER OF SCIENCE in Medical Research*

#### *\*GRADUATE CERTIFICATE in Community Health Services Research and Evaluation*

## SCHOOL DIRECTORY

Dean	1241 Scott Hall; 577-1335
Administration and Finance	1241 Scott Hall; 577-1448
Continuing Medical Education	5E Univ. Health Center; 577-1453
External Affairs	1128 Scott Hall; 577-1495
Development & Alumni Affairs	101 E. Alexandrine; 577-1495
Public Affairs	101 E. Alexandrine, Suite 101; 577-1429
Information	1102 Scott Hall; 577-1460
M.D. Programs	
Admissions	1310 Scott Hall; 577-1466
Academic and Student Programs	1206 Scott Hall; 577-1450
Student Affairs	1369 Scott Hall; 577-1463
Financial Aid	1374 Scott Hall; 577-1039
Records and Registration	1272 Scott Hall; 577-1470
Medical Center Affairs	Orchestra Place; 578-2027
Personnel Office	1248 Scott Hall; 577-1163
Ph.D. and M.S. Programs	3270 Scott Hall; 577-1455
Radiation Therapy Technology	1st Level, Univ. Health Center, Detroit Medical Center; 577-1137
Research Administration	1261 Scott Hall; 577-9553
Residency:	
Graduate Medical Education	9C Univ. Health Center; 745-5146
Sponsored Programs Administration	1128 Scott Hall; 577-1455

*Website:* <http://www.med.wayne.edu/>

Mailing address for all offices: School of Medicine, Wayne State University, 540 East Canfield, Detroit, Michigan 48201

\* For specific requirements, see the Wayne State University Graduate Bulletin.



# UNDERGRADUATE PROGRAM

## RADIATION THERAPY TECHNOLOGY

Office: First Level, University Health Center, Detroit Medical Center; 313-577-1137

Program Director: Diane K. Chadwell

Chairperson, Radiation Oncology Department: Jeffrey D. Forman

### Assistant Professor

Diane K. Chadwell

### Senior Lecturer

Adam F. Kempa

### Part-Time Faculty

Nayer Siddiqi

### Adjunct Assistant Professor

Rosann Keller

### Cooperating Faculty

Merlin E. Ekstrom, Colin G. Orton

### Medical Adviser

Kenneth J. Levin

## Degree Program

### BACHELOR OF SCIENCE in Radiation Therapy Technology

Radiation therapy technology is a health care discipline which utilizes ionizing radiation for the treatment of malignant diseases. This field requires a basic understanding of and interest in science, especially mathematics and physics, as well as emotional maturity and a desire to assist in the management of patient care. A radiation therapist has the unique opportunity to blend knowledge and skills of mathematics, medical science and psychology in his or her everyday work. The therapist comes to know patients over a period of several months and becomes important to their health care..

The Bachelor of Science Degree program in Radiation Therapy Technology at Wayne State University is designed to prepare students for the technical, theoretical and psychological aspects of this career.

Radiation therapists are typically employed in hospitals, clinics, educational institutions, and commercial equipment corporations as staff therapists, clinical supervisors, administrators, educators and technical marketing personnel. A radiation therapist is able to:

- Operate sophisticated radiation equipment to deliver a planned course of radiation therapy;
- Assist the physicist in quality assurance and in treatment planning procedures, and in the calibration of equipment;
- Observe the clinical progress of the patient undergoing radiation therapy, and recognize when a patient's condition requires the attention of a physician; and
- Assist in providing psychosocial support for patients who are dealing with the stress of their illness.

## Bachelor of Science in Radiation Therapy Technology

The Bachelor of Science in radiation therapy technology is a four-year degree program consisting of two years of preprofessional courses and two years of professional courses. The program is accredited by the Joint Review Committee on Education in Radiologic Technology, 20 N. Wacker Drive, Suite 900, Chicago IL 60606-2901; (312) 704-5300. The program complies with the professional curriculum of the American Society of Radiologic Technologists. Upon completion of the program, the student receives a Bachelor of Science Degree in Radiation Therapy Technology and is eligible to take the national certification examination administered by The American Registry of Radiologic Technologists.

## Admission to Preprofessional Program

The first two years (preprofessional program) are taken in the College of Science, the admission requirements of which are satisfied by admission to the University; see page 15. Application forms are available from the Office of Admissions, 3 East, Helen Newberry Joy Student Services Center. Students should consult with the University Advising Center, 2 East, Helen Newberry Joy Student Services Center, regarding course selection. Students are urged to seek additional career advisement from the Radiation Therapy Technology faculty early in their preprofessional program.

**Recommended High School Preparation:** Students interested in a career in radiation therapy technology should take as many of the following high school courses as possible: biology, chemistry, mathematics, physics, computer science, typing, speech and composition.

### PREPROFESSIONAL PROGRAM

Each of the following required preprofessional courses (or its equivalent) must be completed with a minimum grade of 'C' (2.00).

#### First and Second Years

	<i>credits</i>
BIO 1500 --Basic Life Diversity . . . . .	4
BIO 1510 --(LS) Basic Life Mechanisms . . . . .	4
BIO 2870 -- Anatomy and Physiology . . . . .	5
CHM 1020 --(PS) General Chemistry I . . . . .	4
CSC 1000 -- (CL) Intro. to Computer Science . . . . .	3
ENG 1020 --(BC) Introductory College Writing . . . . .	4
ENG 3010 --(IC) Intermediate Writing . . . . .	3
MAT 1800 --Elementary Functions . . . . .	4
PHY 2130 --(PS) General Physics. . . . .	3
PHY 2131 -- General Physics Laboratory . . . . .	1
PHY 2140 -- General Physics . . . . .	3
PHY 2141 -- General Physics Laboratory . . . . .	1
PSY 1010 --(LS) Introductory Psychology. . . . .	4
PSY 2300 --Psychology of Everyday Living . . . . .	4
SPB 1010 --(OC) Oral Communication: Basic Speech . . . . .	3
UGE 1000 --(GE) Information Power. . . . .	(1)
American Society & Institutions (AI) elective <sup>1</sup> . . . . .	3
Foreign Culture (FC) Elective <sup>1</sup> (by Competency Exam or course) (3)	(3)
Historical Studies (HS) Elective <sup>1</sup> . . . . .	3
Humanities (VP,PL) Electives <sup>1</sup> . . . . .	6
Critical Thinking (CT) Competency: <sup>1</sup> (by Competency Exam or course). . . . .	(3)
<b>Total: 62</b>	

## Admission to Professional Program

Admission to the professional program requires completion of the above preprofessional course requirements and satisfaction of specific admission requirements listed below. The application deadline is on or about April 1 for matriculation into the professional program for the subsequent fall term.

1. General Education Group Requirements.

Students should contact the University Advising Center (313-577-2680) prior to each fall term to obtain an updated list of preprofessional course and program admission requirements. Career advisement is provided by the program faculty; a meeting with a faculty member is an admission requirement. Prospective students are urged to contact the program as early as possible in their university studies (313-577-1137).

Since applicants who are admitted will eventually be working as a member of a health care team, the admissions committee evaluates candidates based on their personal qualities as well as their academic achievement. Therefore, throughout the interview and other application requirements, such criteria as a student's maturity, motivation, knowledge of the profession, interpersonal skills, personal integrity, and empathy for others is evaluated.

**Professional Program Admission Requirements:** The student wishing to apply to the professional program must comply with the following admission requirements:

1. Completion of all preprofessional courses (or their equivalents) by the fall term in which admittance is desired. See Preprofessional Program, above.
2. Hold a combined cumulative grade point average of 2.50 or above ('A'=4.00) for *all* college-level work at *all* institutions attended.
3. Completion of a professional program application form with a copy of the student's Wayne State transcript attached. *Mail completed form and Wayne State transcript to:* Program Director, Radiation Therapy Technology, Department of Radiation Oncology, First level, University Health Center, Detroit Medical Center, Wayne State University, Detroit MI 48202.
4. Submission of *official* transcripts from all college institutions attended (other than Wayne State).
5. Meeting with a program faculty member to discuss the career of radiation therapy technology. This visit should be completed *as early in the preprofessional program as possible*. Appointments are made by calling 313-577-1137.
6. Completion of two clinical visits to affiliate institutions for the program. Appointments are made by calling 313-577-1137.
7. Completion of the Allied Health Professions Admissions Test (AHPAT). Application forms for this examination may be obtained from the University Advising Center, 2 East, Helen Newberry Joy Student Services Center, or from Testing and Evaluation Services, 698 Student Center. This test should be taken no later than February of the year in which admission is sought. Application date for AHPAT is about six weeks prior to exam date.
8. Submission of two reference forms (included in the application packet available from University Advising Center or from the Program): one from an employer/supervisor and one from a college professor/adviser.
9. Satisfaction of the University Requirements in English and Mathematics Proficiency (documentation is required).

The information requested in requirements 3, 4, 7, 8 and 9, above, should be submitted to the Program Director, Radiation Therapy Technology, Department of Radiation Oncology, First level, University Health Center, Detroit Medical Center, Wayne State University, Detroit MI 48202.

*Application packets*, including an application form, reference forms, and current procedural guidelines, are available from University Advising or the Radiation Therapy Technology Program.

**Application Deadline:** *The deadline for applications is on or about April 1.* Applications which are incomplete by the deadline or are submitted after that date will be considered only with the approval of the Program Director. Prospective students are urged to submit applications as early as possible after the fall term. Specific directions for submitting the various application materials are indicated on the respective forms.

**Application Review:** All applications will be reviewed for completeness. The Admission Committee will interview all qualified applicants with completed applications submitted by the deadline date. A number of criteria will be evaluated, including academic achievement and personal qualities. Admission interviews are typically conducted in May of each year. The Radiation Therapy Technology Program typically notifies each applicant of the final admission decision in June.

## Degree Requirements

Candidates for the degree Bachelor of Science in Radiation Technology Therapy must complete a minimum of 127 credits, plus sufficient credits to fulfill the University General Education Requirements not satisfied by either required courses or the student's choice of electives. The total course work will be distributed between two years of preprofessional course work (see above) and the two-year professional program as outlined below. Courses in the professional program are taken in the School of Medicine. Enrollment requires full-time student status for six consecutive terms (twenty-four months), during which time students take didactic and clinical courses. The clinical program includes approximately twenty hours per week of clinical education at multiple affiliate institutions in the greater metropolitan Detroit area. Such institutions include urban and suburban hospitals, and private clinics.

A required elective in the senior year encourages a student to take a course in the areas of management, education, humanities or social studies. The course selected may be used to fulfill the social science requirement of the University General Education Requirements.

While most required courses are scheduled during usual daytime hours, students are required to attend some courses or individual class sessions in early evening.

Professional courses and/or professional program admission requirements are subject to change without notification. The curriculum may change because of professional practice requirements which may be separate from academic requirements. *It is the student's responsibility to obtain updated information* from the Radiation Therapy Technology Program, Department of Radiation Oncology, Wayne State University; telephone: 313-577-1137; Fax: 313-577-0908.

### PROFESSIONAL PROGRAM

#### Third Year

	<i>credits</i>
NUR 2030 -- Pathophysiology Related to Nursing Practice . . . . .	2
R T 3000 -- Concepts of Clinical Care . . . . .	3
R T 3010 --Introductory Radiation Physics . . . . .	3
R T 3020 --Clinical Radiation Physics . . . . .	3
R T 3110 --Clinical Aspects of Radiation Therapy . . . . .	3
R T 3140 --Topographical Anatomy and Medical Imaging . . . . .	3
R T 3180 --Design & Construction of Treatment Accessories . . . . .	1
R T 3200 -- Therapeutic Interactions in Oncology Care . . . . .	2
R T 3310--Clinical Practicum I . . . . .	3
R T 3320 --Clinical Practicum II . . . . .	4
R T 3330 --Clinical Practicum III . . . . .	4
<b>Total:</b>	<b>31</b>

#### Fourth Year

R T 4110 --Clinical Radiation Oncology . . . . .	4
R T 4120 --Basic Clinical Dosimetry . . . . .	3
R T 4140 --Oncologic Pathology . . . . .	2
R T 4150 --Radiobiology of Radiation Oncology . . . . .	2
R T 4220 --Radionuclide Physics . . . . .	3
R T 4240 --Radiation Therapy Technology Seminar . . . . .	3
R T 4300 --Quality Assurance . . . . .	2
R T 4350 --Clinical Practicum IV . . . . .	4
R T 4360 --(WI) Clinical Practicum V . . . . .	4
R T 4370 --Clinical Practicum VI . . . . .	4
Elective . . . . .	3
<b>Total:</b>	<b>34</b>

**Scholarship:** Students in the professional program are subject to high academic and professional standards. A grade of 'C' (2.00) or above is required in each professional course, and the student must maintain a *term* grade point average of 2.50 throughout the program. A grade of 'C-minus' (1.67) in a professional course indicates unsatisfactory performance; repetition of the course is required, and review by the Academic Committee will occur. A second grade of 'C-minus' or below, or a single grade of 'D' (1.00 or less) will result in immediate dismissal from the professional program. Academic standards and program probation policies are subject to change. Academic standards and policies are published annually; copies are available upon request from the Radiation Therapy Technology Program.

**Liability Insurance:** Each student is required to have professional liability insurance during the entire length of the professional program. Neither the clinical affiliates, nor Wayne State University, assume liability for student actions during clinical education.

**University General Education Requirements:** In addition to the current course and academic requirements outlined by the Program, the student must complete the University General Education Requirements in order to receive a Bachelor of Science degree in Radiation Therapy Technology. Electives in the preprofessional or professional program may be used to complete these additional course requirements.

## UNDERGRADUATE COURSES (R T)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **3000 Concepts of Clinical Care. Cr. 3**

Procedures and ethics related to the care and examination of the radiation oncology patient. Topics include: basic pharmacology, drug administration, pain management, treatment side effects and their management. Material fee indicated in the Schedule of Classes. (F)

### **3010 Introductory Radiation Physics. Cr. 3**

Basic introduction of radiation physics including the x-ray machine, physical principles and circuitry; principles of mathematics. (F)

### **3020 Clinical Radiation Physics. Cr. 3**

Prereq: R T 3010. Principles of radiation exposure; radiation producing and measuring devices; clinical application of radiation physics. (W)

### **3110 Clinical Aspects of Radiation Therapy. Cr. 3**

Basic concepts in oncology and radiation therapy technology. Topics include: cancer statistics, neoplasia, and principles of treatment and dosage. (F)

### **3140 Topographic Anatomy and Medical Imaging. Cr. 3**

Procedures for imaging human structure and their relevance to radiation therapy; topographic and cross sectional anatomy, identification of anatomic structures as demonstrated through various imaging modalities and human anatomy lab sessions; fundamentals of radiographic exposure techniques and film processing. Material fee as indicated in the Schedule of Classes. (W)

### **3180 Design and Construction of Treatment Accessories. Cr. 1**

Theory and practical experience with design and construction of radiation shielding devices and various treatment accessories; related geometry, magnification devices, use of hot-wire cutter, casting techniques, bolus construction and immobilization devices. Material fee as indicated in the Schedule of Classes. (S)

### **3200 Therapeutic Interactions in Oncology Care. Cr. 2**

Open only to radiation therapy technology students. Issues related to professional interaction with oncology patients. Impact of cancer diagnosis on patient and family; subsequent role of radiation therapist. Approaches to effective communication. Material fee as indicated in the Schedule of Classes. (S)

### **3310 Clinical Practicum I. Cr. 3**

Introduction to clinical radiation therapy. Closely supervised patient-related activities. Emphasis on development of interpersonal communication skills in the clinical setting; medical terminology. (F)

### **3320 Clinical Practicum II. Cr. 4**

Prereq: R T 3310. Closely supervised practice in the delivery of prescribed doses of radiation utilizing common radiation equipment. Observation and performance of clinical care procedures; Development of communication skills in patient/therapist relationships. Correlation of medical imaging techniques to diagnostic workup and treatment planning. Completion of clinical competency requirements. (W)

### **3330 Clinical Practicum III. Cr. 4**

Prereq: R T 3320. Expanded supervised practice in the delivery of radiation therapy treatments. Submission of essay on radiation oncology topic. Completion of clinical competency requirements. (S)

### **4110 Clinical Radiation Oncology. Cr. 4**

General presentation of malignant conditions, their etiology and methods of treatment; specific radiation treatment methodology including technical parameters of field size and direction, dosage, blocking, and patient positioning. Material fee as indicated in the Schedule of Classes. (F)

### **4120 Basic Clinical Dosimetry. Cr. 3**

Prereq: R T 4110. Basic concepts of clinical dosimetry and treatment planning; various external beam techniques, depth dose data, and summation of isodose curves. Material fee as indicated in the Schedule of Classes. (W)

### **4140 Oncologic Pathology. Cr. 2**

Basic principles of neoplasia, including types of growth, causative factors, biological behavior, and significance of staging procedures. Pathology of radiation injury. Material fee as indicated in the Schedule of Classes. (F)

### **4150 Radiobiology of Radiation Oncology. Cr. 2**

Biological effects of ionizing radiation on living tissue. Cell and tissue radiosensitivity; radiation syndromes and related effects. Basic radiobiological principles of radiation oncology and radiation protection. (W)

### **4220 Radionuclide Physics. Cr. 3**

Prereq: R T 3020. Natural radioactivity; isotopes and nuclear structure; techniques of radiation measurement. The clinical use of radionuclides. Radiation safety. (F)

### **4240 Radiation Therapy Technology Seminar. Cr. 3**

Open only to radiation therapy technology students. Issues relevant to the practice and profession of radiation therapy technology explored through group discussion and case studies. Topics include: psychosocial, cultural, economic, physical, and educational factors which affect the patient; professional, administrative, legal, and bio-ethical issues which influence professional practice. Material fee as indicated in the Schedule of Classes. (W)

### **4300 Quality Assurance. Cr. 2**

Open only to radiation therapy technology students. Principles and application of a comprehensive quality assurance program, addressing general clinical and physics factors. Contents include: tasks to be performed, with their frequency and acceptable limits; model implementation program; and legal implications. Lecture and laboratory settings. Material fee as indicated in the Schedule of Classes. (S)

### **4350 Clinical Practicum IV. Cr. 4**

Prereq: R T 3330. Continued supervised practice in a wide spectrum of clinical activities. Submission of a critical bibliography from current literature of radiation therapy, cancer management and related areas. Completion of clinical competency requirements. (F)

### **4360 (WI) Clinical Practicum V. Cr. 4**

Prereq: R T 4350. Continued clinical practice under limited supervision. Submission of essay on radiation oncology topic. Completion of clinical competency requirements. (W)

#### 4370 Clinical Practicum VI. Cr. 4

Prereq: R T 4360. Continued clinical practice under minimal supervision. Practice of procedures related to the development of various treatment plans and methods of treatment planning. Submission of report on quality assurance activities. Completion of clinical competency requirements. Material fee as indicated in the Schedule of Classes. (S)

# DOCTOR OF MEDICINE

## Educational Goals

Our goals are for all graduates to be:

- knowledgeable in the basic science and clinical aspects of medicine and in the application of these principles;
- committed to the pursuit of excellence in all of their professional activities;
- well-grounded in the humanistic aspects of health care;
- well-prepared for future training for careers in patient care, health service, teaching or research;
- skilled in self-education;
- committed to continuing education;
- aware of their limitations throughout their careers;
- equipped to understand future developments and to be effective problem-solvers in patient care, health care delivery systems, and other fields of medicine.

## Admission and Registration — M.D.

*Assistant Dean for Admissions:* Joseph G. Dogariu, Ph.D.

The School of Medicine currently accepts 256 students for its entering class. The students are selected from a large number of applicants who apply through the American Medical College Application Service (AMCAS).

## Selection Factors

The Committee on Admissions will select those applicants who, in its judgment, will make the best students and physicians. Consideration is given to the entire record, g.p.a., Medical College Admission Test (MCAT) scores, recommendations, and interview results as these reflect the applicant's personality, maturity, character, and suitability for medicine. Additionally, the Committee regards as desirable certain health care experiences such as volunteering or working in hospitals, hospices, nursing homes, or doctor's offices. The Committee also values experience in biomedical laboratory research. Following an initial screening process, students with competitive applications are selected to complete a secondary application. Special encouragement is given to candidates from medically underserved areas in Michigan.

As a state-supported school, the institution must give preference to Michigan residents; however, out-of-state applicants are encouraged to apply. An applicant's residency is determined by University regulations. Students whose educational backgrounds include work outside the United States must have completed two years of course work at a U.S. or Canadian college or university. Interviews are required but are scheduled only with those applicants who are given serious consideration. The Committee on Admissions meets on a weekly basis to evaluate candidates. Offers of acceptance will be made on four occasions during the application cycle. Students are urged to apply by November 1.

## Requirements for Entrance

The Medical College Admission Test (MCAT) is required, in addition to a baccalaureate degree or its equivalent; however, the Committee on Admissions is prepared to review the records of third-year students with unusual academic attainment. The MCAT should be taken during the year of application, preferably in the spring. Required courses for medical school admission are:

years

General biology or zoology (with lab) . . . . .	1
Inorganic chemistry (with lab) . . . . .	1
Organic chemistry (with lab) . . . . .	1
General physics (with lab) . . . . .	1
English . . . . .	1

Besides a strong preparation in the basic sciences, a broad educational background in a liberal-arts oriented program is desirable. Applicants are encouraged to select subjects that will contribute substantially to a broad cultural background.

## Curriculum

The School of Medicine curriculum employs a combination of traditional and newer approaches to the teaching of medical students. It uses traditional lectures, small group and panel discussions, computer-assisted instruction, and multimedia in its teaching program.

Year 1 begins with an introductory clinical course which runs through all four years, including introduction to the patient, human sexuality, medical interviewing, physical diagnosis, public health and prevention, and evidence-based medicine. Year 1 is organized around the disciplines of structure (anatomy, histology, embryology, and radiology), and function (biochemistry, physiology, genetics, and nutrition), and ends with an integrated neuroscience course. Year 2 is a completely integrated year focusing on pathophysiology, including immunology/microbiology, and pharmacology.

Year 3 is a series of clinical clerkships including medicine, surgery, pediatrics, family medicine, psychiatry, neurology, and obstetrics/gynecology. During year 3 all students have a six-month continuity clerkship. Year 4 is an elective year including emergency medicine, a subinternship, and an ambulatory block month.

## Application and Acceptance Policies

The School of Medicine adheres to the acceptance procedures of the Association of American Medical Colleges, including the 'Early Decision Plan.' Admission procedures of this School are:

1. AMCAS application must be filed between June 1 and December 15 of the year preceding anticipated matriculation.
2. Applicants must respond to acceptance offer within three weeks of the offer.
3. Payment of a \$50.00 deposit is required upon acceptance by the student of a place in the first-year class. The deposit will be credited toward the initial tuition payment.

## Admission with Advanced Standing

Students from LCME-approved medical schools may be admitted with advanced standing to the second and third years 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 be 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 transferring. A letter of support from the dean of that school is required.
4. The applicant must take and pass the USMLE, Step I, for consideration to transfer with advanced standing into Year 3.

## Minority Recruitment

*Director:* Julia M. Simmons, M.A.

This unit is responsible for assisting in maintaining a representative enrollment of minority students through a combination of advising, counseling, and academic programs for high school, college, and post-baccalaureate students. The High School Outreach Program is conducted in twenty-eight Detroit high schools and five suburban high schools, offering information and support to students interested in medical careers. At the undergraduate level, advising and counseling is available to premedical students through the minority premedical office. The Post Baccalaureate Program for disadvantaged students offers a one-year med-prep experience to a select group of qualified medical school applicants. The program guarantees admission to the School of Medicine for students who perform satisfactorily in the program. This unit is also responsible for the prematriculation program for minority students admitted to the medical school.



# COLLEGE OF NURSING

DEAN: Barbara K. Redman

# Foreword

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 which 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 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 and master's programs of the College are accredited by the National League of Nursing. In addition, the BSN and MSN programs have preliminary approval by the newly-established Commission for Collegiate Nursing Education.

## Degree Programs

*BACHELOR OF SCIENCE in Nursing*

*\*MASTER OF SCIENCE in Nursing -- with a clinical major in:*

- Adult Acute Care Nursing
  - Critical Care Nursing Option
- Adult Primary Care Nursing
  - Gerontological Nurse Practitioner Option
- Psychiatric Mental Health Nurse Practitioner
- Community Health Nursing
- Advanced Nursing Practice with Women, Neonates and Children

*\*GRADUATE CERTIFICATE PROGRAM in*

- Nursing Education
- Transcultural Nursing

*\*DOCTOR OF PHILOSOPHY in Nursing*

\*For specific requirements, see the Wayne State University Graduate Bulletin.



## ADMINISTRATION and FACULTY

Dean: Barbara Redman  
Associate Dean, Academic and Clinical Affairs: Stephen Cavanagh  
Associate Dean, Research: Ada Jacox  
Interim Assistant Dean, Adult Health: Barbara Pieper  
Assistant Dean, Family, Community, and Mental Health:  
Mary Nies  
Administrative Assistant Dean for Student Affairs: Vickie Radoye  
Assistant to the Dean: Mercedes Wolfe  
Administrative Manager: Betty Bontsas  
Academic Staff: Felicia Grace, Jane Helinski, Rosalind Reaves

### *Professors*

Mary Nies, Marilyn Oermann, Barbara Redman, Virginia Rice

### *Associate Professors*

Nancy Artinian, Stephen Cavanagh, Chandice Covington, Mary Denyes, Judith Floyd, Hertha Gast (clinical), Ingvarda Hanson, Mary Jirovec, Barbara Pieper, Jeannette Poindexter, Feleta Wilson

### *Assistant Professors*

Ramona Benkert (clinical), Frances Board (clinical), Eileen Chasens, May Dobal, Marie Draper Dykes, Judith Fry-McComish, Michael Morgan, Daphne Nedd (clinical), Kathleen Patusky (clinical), Stephanie Schim, April Vallerand, Olivia Washington, Linda Weglicki (clinical), Frances Wimbush (clinical)

### *Clinical Instructors*

Joanne Ashare, Esther Bennett, Suzanne Billingsley, Darlene Blair, Ann Collins, Margaret Falahee, Diane Featherston, Kathryn Keves-Foster, Kathleen Kowalewski, Lynne McEnroe, Pamela McNeil, Barbara Moore, Linda Sikora, Catherine Sikorski, Susan Szczesny, Sue Webb, Christine Weber

### *Lecturers*

Joan Bickes, Judith Fouladbakhsh, Janet Harden, Dianne Hayward, Margie Miller, Barbara Williams

## COLLEGE DIRECTORY

Dean . . . . . 112 Cohn; 577-4070  
Associate Dean for Academic & Clinical Affairs . . . . . 230 Cohn  
577-4138 and: 800-544-3890  
Assistant Dean, Adult Health . . . . . 376 Cohn; 577-4144  
Assistant Dean, Family, Community & Mental Health  
242 Cohn; 577-4119  
Office of Student Affairs. . . . . 10 Cohn; 577-4082  
Center for Health Research . . . . . 315 Cohn; 577-4134  
Administrative Manager . . . . . 100 Cohn; 577-4086

*Mailing address for all offices:* College of Nursing, Wayne State University, 5557 Cass Avenue, Detroit, Michigan 48202

*Web:* <http://www.nursing.wayne.edu>

# BACHELOR OF SCIENCE IN NURSING

The undergraduate program is designed to prepare students upon graduation to begin the practice of professional nursing. The program leads to the degree of Bachelor of Science in Nursing (BSN) and provides a basis for graduate study in nursing. This curriculum consists of courses in both general and professional education. Program options include: Traditional, Second Career/Second Degree, and Accelerated RN-MSN.

## Professional Program Admission

**TRADITIONAL:** Applicants are eligible to apply to the Traditional Program if they are entering nursing for the first time and have completed the pre-nursing requirements (see below). The Traditional Program of study begins during the fall term of the sophomore year. Students are eligible to apply for entry into the professional program after having completed at least thirty credits which include specific prerequisite courses, as outlined below, with a grade of 'C' (2.0) or better in each course. Applicants must have a minimum 2.5 grade point average in prerequisite courses to be *eligible* for admission consideration. If any professional nursing courses have been taken, grades earned in those courses will become part of the admission grade point average. Admission to the program is highly competitive and is based in large part on the grade point average earned in the prerequisite courses; therefore, the higher the average, the greater the likelihood of admission. The applicant's academic record indicating ability to pursue a full-time rigorous professional program is part of the admission criteria.

**SECOND CAREER/SECOND DEGREE:** Applicants are eligible to apply to the Second Career/Second Degree Program if they have an earned baccalaureate degree from an accredited institution in a discipline other than nursing and are entering nursing education for the first time. This is an accelerated, full-time program beginning in the fall term for four consecutive semesters. Applicants are eligible to apply for entry into the program after completing the prerequisite courses (see below) with a grade of 'C' (2.0) or better in each course. Applicants must have a minimum 2.5 grade point average in prerequisite courses to be eligible for admission consideration. If any professional nursing courses have been taken, grades earned in those courses will become part of the admission grade point average. Admission to the program is highly competitive and is based in large part on the grade point average earned in the prerequisite courses; therefore, the higher the average, the greater the likelihood of admission. The applicant's academic record indicating ability to pursue a full-time rigorous professional program is part of the admission criteria.

**ACCELERATED RN-MSN:** Applicants are eligible to apply to the Accelerated RN-MSN Program if they are Michigan licensed registered nurses and are interested in preparing for advanced nursing practice at the master's level. The Accelerated RN-MSN Program combines the baccalaureate and master's degree programs for academically talented RNs. The program allows students to apply a maximum of fifteen graduate credits toward both an undergraduate degree and a graduate degree in nursing. Upon completion of all BSN requirements, students, if admissible to graduate study, complete MSN requirements.

Admission to the program is based upon a nursing program grade point average of at least 3.0. Progression into senior year professional nursing courses is granted after completion of all prerequisite courses.

Admission to the MSN portion of the program is a separate application process and students must meet all College of Nursing and Graduate School admission requirements for graduate study. (See Wayne State University Graduate Bulletin for details.) This process begins at the start of senior level professional course work. Completion of the Bachelor of Science in Nursing does not automatically guarantee admission to graduate study in the College of Nursing.

**Presidential Scholars:** Wayne State University Presidential Scholars are admitted directly to the College of Nursing as freshmen or transfer students. Presidential Scholars must satisfactorily complete all Traditional Program prerequisite courses (see below) prior to applying to the professional nursing component beginning in the sophomore year (fall term) and must maintain Presidential Scholarship standards, including a grade point average of 3.0 or above. They must also apply directly to the College to begin the professional component of the program and meet program application deadlines.

## Application

**Admission** to the Bachelor of Science in Nursing programs is a two-step process.

*Step I -- Application to Wayne State University:* Applicants must submit the following items to the Office of University Admissions: the *Application for Undergraduate Admission*, application fee, official transcripts from all post-secondary institutions attended, and a copy of current Michigan RN license (if applicable). Applicants must meet all the general requirements for undergraduate admission to the University (see page 15). International applicants must also achieve a minimum score of 550 on the Test of English as a Foreign Language (TOEFL) and submit all other required documentation (see 'International Students,' page 17).

*Step II -- Application to the College of Nursing:* Applicants must submit to the College of Nursing Office of Student Affairs the *Application for Admission to the Bachelor of Science in Nursing Program*, and a copy of all transcripts from all post-secondary institutions attended.

**APPLICATION DEADLINES:** All admission materials listed above must be received in the appropriate offices by the program application deadline dates listed below:

### TRADITIONAL PROGRAM:

Fall Admission . . . . . March 31

### SECOND CAREER/SECOND DEGREE PROGRAM:

Fall Admission . . . . . March 31

(Evidence of completion of all course prerequisites must be documented with official transcripts and received by the College of Nursing, Office of Student Affairs, no later than June 1.)

### ACCELERATED RN-MSN PROGRAM:

Fall Admission . . . . . August 1

Winter Admission . . . . . December 1

Spring/Summer Admission . . . . . April 1

*All application materials must be received by the deadline date to be considered for admission.*

## Readmission

Nursing students whose attendance in the nursing clinical sequence of the curriculum has been interrupted for more than one academic year must apply for readmission to the College of Nursing. Contact the Office of Student Affairs for application materials and deadline dates. Readmission decisions are based on the student's academic record and space availability. There is no assurance that a student can be readmitted once the student withdraws from the program or does not progress in the program within the specified time limitation.

## Transfer Students

Students may transfer credit for the prerequisite courses from community colleges or universities and apply for admission to the College of Nursing. Students may apply for transfer to upper division levels from BSN accredited programs. Transfers to the upper division level will be determined by the equivalency of curricula as determined by the Associate Dean for Academic and Clinical Affairs and upon available space in the program in upper division courses. The College determines which transfer credit is applicable to the BSN degree.

## Pre-Nursing Requirements

**TRADITIONAL PROGRAM:** The pre-nursing requirements for admission into the Traditional Program are completion of a minimum of thirty credits, including satisfaction of the Mathematics Competency (MC) requirement of the General Education Requirements, and completion of the following courses with a grade of 'C' (2.0) or better:

	<i>credits</i>
BIO 1510 -- (LS) Basic Life Mechanisms (Laboratory) . . . . .	4
BIO 2200 -- (LS) Introductory Microbiology . . . . .	4
BIO 2870 -- Anatomy and Physiology (Laboratory) . . . . .	5
CHM 1020 -- (PS) General Chemistry I (Laboratory) . . . . .	4
CHM 1030 -- General Chemistry II (Laboratory) . . . . .	4
ENG 1020 -- (BC) Introductory College Writing . . . . .	4
PSY 1010 -- (LS) Introductory Psychology . . . . .	4
PSY 2400 -- Developmental Psychology . . . . .	4
SOC 2000 or ANT 2100	
-- (SS) Understanding Human Society . . . . .	3
-- (SS) Introduction to Anthropology . . . . .	3
Mathematics Competency (MC) Requirement	

The Mathematics Competency (MC) requirement may be satisfied by examination (see General Education Requirements, page 29). All applicants must have a minimum 2.5 grade point average in prerequisite courses to be *eligible* for admission consideration. If any professional nursing courses have been taken, grades earned in those courses will become part of the admission grade point average. Since admission to the program is competitive, the higher the grade point average, the greater the likelihood of admission.

NOTE: All sciences must include a laboratory component, and the anatomy and physiology requirement must have been completed within five years prior to entry into the program.

**SECOND CAREER/SECOND DEGREE PROGRAM:** The pre-nursing requirements for admission into this program include completion of a baccalaureate degree from an accredited institution, and completion of the following courses with a grade of 'C' (2.0) or better:

	<i>credits</i>
BIO 1510 -- (LS) Basic Life Mechanisms (Laboratory) . . . . .	4
BIO 2200 -- (LS) Introductory Microbiology (Laboratory) . . . . .	4
BIO 2870 -- Anatomy and Physiology (Laboratory) . . . . .	5
CHM 1020 -- (PS) General Chemistry I (Laboratory) . . . . .	4
CHM 1030 -- General Chemistry II (Laboratory) . . . . .	4
PSY 2400 -- Developmental Psychology . . . . .	4
One Sociology (SOC) course . . . . .	3
OR One Foreign Culture (FC) course . . . . .	3
ANT 2100 -- (SS) Introduction to Anthropology . . . . .	3
Philosophy and Letters (PL) OR Visual & Performing Arts (VP) course . . . . .	3

All applicants must have a minimum 2.5 grade point average in prerequisite courses to be *eligible* for admission consideration. If any professional nursing courses have been taken, grades earned in those courses will become part of the admission grade point average. Since admission to the program is competitive, the higher the grade point average, the greater the likelihood of admission.

NOTE: All sciences must include a laboratory component and the anatomy and physiology requirement must have been completed within five years prior to entry into the program.

## Enrollment in Professional Nursing Courses

1. **Admission** to the College of Nursing and fulfillment of all prerequisites/corequisites identified for nursing courses.

2. **Health Status Report:** Students admitted to the College are required to have a *Health Clearance Form* on file in the Office of Student Affairs. The health clearance must indicate that the student is in good health, free from communicable disease, and able to engage in a rigorous professional program with extensive clinical experiences. Health requirements are specified on the clearance form; some must be repeated yearly. Verification of compliance must be supplied annually to the Office of Student Affairs prior to July 15 for clinical courses beginning Fall Term. Throughout the program students must maintain a level of health consistent with meeting the objectives of the curriculum and practicing nursing safely. If a health problem occurs during a student's educational program, the faculty member responsible for clinical practice will assess the student's ability to continue in the program and will make recommendations for action to the Associate Dean for Academic and Clinical Affairs. The University and the College reserve the right to refuse or cancel a student's admission or to restrict his/her activities in the College if the health status indicates such action is warranted for safeguarding the patient, the student, other students, or the University.

3. **Liability Insurance:** The minimum amount of malpractice liability insurance acceptable is \$1,000,000/\$3,000,000 to cover each year of the student's nursing studies. Each student is to present a copy of his/her insurance policy to the Office of Student Affairs no later than July 15 of each year. This copy must show the amount of coverage, the expiration date, and the student's name. Students may not participate in clinical courses without a copy of this policy being on file.

4. **BLS for Health Care Providers Certification:** All students must have BLS for Health Care Providers (BLS-HCP) Certification or the equivalent for entry to clinical courses. It must be updated each year and students must have current, updated certification on file in the Office of Student Affairs by July 15 of each year.

Faculty are directed to deny student access to clinical experiences if the student cannot present proof of current health clearance, BLS certification, and malpractice insurance.

## Re-Entry into the Clinical Sequence of the Nursing Curriculum

Students whose progression in the clinical sequence of the program is interrupted due to unsatisfactory completion of course work prerequisite to a clinical course or to interruption in attendance in the program, must apply for re-entry into the clinical sequence. Contact the Office of Student Affairs for re-entry application materials. Students must file this application prior to March 31 for Fall Term re-entry, or August 31 for Winter Term re-entry. Application for re-entry will be reviewed by the College's Scholastic Policy and Admissions (SPA) Committee. Re-entry decisions are based on the student's academic record in the program and space availability; re-entry is not guaranteed.

## Registration

Each student is to register at the beginning of each semester according to the procedure and schedule published in the official University Schedule of Classes. Students may not attend classes unless they are officially registered. The usual full-time undergraduate program is 12-16 credits per term.

## DEGREE REQUIREMENTS

Candidates for the Bachelor of Science in Nursing must complete 128 credits in course work in accordance with the academic procedures of the University and the College; see pages 15-46 and 349-351, respectively.

**Residency:** The last thirty credits of the degree must be taken at Wayne State.

**Grade Point Average:** A student must maintain a grade point average of at least 2.0 in total residence credit and in all nursing courses and corequisite courses.

**Curriculum and Program Requirements:** A student must complete the curriculum and program requirements, remove any marks of 'I' or 'Y', and be recommended by the faculty for the degree. The student must complete the required minimum number of credits, elect courses in the proper sequence in the appropriate curriculum (as shown below), and satisfy any course prerequisite or corequisite.

## Professional and General Education Requirements for the Traditional Program

The following curriculum outlines the total 128 credits required for the Bachelor of Science in Nursing, including sixty-three credits in nursing major courses. The last thirty credits of the degree must be taken at Wayne State University.

### Freshman Year

<i>First Semester (Fall)</i>	<i>credits</i>
ENG 1020 -- (BC) Introductory College Writing . . . . .	4
BIO 1510 -- (LS) Basic Life Mechanisms (Laboratory) . . . . .	4
CHM 1020 -- (PS) General Chemistry II (Laboratory) . . . . .	4
PSY 1010 -- (LS) Introductory Psychology . . . . .	4
UGE 1000 -- (GE) Information Power . . . . .	1
	Total: 17

### *Second Semester (Winter)*

PSY 2400 -- Developmental Psychology . . . . .	4
BIO 2200 -- (LS) Introductory Microbiology (Laboratory) . . . . .	4
BIO 2870 -- Anatomy and Physiology (Laboratory) . . . . .	5
CHM 1030 -- General Chemistry II (Laboratory) . . . . .	4
SOC 2000 or ANT 2100	
-- (SS) Understanding Human Society . . . . .	3
-- (SS) Introduction to Anthropology . . . . .	3
Satisfaction of Mathematics Competency (MC) Requirement	
	Total: 20

### Sophomore Year

<i>First Semester (Fall)</i>	
NUR 2000 -- Conceptual Basis of Professional Nursing . . . . .	2
NUR 2010 -- Health Assessment: History Taking & Physical Examination . . . . .	4
NUR 2020 -- Foundations of Health & Health Promotion . . . . .	4
NUR 2030 -- Pathophysiology Related to Nursing Practice . . . . .	2
Critical Thinking (CT) . . . . .	0-3
	Total: 12-15

### *Second Semester (Winter)*

NUR 2040 -- Environments of Care in the Community . . . . .	2
NUR 2050 -- Supportive Measures for Basic Care Needs . . . . .	4
NUR 2060 -- Nursing Implications of Drug Administration . . . . .	2
NFS 2210 -- Human Nutrition . . . . .	3
Computer Literacy (CL) proficiency (NUR 1110 recommended) . . . . .	0-2
Oral Communication (OC) . . . . .	0-2
	Total: 11-15

## Junior Year

### First Semester (Fall)

NUR 3010 --Restorative Care of Adults & Elders with Acute Illness.6	
NUR 3015 --Restorative Care: Psychiatric Mental Health Nur: Life Span	5
ENG 3010 or ENG 3030	
-- (IC) Intermediate Writing	3
-- (IC) Writing the Research Paper	3
	Total: 14

### Second Semester (Winter)

NUR 3020 -- Restorative Care of Adults & Elders with Chronic Illness 6	
NUR 3400 -- Introduction to Nursing Research	2
Philosophy and Letters (PL)	3
American Society & Institutions (AI)	3
	Total: 14

## Senior Year

### First Semester (Fall)

NUR 4010 -- Integrative Care of Children & their Families	5
NUR 4020 -- Integrative Care of the Perinatal Family	5
NUR 4030 -- Community Health Nur. Pract.: At-Risk Urban Populations.	4
Foreign Culture (FC) (NUR 4800 recommended)	3
	Total: 17

### Second Semester (Winter)

NUR 4040 -- Leadership and Management in Nursing Practice	4
NUR 4050 -- Transition to Professional Nursing Practice	4
NUR 4060 -- Legal, Ethical & Health Policy Issues	2
Historical Studies (HS)	3
Visual and Performing Arts (VP)	3
	Total: 16
Total BSN Credits	128

## Professional Education Requirements for the Second Career/Second Degree Program

In addition to the pre-nursing requirements for the Second Career/Second Degree Program (see page 346) the following professional educational courses are required, in addition to a minimum of sixty-three credits in prior baccalaureate and pre-nursing requirements:

### First Semester (Fall)

NUR 2000 -- Conceptual Basis of Professional Nursing	2
NUR 2010 -- Health Assessment: History Taking & Physical Examination	4
NUR 2020 -- Foundations of Health & Health Promotion	4
NUR 2030 -- Pathophysiology Related to Nursing Practice	2
NUR 2050 -- Supportive Measures for Basic Care Needs	4
NUR 2060 -- Nursing Implications of Drug Administration	2
NFS 2210 -- Human Nutrition	3
	Total: 21

### Second Semester (Winter)

NUR 2040 -- Environments of Care in the Community	2
NUR 3010 --Restorative Care of Adults & Elders with Acute Illness.6	
NUR 3015 --Restorative Care: Psychiatric Mental Health Nur: Life Span	5
NUR 3400 -- Introduction to Nursing Research	2
	Total: 15

### Third Semester (Spring/Summer)

NUR 3020 -- Restorative Care: Adults & Elderly: Chronic Illness	6
NUR 4010 -- Integrative Care of Children & Families	5
NUR 4020 -- Integrative Care of the Perinatal Family	5
	Total: 16

### Fourth Semester (Fall)

NUR 4030 -- Community Health Nur. Pract.: At-Risk Urban Populations	4
NUR 4040 -- Leadership and Management in Nursing Practice	4
NUR 4050 -- Transition to Professional Nursing Practice	4
NUR 4060 -- Legal, Ethical & Health Policy Issues	2
	Total: 14

Nursing credits	63
Non-Nursing credits	65
BSN Total Credits	128

## Professional and General Education Requirements for Accelerated RN--MSN Program

Progression of the RN student in the Accelerated RN-MSN Program to senior-level nursing courses is contingent upon satisfactory completion all prerequisite courses listed below.

credits

Nursing Credits by Special Examination (NCLEX)	33
In addition, <i>all students must achieve grades of 'C' (2.0) or better</i> in all courses cited below. These courses may NOT be taken for Passed/Not Passed grades. A cumulative University g.p.a. of 2.0 or above must be maintained.	
BIO 1510 -- (LS) Basic Life Mechanisms (Laboratory)	4
BIO 2200 -- (LS) Introductory Microbiology (Laboratory)	4
BIO 2870 -- Anatomy and Physiology (Laboratory)	5
CHM 1020 -- (PS) General Chemistry I (Laboratory)	4
CHM 1030 -- General Chemistry II (Laboratory)	4
ENG 1020 -- (BC) Introductory College Writing	4
ENG 3010 or ENG 3030	
-- (IC) Intermediate Writing	3
-- (IC) Writing the Research Paper	3
PSY 1010 -- (LS) Introductory Psychology	4
PSY 2400 -- Developmental Psychology	4
SOC 2000 or ANT 2100	
-- (SS) Understanding Human Society	3
-- (SS) Introduction to Anthropology	3
NUR 2010 -- Health Assessment: History Taking & Physical Examination	4

**General Education Requirements:** The student must also demonstrate satisfactory completion of the University General Education Requirements (see page 29), including English Proficiency (EP), Mathematics Competency (MC), Critical Thinking (CT), Computer Literacy (CL) (NUR 1110 recommended), Oral Communication (OC), and UGE 1000 -- (GE) Information Power.

NOTE: Effective Fall 1991, UGE 1000 is not required of students transferring thirteen or more semester credits to Wayne State University.

**RN-MSN Declaration of Graduate Major:** Students in the Accelerated RN-MSN Program must declare their intended graduate major and begin the application process for admission to the Graduate School and the Master of Science in Nursing program before entering senior level nursing courses.

## Senior/Graduate Level Courses for the Accelerated RN-MSN Program

In addition to the prerequisites for progression into senior year (listed above), the following senior level professional nursing courses are required. The remaining General Education Requirements and liberal arts credits comprise the balance of the 128 credits required for the Bachelor of Science in Nursing. General Education Requirements and liberal arts electives (as needed to bring total number of degree credits to 128) may be taken prior to the senior level professional nursing course work. The last thirty credits in course work must be taken at Wayne State University.

Foreign Culture (FC) . . . . .	3
Historical Studies (HS) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3
Philosophy and Letters (PL) . . . . .	3
American Society and Institutions (AI) . . . . .	3
NUR 4030 -- Community Health Nursing Practice:	
Care of At-Risk Urban Populations . . . . .	4
NUR 4040 -- Leadership & Management in Nursing Practice . . . . .	4
NUR 6510 -- Health Economics, Policy, & Prof. Issues for APNs . . . . .	3
NUR 7010 -- Research in Nursing . . . . .	3
NUR 7100 -- Theoretical Foundations of Nursing Practice . . . . .	3
NUR 7110 -- Responses and Experiences in Health and Illness . . . . .	3
NUR 7000 or NUR 7030	
-- Statistics in Nursing . . . . .	3
-- Advanced Nursing Assessment . . . . .	4-5

The graduate level courses above (total fifteen credits) may be applied toward the Master of Science in Nursing degree for students admitted to graduate study in the College of Nursing. Once admitted to the MSN program, completion of degree requirements will require up to an additional thirty-seven credits in graduate course work, depending on the nursing major. Graduate majors include: Adult Primary Care Nursing/Gerontological Nurse Practitioner, Adult Acute Care Nursing/Adult Critical Care Nursing, Psychiatric Mental Health Nurse Practitioner, Community Health Nursing, and Advanced Practice Nursing with Women, Neonates and Children.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the section beginning on page 5. The following additions and amendments pertain to College of Nursing students.*

**The following definitions of terms** apply to the Academic Regulations:

1. **Professional course** means any course required in the professional nursing curriculum.
2. **Satisfactory grade** means a grade of 'C' (2.0) or better.
3. **Unsatisfactory grade** means a grade below 2.0, or a mark of 'X' or an unauthorized mark of 'W.'
4. **Probation** means a restricted status in the nursing program.
5. **Exclusion** from the program means that the student may not register in the program. (Continued registration in the University will necessitate that the student processes a Change of College to another academic program.)

## Attendance

Regular punctual attendance in classes and clinical practice is expected. It is imperative that students maintain a perfect or near-perfect attendance record. Tardiness and/or failure to report to class can result in a lowering of the final course grade or exclusion from the course.

## Time Limitation

**The Traditional Program** must be completed within four calendar years of admission to professional course work, unless an extension is granted by the Scholastic Policy and Admissions (SPA) Committee.

**The Second Career/Second Degree Program** must be completed within four consecutive semesters following admission to the program.

All students whose progress is delayed by reason of academic failure and/or leaves of absence beyond the time limitation for the program may be required to repeat and/or take additional course work in order to assure graduation with appropriate preparation for current professional nursing practice. Such determination will be made by the SPA Committee.

## Authorized Leave of Absence

A leave of absence may be requested by a student when personal circumstances interfere with the student's ability to devote sufficient time to academic pursuits to assure reasonable expectation of success. Leaves of absence are requested from and granted by the Associate Dean for Academic and Clinical Affairs, in consultation with the SPA Committee. The student should contact the Office of Student Affairs for the necessary materials and deadline dates regarding leaves of absence. A student who is granted an approved leave of absence is assured progression in the program as designated. A student who takes an unauthorized leave of absence will be considered to have voluntarily withdrawn from the program and must apply for readmission to the College.

## Licensure Preparation

Successfully writing the NCLEX (RN licensure examination) is essential for each nurse in order to begin a professional nursing career. Students graduating from the Traditional and Second Career/Second Degree Programs are required to complete a series of diag-

nostic tests and a general review of specific nursing content areas in preparation for taking the NCLEX. Each student is expected to complete additional contact hours in the classroom and the College's Learning Resource Center in preparation for licensure.

## Scholarship

1. All students must maintain a satisfactory (2.0) grade point average in both: a) cumulative grades (general education and nursing); and b) professional nursing courses.
2. Students must achieve a 2.0 g.p.a. in each nursing course. A student may not continue in subsequent courses for which the failed course is a prerequisite until a minimum of 2.0 has been achieved.
3. A grade below 'C' (2.0) in a nursing course is unsatisfactory for progression.
4. Students may apply to repeat a nursing course, as space is available, only once to raise the grade to the 2.0 level or above.
5. A maximum of two nursing courses within the program may be repeated.
6. No nursing course for which a student has received a passing grade may be repeated without written approval of the Associate Dean for Academic and Clinical Affairs.
7. A student receiving a 'C-minus' (1.67 g.p.a.) grade or less in either the theory or the clinical portion of any nursing course will have recorded no higher than a 'C-minus' for the total course and will be required to successfully complete the re-entry process to repeat it before progressing to the next clinical course.
8. The mark of 'I' is appropriate if the student encounters a catastrophic situation which prevents completion of the final requirements of a course. The mark of 'I' is not appropriate for unsatisfactory scholastic performance. In the event a mark of 'I' is given, the time limit for completion will be determined by the instructor, but may not exceed one year. In the event the mark of 'I' is received for a prerequisite course, the 'I' must be removed prior to enrollment in the subsequent course.

## Probation

Probationary status is a warning to a student to improve his/her academic performance in order to remain in the program.

1. A student is placed on probation if he/she does not maintain a minimum cumulative grade point average of 2.0.
2. A student is placed on probation if he/she does not maintain a minimum grade point average of 2.0 in professional nursing courses.
3. A grade point average must be returned to a minimum of 2.0 to remove probationary status. Probationary status must be removed within one calendar year.
4. Students on probation are not eligible to represent the College in any student activity.

## Exclusion

A student will be excluded from the College if any of the following conditions occur:

1. Failure to satisfactorily complete a nursing course after two attempts;
2. Failure of more than two professional nursing courses;
3. Failure to remove probationary status within one calendar year;
4. Irresponsible attendance or irresponsible performance/behavior at any time while enrolled in the program;
5. Failure to meet any special conditions required by the College SPA Committee for the student's continuation in the program;

6. Failure to complete the program within the time limitations outlined above, unless granted an extension by the Scholastic Policy and Admissions Committee.

## Graduation Residency Requirement

The last thirty credits of the degree must be taken as resident credit at Wayne State University.

## Graduation With Distinction

A candidate eligible for the bachelor's degree may receive a special diploma with *Cum Laude*, *Magna Cum Laude*, or *Summa Cum Laude* indicated. For the University guidelines regarding these distinctions, see page 39.

## Dean's List and Honors List

Students completing twelve semester credits in study at Wayne State University are eligible for appointment each semester. The semester grade point average at Wayne State must be 3.75 or above in order to qualify for the Dean's List. The Honors List requires a minimum grade point average of 3.50. Lists of students on the Dean's List and Honors List will be posted in 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 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 adviser. The faculty reserves the right to amend or revise the policies and requirements set forth in the College of Nursing section of this bulletin.

A student may be required to withdraw from the College when, in the judgment of the faculty, behavior demonstrates that the student is unsuited for nursing. (See also Exclusion, above.)

*Student Rights and Responsibilities for the University:* see page 43.

## Financial Assistance

The University Office of Scholarships and Financial Aid, 3 West, Helen Newberry Joy Student Services Center (see page 20), 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 July 1.

*College of Nursing Alumni Community Service Award:* Award open to any nursing student who shows evidence of community involvement, has a minimum g.p.a. of 3.0, and demonstrates qualities of leadership and financial need.

*College of Nursing Alumni Endowed Scholarship:* Award open to any full-time nursing student with a minimum g.p.a. of 3.0, qualities of leadership, and financial need.

*College of Nursing Alumni Undergraduate Scholarship:* Award open to any full-time undergraduate nursing student with a minimum g.p.a. of 3.0, qualities of leadership, and financial need.

*Mildred E. Halvorsen Endowed Scholarship:* Award open to any full-time student accepted into the College of Nursing.

*John Helfman Nursing Scholarship:* Award open to any undergraduate nursing student with senior class standing, outstanding scholastic

achievements and leadership abilities, and demonstrated financial need.

*Helen Newberry Joy Scholarship:* Award open to any undergraduate student admitted to the College, based on financial need and with consideration given to academic standing and service.

*Metro Health Foundation Scholarship:* Award open to any full-time student enrolled in the junior or senior year of the Traditional Program or RN with senior standing, who demonstrates willingness to complete a service project (with written and oral presentations) that meets a specific health care need within the community.

*Richard and Ruth Morrisey Endowed Scholarship:* Award open to any full-time undergraduate student enrolled in a degree program in the College of Nursing.

*Beatrice L. Murray Endowed Scholarship:* Award open to any full-time student accepted into the College of Nursing.

*Carolyn L. Rivers Annual Scholarship in Nursing:* Award open to any full-time student enrolled in a College of Nursing degree program whose family has a demonstrated financial need.

*Carol Peterson Rosso Award:* Award open to senior students with outstanding scholastic achievement and financial need.

*Sigma Theta Tau Scholarship:* Award open to any student enrolled in a College of Nursing degree program.

*Steiger Memorial Scholarship:* Award open to any nursing student with demonstrable financial need.

*Joseph Taranto Undergraduate Scholarships:* Awards open to any undergraduate student enrolled in a College of Nursing degree program.

*Wayne County Medical Society Auxiliary Scholarship in Nursing:* Award open to nursing students with a minimum 3.0 g.p.a. and demonstrated financial need.

*WSHF Student Financial Assistance Award:* Award open to any nursing student; selected on the basis of scholastic achievement, qualities of leadership, and financial need.

## Organizations

*The College of Nursing Council* is composed of elected representatives of students and faculty. Its purpose is to reflect the concerns of the student members to the University and the larger community.

*W.S.U. Chapter of the National Student Nurses' Association* provides a means of professional development for students and for direct participation by students in the continuing development of nursing.

*Chi Eta Phi Sorority, Inc.*, is a national professional nurses' organization with a focus on African American nursing issues.

*Sigma Theta Tau*, International Honor Society of Nursing, installed Lambda Chapter on the Wayne State University campus in 1953. Its purposes include recognition of superior scholastic achievement and leadership potential. Candidates for membership are elected annually from baccalaureate and graduate programs.

*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.

## 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 and Counseling Services, 1001 Faculty/Administration Building.

## UNDERGRADUATE COURSES (NUR)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **1110 (CL) Introduction to Computers and Technology for Health Care Professionals. Cr. 2**

Introduction to computer terminology, hardware, software, telecommunication, word processing, database, spreadsheet; impact of computer technology on health care practitioners. Computer laboratory activities. (F,W)

### **2000 Conceptual Basis of Professional Nursing Practice. Cr. 2**

Introduction to the discipline and profession of nursing through the examination of historical development, legal and professional regulations, conceptual models and theories, research-theory-practice relationships, clinical reasoning, and ethical principles. (F,W)

### **2010 Health Assessment: History Taking and Physical Examination. Cr. 4**

Prereq: admission to the College of Nursing or RN licensure in Michigan; anatomy and physiology course; coreq: NUR 2020. Foundational learning experience for performing comprehensive health assessments of individuals in the context of family and community. Included are theory and skill in health history-taking, physical examination, and mental health screening of children, adults, and elders. Material fee as indicated in the Schedule of Classes. (T)

### **2020 Foundations of Health and Health Promotion Practice. Cr. 4**

Prereq: admission to College of Nursing; Coreq: NUR 2000 and 2010. CPR-PR certification, liability insurance, health clearance required. Introduction to the phenomenon of health experienced by individuals across the lifespan within the context of family, group, and community. Review of theoretical perspectives on health and health promotion, multiple factors that influence health, sources of diversity in the health experience and a wide repertoire of health promotion strategies. Material fee as indicated in the Schedule of Classes. (F)

### **2030 Pathophysiology Related to Nursing Practice. Cr. 2**

Prereq: an anatomy and a physiology course, including laboratory. No credit after IHS 3100 and IHS 3200. Exploration of processes by which disease occurs, body responses, and effects of diseases on normal physiology. Diseases explored in terms of definition, diagnosis, etiology, epidemiology, clinical manifestations, cultural and socioeconomic factors, and contemporary research. (T)

### **2040 Environments of Care in the Community. Cr. 2**

Prereq: NUR 2000 and 2020. Community environments as contexts of health and nursing care. Introduction to community as client; ethical, legal, environmental, and epidemiological concepts related to care of individuals, families and groups. (W)

### **2050 Supportive Measures for Basic Care Needs. Cr. 4**

Prereq. or coreq: NUR 2020, 2030, 2110 and 2060. CPR-PR certification, liability insurance, health clearance required. Supportive nursing care strategies for individuals in the context of family and community. Emphasis on scientific basis of supportive care, critical thinking and nursing process, development of basic nursing care skills, therapeutic communication, and understanding of cultural context. Material fee as indicated in the Schedule of Classes. (F,W)

**2060 Nursing Implications of Drug Administration. Cr. 2**

Prereq: BIO 2870; coreq: NUR 2050. Concepts of pharmacotherapeutics across the life cycle: theories of drug actions mediating physiological processes, variables affecting drug actions, and unusual and adverse reactions. Development of nursing role incorporating principles of safe, therapeutic, legal, and ethical principles. Psychological and cultural variations addressed. Contemporary research explored. Pharmacological math competency required. (F,W)

**3010 Restorative Care of Adults and Elders with Acute Illness. Cr. 6**

Prereq: NUR 2050, NFS 2210; prereq. or coreq: ENG 3010 or ENG 3030. CPR-PR certification, liability insurance, health clearance required. Theory and practice in providing nursing care to adults throughout the lifespan experiencing acute disruptions in living patterns within the context of their families and in a community-based systems of health care. Emphasis on practice within a theoretical framework using research-based interventions. (F,W)

**3015 Restorative Care: Psychiatric Mental Health Nursing Across the Lifespan. Cr. 5**

Prereq: junior standing; CPR-PR certification; liability insurance; health clearance. Nursing care to individuals experiencing emotional crises and/or acute chronic psychiatric illnesses within the context of their families and communities. Biosocial theories of mental health and illness, determinants of mental illness; cultural and socioeconomic factors and psychotherapeutic modalities. Public and private systems of care for mental health promotion, restoration, and rehabilitation. (F,W)

**3020 Restorative Care of Adults and Elders with Chronic Illness. Cr. 6**

Prereq: NUR 3010; CPR-PR certification; liability insurance and health clearance. Theory and practice in providing nursing care to adults throughout the adult lifespan experiencing chronic disruptions in living patterns within the context of their families in a community based system of healthcare. (W,S)

**3400 Introduction to Nursing Research. Cr. 2**

Prereq: NUR 2000, 2050, computer literacy or NUR 1110. Introduction to the research process and research utilization in nursing practice. Research problems, access and retrieval of research literature and databases, reading and critiquing research studies, and individual and organizational strategies to promote research-based practice. (W)

**4000 Research-Based Interventions for Health Promotion. Cr. 4**

Prereq: admission to senior year in nursing; Michigan R.N. licensure. Open only to Registered Nurses; CPR-PR certification, liability insurance, health clearance required. Theoretical perspectives of health and health promotion; factors influencing human health and research-based health promotion interventions. Use of lifespan approach field testing of diverse interventions for health promotion. Emphasis on teaching strategies to improve health status of families, groups, and communities based on learning theories and group dynamics. (Y)

**4010 Integrative Care of Children and Their Families Cr. 5**

Prereq: senior standing; CPR-PR certification; liability insurance; health clearance. Theory and practice in care of children in various states of health in the context of their families. Emphasis on knowledge of age-appropriate normal biological, physical, psychosocial, cognitive, moral, spiritual, and social development as a basis for implementing health promotive, supportive, and restorative practices with children of all ages in the context of their families in community-based systems of health care. (F,S)

**4020 Integrative Care of the Perinatal Family. Cr. 5**

Prereq: senior standing; CPR-PR certification; liability insurance; health clearance. Theory and practice in care of the perinatal family: woman, fetus, newborn, and other members from preconception to

postpartum and newborn in the first month of life. Emphasis on integrative care: health assessment, risk assessment, health promotion, supportive and restorative care of the woman and the family. Exploration of ethical and consumer movement effects on prenatal care. Material fee as indicated in the Schedule of Classes. (F,S)

**4030 Community Health Nursing Practice: Care of At-Risk Urban Populations. Cr. 4**

Prereq: senior standing; CPR-PR certification; liability insurance; health clearance. Comprehensive learning experiences in community health nursing. Direct integrative care (health promotion, restorative and support care), and indirect services to urban at-risk individuals, families, populations, and communities. Concepts include: community populations, community as client, population-focused partnerships, collaborative practices and interdisciplinary teams. (F)

**4040 Leadership and Management in Nursing Practice. Cr. 4**

Prereq: senior standing; CPR-PR certification; liability insurance; health clearance. Theory and skill development in leadership processes in nursing practice. Assessment of a health care system, analysis of nurses' roles, organizational design systems theory, leadership and management theory, culture, decision-making, delegation, conflict management, and planned change. (Y)

**4050 Transition to Professional Nursing Practice. Cr. 4**

Prereq: senior standing; CPR-PR certification; liability insurance; health clearance. Theory and practice in care of groups of patients with complex acute and chronic illness needs. Advanced critical thinking, clinical knowledge and judgment, and nursing skills. Organizational and interpersonal skill development for micro and macro management of groups of patients in a multidisciplinary environment. (Y)

**4060 Legal, Ethical, and Health Policy Issues. Cr. 2**

Prereq: senior standing. Legal, ethical, and health policy issues affecting health care delivery, policy formulation, and nursing practice. Interaction between health policy and finance as it effects the consumer and the environment in which nursing is practiced. (Y)

**4110 Psychiatric/Mental Health Nursing Care of Individuals and Groups. Cr. 6**

Prereq: senior standing. CPR-PR certification, liability insurance, health clearance required. Theory-based practice in providing health care to individuals of all ages and groups with varying degrees of psychiatric-mental health needs. Emphasis on group process and dynamics, promotion of personal and community mental health, humanistic care of the acutely and chronically ill client. (F,S)

**4120 (WI) Community Focused Nursing Practice. Cr. 6**

Prereq: senior standing. CPR-PR certification, liability insurance, health clearance required. Analysis of role of professional nurse in community settings: caring for individuals and groups from diverse cultural backgrounds at various developmental stages and at any point on the health-illness continuum. Satisfies the University General Education Writing Intensive Course in the Major requirement. (W,S)

**4150 Nursing Care of Acutely Ill Adults. Cr. 4**

Prereq: senior standing. Senior level course on care of acutely ill adults hospitalized with complex health care needs. Advancement of clinical knowledge, clinical judgement, critical thinking, and transitional care management of patient groups in a multidisciplinary environment. (T)

**4220 Leadership and Management in Nursing Practice. Cr. 4**

Prereq: senior standing, NUR 4110, 4120. BCLS-C certification, liability insurance, health clearance required. Organizational and management theories. Health care delivery systems, planned change theory, role conflict theory and research related to leadership and



management. Students function in nurse manager/leader role in the clinical setting. (F,W)

**4300 Nursing Informatics. Cr. 3**

Prereq: NUR 1110 or equiv.; senior standing or consent of instructor. Opportunity for nursing students or registered nurses to develop knowledge and skills in nursing informatics. (Y)

**4800 (FC) Transcultural Health Through the Life Cycle. Cr. 3**

Prereq: junior standing; completion of sixty credits. Transcultural health differences and similarities in selected Western and non-Western cultures, from birth through old age. Use of theories and research methods from the health and social sciences and humanities in study and analysis of different cultures. (Y)

**4990 Directed Study. Cr. 1-4**

Prereq: admission to College of Nursing; written consent of Associate Dean for Academic and Clinical Affairs. (T)

**6010 Writing for Nursing Publication. Cr. 3**

Graduate students prepare to write for nursing and health-care publications; process from beginning the manuscript through publication. (Y)

**6050 Nursing Information Systems. Cr. 3**

Prereq: computer literacy. Development of proficiency in use of nursing data and information systems for nursing information, clinical management and research. Ethical and moral implications of computerized information systems and proposed future directions for practice. (Y)

**6510 Health Economics, Policy, and Professional Issues for APNs. Cr. 3**

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. (F,W)



**COLLEGE OF PHARMACY and ALLIED  
HEALTH PROFESSIONS**

**INTERIM DEAN: Eberhard F. Mammen**

# Foreword

The College of Pharmacy and Allied Health Professions is a unit of the University formed by the administrative affiliation of the College of Pharmacy and the Division of Allied Health Professions of the School of Medicine. The academic programs of the two units maintain autonomous admission requirements, curricula, degree requirements and academic procedures.

## Location

The College is housed in Shapero Hall, 1400 Chrysler, and the Shapero Annex, 1390 Chrysler. It is in the heart of the principal metropolitan area of Michigan, as well as being in the vicinity of the Detroit Medical Center, the Wayne State University School of Medicine and Shiffman Medical Library. This location provides a wealth of settings in which students may participate as part of their professional development.

## Accreditation

Wayne State University is accredited by the North Central Association and all professional programs in the College of Pharmacy and Allied Health Professions are accredited by their respective agencies.

## DEGREES

Upon completion of the requirements listed in each of the programs, the College of Pharmacy and Allied Health Professions grants the following:

*BACHELOR OF SCIENCE in Clinical Laboratory Science*

*BACHELOR OF SCIENCE in Allied Health Sciences*

- Cytotechnology Concentration
- Laboratory Science Concentration
- Pharmaceutical Sciences Concentration
- Physical Therapy Concentration

*BACHELOR OF SCIENCE in Mortuary Science*

*BACHELOR OF SCIENCE in Occupational Therapy*

*BACHELOR OF SCIENCE in Pathologists' Assistant*

*BACHELOR OF SCIENCE in Pharmacy*

*POST-BACHELOR'S CERTIFICATE in Forensic Investigation*

*POST-BACHELOR'S CERTIFICATE*

*in Clinical Laboratory Science*

*\*DOCTOR OF PHARMACY with a major in  
Clinical Pharmacy*

*\*MASTER OF SCIENCE with majors in*

Health Systems Pharmacy Management

Occupational and Environmental Health Sciences with  
specialization in

Industrial Hygiene

Industrial Toxicology

Occupational Medicine

Pharmaceutical Sciences with specialization in

Medicinal Chemistry

Pharmaceutics

Pharmacology/Toxicology

*\*MASTER OF SCIENCE in Anesthesia*

*\*MASTER OF SCIENCE in Clinical Laboratory Science with  
specialization in*

Clinical Laboratory Instrumentation

Education/Management

Hematology

*\*MASTER OF SCIENCE in Occupational Therapy*

*\*MASTER OF SCIENCE in Physician Assistant Studies*

*\*MASTER IN PHYSICAL THERAPY*

*\*DOCTOR OF PHILOSOPHY with a major in  
Pharmaceutical Sciences with specialization in*

Medicinal Chemistry

Pharmaceutics

Pharmacology/Toxicology

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## COLLEGE DIRECTORY

### Interim Dean:

Eberhard Mammen . . . . . 105 Shapero Hall; 577-1574

### Associate Dean:

W. Dale Walls (Emeritus)

### Interim Deputy Dean for Allied Health and Graduate Officer:

Steven Siconolfi . . . . . 121 Shapero Hall; 577-0820

### Interim Deputy Dean for Pharmacy:

Hanley N. Abramson . . . . . 125 Shapero Hall; 577-1711

### Academic Services Officer:

Michael G. Koltuniak . . . . . 139 Shapero Hall; 577-1716

### Administrative Manager:

Mary R. Donahue . . . . . 101 Shapero Hall; 577-1576

### Assistant Dean, Student Affairs:

Wynefred H. Schumann . . . . . 143 Shapero Hall; 577-1719

### Assistant to the Dean:

Susan Christie . . . . . 127 Shapero Hall; 577-1574

### Minority Recruitment and Retention:

T. Delores Clark . . . . . 145 Shapero Hall; 577-4814

### Director of Enrollment Services and Registrar

Larry J. Zimmerman . . . . . 139 Shapero Hall; 577-1716

Richard H. Schell (Emeritus)

### *Faculty of Pharmacy*

#### Pharmaceutical Sciences:

George B. Corcoran . . . . . 528 Shapero Hall; 577-1047

Craig K. Svensson . . . . . 639 Shapero Hall; 577-2033

#### Pharmacy Practice:

Richard L. Slaughter . . . . . 328 Shapero Hall; 577-0824

Douglas A. Miller . . . . . 428 Shapero Hall; 577-5369

### *Faculty of Allied Health Professions*

#### Anesthesia:

Prudentia A. Worth . . . . . 2V-4, Detroit Receiving Hospital; 745-3610

#### Clinical Laboratory Science:

Carol Watkins . . . . . 233 Shapero Hall; 577-1384

#### Mortuary Science:

Peter D. Frade . . . . . 102 Mortuary Science; 577-2050

#### Occupational and Environmental Health Sciences:

David J.P. Bassett . . . . . 628 Shapero Hall; 577-1551

#### Occupational Therapy:

Joseph Pellerito . . . . . 309 Shapero Hall; 577-1435

#### Physical Therapy

Louis R. Amundsen . . . . . 435 Shapero Hall; 577-1432

#### Physician Assistant Studies:

Howard J. Normile . . . . . 60 East Farnsworth; 577-1368

*Website:* <http://wizard.pharm.wayne.edu/welcome.html>

Mailing address for all offices: College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

# FACULTY OF PHARMACY

## History

The Faculty of Pharmacy is the component of the College of Pharmacy and Allied Health Professions offering a program of professional pharmaceutical education at the undergraduate, graduate and graduate-professional levels. This unit of the College of Pharmacy and Allied Health Professions traces its past through two pharmacy colleges.

In 1890, the Detroit College of Pharmacy was founded as a program in the Detroit Medical College, the forerunner of the Wayne State University School of Medicine. The Detroit College of Pharmacy later separated from its parent institution, operated independently for two years, and in 1907, affiliated with the Detroit Institute of Technology.

In response to the urging of Detroit area pharmacists, and developing from the six-year course in pharmacy established at Cass Technical High School two years earlier, a new College of Pharmacy was organized by the Detroit Board of Education in 1924. This College of Pharmacy and the Detroit Board of Education's Colleges of Medicine, Education, Liberal Arts, Engineering and Graduate School were united in 1933 into a university called the Colleges of the City of Detroit and named Wayne University in 1934. In 1957, one year after Wayne University became Wayne State University, the College of Pharmacy at the Detroit Institute of Technology joined the College of Pharmacy at Wayne by merging into Wayne State University.

## Goals

Wayne State University is committed to the advancement of higher education and the contribution of services and research to the advancement of society. The Faculty of Pharmacy strives toward the achievement of these general goals:

1. To provide for the training, education and professional development of pharmacy students and pharmacists.
2. To foster interdisciplinary, community, University and professional interaction in education, research and community development needs.
3. To foster, conduct and promote applied research and problem-oriented basic research as a vital element of pharmaceutical care.
4. To provide for scholarly development and the dissemination of research findings and scholarly thought.
5. To encourage and support the development of appropriate pharmacist role models for various practice setting.

Pharmacy is a dynamic and essential component of the health care delivery system. Updating the curriculum and responding to the changing needs of society presents an exciting challenge to which the Faculty of Pharmacy has repeatedly responded. To this end, statements, provisions, or regulations contained herein are neither offers nor parts of a contract and the Faculty of Pharmacy reserves the right to change, at any time, any such statements, provision or regulation.

## Policy on Recruitment

In accord with the Wayne State University Strategic Plan, the Faculty of Pharmacy of the College of Pharmacy and Allied Health Professions recruits students from cultural/minority groups that are underrepresented in the student body, and reserves the right to overenroll disadvantaged/underrepresented minority students who meet minimum program requirements.

## The Profession of Pharmacy

Expanded opportunities for pharmacists in patient-care roles and therapeutic decision-making have occurred as a result of several developments. Like most of the health professions, the practice of pharmacy has experienced profound change during the past three decades. Its traditional role in drug distribution has increasingly expanded to incorporate the concept of pharmaceutical care. The pharmaceutical care philosophy 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 being recognized at both the state and national levels. In recent years, several states have passed, or are considering, 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.

The profession of pharmacy continues to progress from a drug-product orientation to a more patient-focused practice. In addition, employers in managed care, long-term care, and primary care are demanding pharmacy professionals with increasingly higher levels of education. To allow pharmacy students to still be trained intensely in the basic sciences while emphasizing patient assessment, communication, and pharmacotherapy, an additional year of training is now required. Therefore, the Doctor of Pharmacy degree at Wayne State University is now the entry-level pharmacy degree program.

## Accreditation

Wayne State University's Doctor of Pharmacy and Baccalaureate in Pharmacy programs are accredited by the American Council on Pharmaceutical Education, 311 West Superior Street, Suite 512, Chicago, IL 60610, 312/664-3575, 800/533-3606; Fax, 312/664-4652.

The degree of Bachelor of Science in Pharmacy or Doctor of Pharmacy conferred by the College are the current minimal requirements for licensure eligibility and are recognized by all state boards of pharmacy.

## Degrees

*BACHELOR OF SCIENCE in Pharmacy*<sup>1</sup>

*BACHELOR OF SCIENCE in Allied Health Sciences*  
--Pharmaceutical Sciences Concentration

*\*DOCTOR OF PHARMACY with a major in clinical pharmacy*

*\*MASTER OF SCIENCE with majors in*  
*health systems pharmacy management*  
*pharmaceutical sciences with specialization in*  
*medicinal chemistry,*  
*pharmaceutics,*  
*pharmacology/toxicology*

*\*DOCTOR OF PHILOSOPHY with a major in*  
*pharmaceutical sciences with specialization in*  
*medical chemistry,*  
*pharmaceutics,*  
*pharmacology/toxicology*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

1. The B.S. in Pharmacy is accredited for admission through 2001 by the American Council on Pharmacy Education. The Faculty of Pharmacy will halt admissions to this program after Fall 2001, leaving the Doctor of Pharmacy program as the sole entry-level degree program in pharmacy at Wayne State University.

# PHARMACY PRACTICE

*Office:* 328 Shapero Hall; 577-0824

*Chairperson:* Richard L. Slaughter

*Associate Chairperson:* Douglas A. Miller

## *Professors*

David J. Edwards, Douglas A. Miller, Michael J. Rybak, Richard L. Slaughter, Jesse C. Vivian

## *Adjunct Professors*

Richard LaLonde, Richard L. Lucarotti, Larry K. Shoup, James G. Stevenson, Barbara J. Zarowitz

## *Associate Professors*

David S. Bach, Linda A. Jaber, Pramodini B. Kale-Pradhan, Paul J. Munzenberger, James E. Tisdale, Wynefred H. Schumann, Maureen A. Smythe, Victoria Tutag-Lehr

## *Adjunct Associate Professors*

J.V. Anandan, Kenneth H. Fish, Glenn Kaatz, Michael Powell, Gregory S. Umstead

## *Assistant Professors*

Dianne Cappelletty, John Dougherty, Peter Dumo, Laura Katz, Patty Keys, Lynette Moser, Dennis Parker, Denise Rhoney, Justine Schuller, Renu Singh, Geralynn B. Smith, William Sypula

## *Adjunct Assistant Professors*

Elaine M. Bailey, Denise Bajarski, Iman Bajjoka, Jeffrey Barletta, Andrea Battaglia, Julie R. Berman, Nella Bieszk, Len Billingsley, Daniel M. Colaluca, Ronald Coleman, Philip Cole, William A. Cornelis, Cliff Crabtree, Christine Donaldson, Mark Douglas, William Drake, Gerald L. Emmer, Gerald Franchina, Susan Hart, Richard H. Jennings, Beverly P. Kershaw, Polly Kintzel, Ronald H. Lukasiewicz, Kerry Manseau, Mark E. Mlynarek, Kellie Murry, Patricia Pacheco, Kathleen Pawlicki, Antonino Pettita, Krista Piekos, Cynthia L. Quince, Eric Racine, Randy F. Schad, Diana Sigler, Richard Smolarek, Allison Somerville, Virginia Spadoni, Mary Jane Sudekum, Edward G. Szandzik, Mark A. Touchette, Paul C. Walker, Cindy M. Weingarten, David B. Wright, Leslie Zanetti, Chris Zimmerman

## *Adjunct Instructors*

Maudestine Bell, Mary R. Bloome, Gerald E. Bodendistel, Marija G. Brandoline, Brian O. Brown, Lawrence Cantor, E. Philip Cole, Lisa A. Cortez, Glenn R. Currier, John S. Dryps, Amy Forbush-Roy, Carol R. Hillman-Wiseman, Ervin A. Galecki, Sandra M. Gryebet, Dennis B. Halstead, Rayne A. Henderson, Thomas R. Jantz, G. Richard Krieger, Christina Long, Allen N. Marmalad, Ronald A. McEachen, Jerome D. Mills, Mark E. Mlynarek, Deborah Njus, Mary E. Peters, Leonard W. Ptak, Carol Reneski, Thomas F. Rolands, Richard Roos, David Ruta, Noel Ryan, Deborah H. Schweyen, Prakash Shah, Elizabeth A. Simpson, Cheryl A. Szof, Steven J. Tebay, Mary C. Thorsby, Virginia Tekieli, Kenneth Wiasuk, Karl W. Widak, Moses C. Wu

# PHARMACEUTICAL SCIENCES

Office: 528 Shapero Hall; 577-1047

Chairperson: George B. Corcoran

Associate Chairperson: Craig K. Svensson

## Professors

Hanley N. Abramson, Martin Barr (Emeritus), George B. Corcoran, Raymond J. Dauphinais (Emeritus), Melvin F. W. Dunker (Emeritus), George C. Fuller, Fusao Hirata, Robert T. Louis-Ferdinand, Janardan B. Nagwekar (Emeritus), Craig K. Svensson, Henry C. Wormser

## Adjunct Professors

Jacob V. Ananda, David J.P. Bassett, Deepak K. Bhalla, Charles K. Grieshaber, Robert A. Levine, John F. Lechner, Joel G. Pound

## Associate Professors

Randall L. Commissaris, Alope K. Dutta, Richard A. Gibbs, Anjan Kowluru, William J. Lindblad, David K. Pitts, Patrick M. Woster

## Adjunct Associate Professors

Merlin E. Ekstrom, Peter D. Frade, Howard J. Normile, Ralph E. Parchment, J. Christopher States, Alice M. Young

## Assistant Professors

Bhaskara L. Jasti, Robert J. Kerns

## Adjunct Assistant Professors

Michael J. McCabe, Steven E. Rose, Bonita G. Taffe

## Degree Program

*BACHELOR OF SCIENCE in Allied Health Sciences*

*-- Pharmaceutical Sciences Concentration*

## BACHELOR OF SCIENCE IN ALLIED HEALTH SCIENCES --Pharmaceutical Sciences Concentration

This four-year professional program qualifies advanced standing students to either (1) complete the B.S. in Pharmacy professional program following an additional year of study, or (2) complete the postgraduate Doctor of Pharmacy (Pharm.D.) professional program after an additional two years of study, or (3) pursue graduate work or professional studies in another health-related area. Receipt of the B.S. in Allied Health Sciences (Pharmaceutical Sciences Concentration) does not satisfy eligibility requirements for licensure as a pharmacist. Receipt of either the B.S. in Pharmacy or the Pharm.D. are the current minimal requirements for licensure eligibility. The decision to pursue one of these two licensure-eligible programs is made at the end of the second professional year and is dependent on the student's professional plans and academic qualifications, as well as Faculty of Pharmacy resources.

Applicants for the Bachelor of Science in Allied Health Sciences (Pharmaceutical Sciences Concentration) must complete a minimum of fifty-eight semester credits in acceptable pre-professional courses. This total does not include the number of credits required to demonstrate competency in computer literacy, critical thinking, and oral communication (University General Education Requirements), which also must be completed prior to admission. Pre-professional credits

may be obtained at Wayne State University, another university, or a community college, and then applied towards admission to the professional pharmacy curriculum in the College of Pharmacy and Allied Health Professions.

For information on the Doctor of Pharmacy (Pharm.D.) professional program, see the Graduate Bulletin or contact the Department of Pharmacy Practice at (313) 577-0824.

## Preprofessional Admission

**Admission requirements** for the College of Liberal Arts are satisfied by the general requirements for undergraduate admission to the University; see page 13. Counselors are available in the Office of Admissions for personal conferences to aid the prospective student.

**Recommended High School Preparation:** Fifteen units of high school work are required for admission. The following units are recommended:

English . . . . .	4 units
Foreign Language . . . . .	1-2 units
Mathematics . . . . .	4 units
Laboratory Science . . . . .	3 units
Social Studies and History . . . . .	2 units

Students will find it advantageous to have had at least one year each of algebra, biology, chemistry, and physics. English, mathematics, and science are strongly recommended.

**Application:** For applicants who have not previously attended Wayne State University as undergraduate students, an official *Application for Undergraduate Admission* with a \$20.00 Application Fee must be filed in the University Office of Admissions before any consideration regarding admissibility can begin. The University application may be secured from the Office of Admissions. High school students in Michigan can secure an application from their high school counselor. Foreign applicants desiring admission should file an *Application for Admission to Undergraduate Studies for Applicants from Other Countries*, with a \$30.00 non-refundable application fee, with the admission office.

Applicants whose first language is not English must pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550. Applicants who have taken classes outside the United States must supply a detailed report evaluation of foreign educational credentials completed by Educational Credential Evaluators, Inc. (ECE). Contact ECE at 414-289-3400 for evaluation applications.

## PREPROFESSIONAL COURSE REQUIREMENTS

The following courses (or their equivalents) may be taken at Wayne State University, another university, or a community college. Students are advised that *no more than sixty-four* community college credits may be transferred as applicable to the Bachelor of Science in Allied Health Sciences (Pharmaceutical Sciences Concentration) degree. Requirements to be completed prior to admission to the pharmacy curriculum are:

1. Completion of fifty-seven credits in core courses (see below), plus any credits required to demonstrate competency in computer literacy, critical thinking, and oral communication.
2. Completion of each of the following core courses (or their equivalents) with the grade of 'C' (2.0 g.p.a.) or better. Grades of 'C-minus' or below, or numerical grades below 2.0 g.p.a., are not acceptable.

### Preprofessional Core

credits

BIO 1510 --(LS) Basic Life Mechanisms . . . . .	4
CHM 1220 -- (PS) Chemical Structures, Bonding & Reactivity . . . . .	4
CHM 1230 -- Chemical Principles Lab . . . . .	1
CHM 1240 --Principles of General/Organic Chemistry . . . . .	4
CHM 1250 --General/Organic Chemistry Lab . . . . .	1

CHM 2220 --Organic Chemistry . . . . .	3
CHM 2230 --Preparative Organic Chemistry Lab . . . . .	2
CSC 1000-- (CL) Intro. to Computer Science . . . . .	3
ECO 1000 or 2010 or 2020	
--(SS) Survey of Economics . . . . .	4
-- (SS) Principles of Microeconomics . . . . .	4
-- (SS) Principles of Macroeconomics . . . . .	4
ENG 1020 or ENG 1050	
-- (BC) Introductory College Writing . . . . .	4
-- (BC) Freshman Honors: English I . . . . .	4
MAT 2010 -- Calculus I . . . . .	4
PHI 1050 or SPC 2110 or GIS 3260	
-- (CT) Critical Thinking . . . . .	3
-- (CT) Argumentation and Debate . . . . .	3
-- (CT) Methods of Search and Critical Thinking . . . . .	4
PHY 2130 --(PS) General Physics . . . . .	3
PHY 2131 --General Physics Lab . . . . .	1
P S 1010 --(AI) American Government . . . . .	4
ENG 3060 or GIS 1560 or SPB 1010	
-- (OC) Technical Communication II: Writing and Speaking . . . . .	3
-- (OC) Dimensions of Oral Communication . . . . .	4
-- (OC) Oral Communication: Basic Speech . . . . .	3
SPC 3220 -- Health Communication <sup>1</sup> . . . . .	3
Other General Education Requirements:	
Historical Studies (HS) . . . . .	3
Foreign Culture (FC) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3
Philosophy and Letters (PL) . . . . .	3
UGE 1000 -- (GE) Information Power . . . . .	1
Minimum total: 64	

**Basic Composition (BC) Competency:** ENG 1020, 1050. This requirement may be met by earning an appropriate score on the University English Placement Examination, or by earning credit through Advanced Placement or CLEP examinations.

**English Intermediate Composition (IC):** ENG 3010, 3030, 3050 preferred; or ENG 2050, 2100, 2110, 2120, 2210, 2310, 2390, 2570.

**English Proficiency (EP) Requirement:** All applicants must demonstrate competence in written composition by successfully completing the English Proficiency Examination. Students who do not successfully complete the English Proficiency Examination after two attempts must elect and satisfactorily complete ENG 1080.

**Competency/Proficiency Examinations:** Contact the Testing and Evaluation Office, 698 Student Center, 577-3400, for details on competency and proficiency examinations, test costs, dates and times.

**Computer Literacy (CL) Competency:** CSC 1000. This competency may be demonstrated by successfully completing an approved course, passing the Computer Literacy Competency Examination, or having successfully completed a suitable high school course.

**Critical Thinking (CT) Competency:** PHI 1050, SPC 2110, GIS 3260. This competency may be demonstrated by successfully completing an approved course or passing the Critical Thinking Competency Examination.

**Mathematics Competency Requirement:** Transfer students may fulfill this competency by transferring credit for the equivalent of MAT 2010.

**Oral Communication (OC) Competency:** ENG 3060, GIS 1560, SPB 1010. This requirement may be met by successfully completing an approved course, passing the Oral Communication Competency Examination, or having successfully completed suitable high school courses.

**The Pharmacy College Admission Test (PCAT)** is required for admission. This standardized examination is offered in major cities

three times a year, in October, January, and April. Applicants may obtain PCAT information by calling: (800) 622-3231.

**Time Limitation:** Because of rapid changes in technology, pre-professional science credits must be completed within five years prior to admission to the professional program.

**General Education Requirements:** Students must complete additional University General Education Requirements (see below, and page 29), for a total of sixty-two to seventy-four credits. The following requirements apply to students who do not have bachelor's degrees from accredited institutions:

Some pre-pharmacy courses, indicated by parenthetical prefixes to course titles in the material above, fulfill University General Education Requirements. To complete the General Education Program, students must take *one course in each* of the following areas:

	<i>credits</i>
Historical Studies (HS) . . . . .	3
Foreign Culture (FC) . . . . .	3
Visual and Performing Arts (VP) . . . . .	3
Philosophy and Letters (PL) . . . . .	3
UGE 1000 --(GE) Information Power . . . . .	1

(Effective Fall 1991, UGE 1000 is not required of students transferring thirteen or more semester credits to Wayne State University.)

**APPLICATION DEADLINE:** Deadline for submission of complete application materials is February 1. A complete application includes: application form, letters of recommendation, professional goal statement and resume, proof of completion of English proficiency requirement, transcripts, PCAT scores, and TOEFL scores (if required). Only candidates who have completed all prerequisite courses, or who will complete all prerequisite courses by the end of Winter Term, will be considered for admission. Candidates who have not completed the English proficiency requirement by February 1 may be required to enroll in and pass English 1080 during the Spring/Summer Term as a condition of admission. Incomplete applications are not reviewed by the Admissions Committee. Late applications are reviewed and held only for possible inclusion as 'alternates' should space in a class become available late in the admissions cycle.

## Professional Program Admission

Admission to the Pharmacy Curriculum is granted only for the Fall semester. Enrollment in the professional pharmacy curriculum is limited to applicants who have met the general University admissions requirements by the stipulated deadline and present evidence of professional admissibility and promise of academic and professional competence in pharmacy.

**Application:** For admission to the pharmacy curriculum, applicants must submit an *Application for Admission to Undergraduate Professional Programs, College of Pharmacy and Allied Health Professions*. All of the necessary application forms are available from: Wayne State University College of Pharmacy and Allied Health Professions, Office of the Registrar, 139 Shapero Hall, Detroit, Michigan 48202; or from the Web: <http://wizard.pharm.wayne.edu/welcome.html>

**Application Deadline:** Deadline for submission of complete application materials is February 1. (See section above.)

Admission to the pharmacy professional curriculum is competitive and the following criteria are used to evaluate applications from prospective students. Admission decisions are made by the Admissions Committee of the Faculty of Pharmacy. In exceptional circumstances, applicants who do not meet all of the following criteria may be considered for admission.

1. Minimum core grade point average (g.p.a.) of 2.5 (4-point system) calculated on the final grades earned in the required pre-professional courses. Completion of prerequisites with minimum grades does not guarantee admission.

1. May be completed in fall semester of first professional year.



2. Science grade point average (g.p.a.) of 2.5 (4-point system) calculated on the final grades earned in the required pre-professional science courses (biology, chemistry, physics, statistics, and mathematics). Completion of science prerequisites with minimum grades does not guarantee admission.
3. Promise of success in a professional curriculum. Transcripts are evaluated for continued success in a full-time, science-based curriculum. Patterns of course repetition and excessive withdrawals are considered. It is recommended that applicants have repeated not more than two mathematics and science courses in order to improve grades.
4. Two completed professional recommendations must accompany the completed application form. The applicant is encouraged to solicit the recommendations from two faculty members or one faculty member and one employer.
5. All applicants must write a professional goal statement as part of the application.
6. All applicants must include a personal resume, outlining community or vocational activities, honors, employment, extracurricular and volunteer activities.
7. All applicants must take the Pharmacy College Admissions Test (PCAT). Applicants may obtain PCAT information by calling: (800) 622-3231.
8. All applicants must complete the Wayne State University English Proficiency Requirement, during the winter semester prior to fall admission. Out-of-state applicants may arrange for testing to satisfy this requirement at their present educational institution; for information, call the Testing and Evaluation Office: (313) 577-3400.
9. Applicants whose first language is not English must pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550.
10. A personal interview with a member of the Faculty of Pharmacy Admissions Committee is offered and may be required.

**Transferring Students:** A student who anticipates admission to the Wayne State University pharmacy curriculum by transferring from a community college, university, or college outside Wayne State must complete an Application to Wayne State University in addition to the Application for the College of Pharmacy and Allied Health Professions. The student is urged to complete the Wayne State Application no later than February 1.

**Post-Bachelor Admission** permits registration in undergraduate courses, subject to the approval of the Dean or the Dean's designee and in conformance with University policy (see 'Post-Bachelor Admission,' page 49). Post-bachelor status is an undergraduate classification and therefore course credits earned in it may *not* be converted to graduate credit.

**Post-Degree Students:** Students with a baccalaureate degree from this college or another accredited college of pharmacy may be admitted as post-degree students. This rank permits registration in pharmacy courses subject to the approval of the Dean or the Dean's designee. Post-degree status is an undergraduate classification and therefore course credits earned can not be converted to graduate credit.

## Degree Requirements

The Bachelor of Science in Allied Health Sciences with a concentration in Pharmaceutical Sciences requires a minimum of 134 semester credits. This four-year degree does not confer eligibility for licensure as a pharmacist. The Pharm.D. program will be the entry-level degree program for the profession; beginning with the 2002 admission cycle, admission to the Pharm.D. program may be permitted after successful completion of the B.S. degree. Academically-competitive advanced-level pharmacy students may opt for the Pharm.D. degree (instead of the B.S. in Pharmacy degree) in their second year of professional school and thereby earn the Pharm.D.

degree after four years of study. (Admission to the B.S. in Pharmacy degree is accredited by the American Council on Pharmacy Education through 2001. The Faculty of Pharmacy will halt admission to the B.S. program no later than Fall 2001, at which time the Pharm.D. degree program will be the only entry-level degree program in pharmacy at Wayne State University.)

The credit total for the B.S. in Allied Health Sciences, Pharmaceutical Sciences concentration, includes the core curriculum required in the pre-pharmacy program (see above, page 359), elective and/or specific courses to satisfy the University General Education Requirements (see page 20), and the pharmacy curriculum as outlined below. All course work must be done in compliance with the academic procedures of the University (see pages 15-46) and the College (see page 367) as well as the following standards:

**Residence:** A student must have devoted at least two academic years to resident study in an accredited pharmacy program, of which the second professional year and last thirty credits must be taken at the Wayne State University College of Pharmacy and Allied Health Professions.

**Grade Point Average:** A student must maintain a grade point average of at least 2.0 in all pharmacy courses and in total residence credit.

**Curriculum and Program Requirements:** A student must complete the curriculum and program requirements, remove any marks of 'I' or 'Y', and be recommended by the faculty for the degree. The student must complete the required minimum number of credits, elect courses in the proper sequence in the appropriate curriculum shown below, and meet any course prerequisite or corequisite, unless excused from doing so by the Dean.

### *B.S. CURRICULUM (Pharmaceutical Sciences Concentration)*

#### **First Professional Year (P-1)**

<i>Fall Semester</i>	<i>credits</i>
IHS 3100-- Basic Mechanisms of Human Disease I . . . . .	5
PSC 3110 -- Pharmaceutical Biochemistry I . . . . .	3
PSC 3120 -- Dosage Form Design and Biopharmaceutics . . . . .	4
PPR 3020 --Introduction to Patient Care I . . . . .	2
PPR 3040 -- Patient Care Lab I . . . . .	1
	<b>Total: 15</b>

#### *Winter Semester*

IHS 3200-- Basic Mechanisms of Human Disease II . . . . .	5
PSC 3210 -- Biotechnology in Therapeutics . . . . .	2
PPR 3120 --Pharmacy and Jurisprudence . . . . .	2
PPR 3060 -- Introduction to Patient Care II . . . . .	2
PPR 3070 -- Patient Care Lab II . . . . .	2
PHA 3010 -- Survey of the Practice of Pharmacy . . . . .	2
PSC 3310 -- Principles of Drug Disposition . . . . .	1
	<b>Total: 18</b>

#### *Spring Semester*

PSC 3320 -- Principles of Drug Action . . . . .	2
	<b>Total: 2</b>

#### **Second Professional Year (P-2)**

#### *Fall Semester*

PHA 4110 --Principles of Pharmacotherapy I . . . . .	4
PHA 4140 --Principles of Pharmacotherapy III . . . . .	4
PHA 4150 -- Principles of Pharmacotherapy II . . . . .	4
PPR 4120 -- Patient Care Lab III . . . . .	1
	<b>Total: 13</b>

#### *Winter Semester*

PHA 4210-- Principles of Pharmacotherapy IV . . . . .	6
PHA 4220 -- Principles of Pharmacotherapy V . . . . .	4
PHA 4240 --Principles of Pharmacotherapy VI . . . . .	4
PPR 4220 -- Patient Care Laboratory IV . . . . .	1
	<b>Total: 15</b>

## Bachelor of Science in Pharmacy

Students who have received the B.S. in Allied Health Sciences (Pharmaceutical Sciences Concentration) are eligible to proceed into the third professional year. Upon successful completion of the third professional year, the Bachelor of Science in Pharmacy is conferred. Third professional year course work is as follows:

### Third Professional Year (P-3)

During the third professional year, B.S. in Pharmacy students will be required to complete the following (all of these courses are offered each semester):

#### Fall and Winter Semesters

PPR 5000-- (WI) Drug Literature Evaluation . . . . .	2
PPR 5290 -- Pharmacy Practice & the Health Care System. . . . .	3
PPR 6110 -- Drug-Induced Diseases . . . . .	2
PPR 5280-- Ethics and Professional Responsibility . . . . .	2
PPR 6120 -- Home Health Care . . . . .	3
PPR 6210 -- IV Therapeutics . . . . .	2
Professional Electives . . . . .	3
Pharmacy Practice Experiences . . . . .	15
Total: 32	

**B.S. Pharmacy Practice Experiences:** Two experiences are required and one experience is elective. The pharmacy practice experiences may include adult medicine, pediatrics, drug information, and the like. (See section below for further information.)

**Licensure:** The graduate of the above curriculum earns a B.S. in Pharmacy and is eligible for the NAPLEX examination to obtain licensure as a pharmacist.

**Discontinuance of Admissions to the B.S. in Pharmacy:** The Faculty of Pharmacy has announced its intention to discontinue admissions to the B.S. in Pharmacy program no later than fall semester 2001. After this date, all eligible recipients of the B.S. in Allied Health Sciences (Pharmaceutical Sciences Concentration) degree will proceed directly into the postgraduate Doctor of Pharmacy (Pharm.D.) program. For information on the Pharm.D. professional program, consult the Wayne State University Graduate Bulletin, or contact the Department of Pharmacy Practice at 313-577-0824.

## Pharmacy Practice Experiences Requirements

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 program.

Pharmacy practice experiences give the student an 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.

Before students are scheduled in 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. Additional information on pharmacy practice experience requirements and when they must be obtained will be provided by the College. Students provide their own transportation to practice site settings.

## Pharmacist Licensure

Licensure as a pharmacist is available to graduates of the professional pharmacy programs of the College of Pharmacy and Allied Health Professions, either by examination or by reciprocity, in all states and in the District of Columbia.

## Internship

Internship is an educational program of professional and practical experience under the supervision of a preceptor in a pharmacy and is required for the Michigan State Board of Pharmacy. Beginning after

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, Illinois 60068-2402.

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

**NOTE:** Professional pharmacy courses (PSC, PHA, PPR) require admission to the professional curriculum as a prerequisite. It is recommended that prepharmacy students do not take IHS 3100, 3200 and 3210 prior to admission to the professional program.

## INTERDISCIPLINARY HEALTH SCIENCES (IHS)

### 3100 Basic Mechanisms of Human Disease I. Cr. 5

Prereq: BIO 1510 or equiv. First part of two-semester sequence: anatomy, physiology, and pathology of human organ systems. Material fee as indicated in the Schedule of Classes. (F)

### 3200 Basic Mechanisms of Human Disease II. Cr. 5

Prereq: IHS 3100. Continuation of IHS 3100. Second part of two-semester sequence. Material fee as indicated in the Schedule of Classes. (W)

### 3210 Basic Mechanisms of Human Disease: Laboratory. Cr. 1

Prereq: IHS 3100; coreq: 3200. Prosections to understand anatomical relationships. (W)

### 3300 Pharmacology for Allied Health Professions. Cr. 1

Prereq: IHS 3100, 3200 or equiv. Open only to allied health professions students. Basic course for allied health professions students in mechanisms of drug action (pharmacodynamics), and the use of drugs in the prevention and treatment of disease (pharmacotherapeutics). (S)

## PHARMACEUTICAL SCIENCES (PSC)

### 3110 Pharmaceutical Biochemistry. Cr. 3

Prereq: admission to pharmacy program. Survey of biochemistry for pharmacy students, metabolism, and drug effects in the maintenance of normal human biochemistry and homeostasis. (Formerly PSC 3300) Material fee as indicated in the Schedule of Classes. (F)

### 3120 Dosage Form Design and Biopharmaceutics. Cr. 4

Prereq: admission to pharmacy program. Principles of dosage form design and introduction to biopharmaceutics. (Formerly PSC 3100) Material fee as indicated in the Schedule of Classes. (F)

### 3130 Principles of Drug Analysis. Cr. 2

Prereq: admission to professional program. Analytical techniques pertinent to pharmacy practice, encompassing procedures based on chromatography, spectroscopy, and immunological or enzymatic reactions. (F)

### 3210 Biotechnology in Therapeutics. Cr. 2

Prereq: PSC 3110. Continuation of PSC 3110. (Formerly PSC 3400) Material fee as indicated in the Schedule of Classes. (W)

**3310 Principles of Drug Disposition. Cr. 4**

Prereq: PSC 3110, IHS 3100, completion of pharmacy calculations requirement; coreq: IHS 3200, PSC 3210, PPR 3060, PPR 3070. Basic principles and applications of pharmacokinetics, drug metabolism, and pharmacogenetics. Material fee as indicated in the Schedule of Classes. (Y)

**3320 Principles of Drug Action. Cr. 2**

Prereq: PSC 3310, PSC 3210, IHS 3200, PHA 3010. General principles of pharmacology and medicinal chemistry. (Y)

**5600 Recreational Drug Use and Drug Abuse. Cr. 3-4**

Prereq: PCL 4100, PCL 4200; PPR 4500, PPR 4600; fifth 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. (Formerly PCL 5310) (Y)

**5870 Seminar in Pharmacology. Cr. 1 (Max. 2)**

Prereq: consent of instructor. Open only to undergraduates in good academic standing. Reports and discussions on current literature and recent advances in the field. Assigned topics presented by students. (Formerly PCL 5890) (T)

**5990 Directed Study in Medicinal Chemistry. Cr. 1-3 (Max. 3)**

Prereq: consent of instructor. Open only to undergraduates in good academic standing. (Formerly M C 5990) (T)

**5991 Directed Study in Pharmaceutics. Cr. 1-3 (Max. 3)**

Prereq: consent of instructor. Open only to undergraduates in good academic standing. (Formerly PHA 5990) (T)

**5992 Directed Study in Pharmacology. Cr. 1-3 (Max. 3)**

Prereq: consent of instructor. Open only to undergraduates in good academic standing. (Formerly PCL 5990) Material fee as indicated in the Schedule of Classes. (T)

**6000 Fundamentals of Drug Design. Cr. 2**

Prereq: last professional year, graduate, or graduate professional standing; consent of instructor. Discussion of practical applications of theoretical consideration in the design of new drug molecules. Topics include quantitative structure-activity relationships, metabolic antagonism, enzyme inhibition, and pro-drugs. (Y)

**6600 (PPR 6600) Biostatistics. (PSC 6600) Cr. 3**

Prereq: last professional year, graduate, or graduate professional standing. Use and interpretation of statistical tools in the pharmaceutical and clinical literature. (F)

**6720 Techniques in Animal Experimentation. Cr. 1**

Prereq: consent of instructor. Ethical, legal, and experimental considerations of animal experimentation. Training in the humane care of animals; techniques used in pharmaceutical research. (Y)

**6800 Introduction to Research. Cr. 2**

Prereq: last professional year, graduate, or graduate professional standing. Introduction to research in the pharmaceutical sciences for students contemplating or beginning graduate study. (Y)

**6890 Toxicology and Adverse Drug Reactions. Cr. 3**

Prereq: last professional year, graduate, or graduate professional standing. Study of toxicology and adverse drug reactions including metabolism, hypersensitivity, carcinogenicity, drug-drug interactions, and other factors hazardous to human health. Material fee as indicated in the Schedule of Classes. (Y)

**PHARMACY (PHA)****3010 Survey of the Practice of Pharmacy. Cr. 1**

Prereq: admission to pharmacy program, PPR 3020, PPR 3040, PSC 3120. Introduction to the essential elements of the practice of pharmacy. (W)

**4110 Principles of Pharmacotherapy I. Cr. 4**

Prereq: PSC 3310, PSC 3320, second professional year status. Pharmacotherapeutic principles in autonomic, renal and immunologic diseases. (F)

**4120 Pharmacotherapeutics II: Fluid and Electrolytes/Renal. Cr. 1**

Prereq: PSC 3310, PSC 3320, PPR 3230. Pharmacology, medicinal chemistry, therapeutic application, pharmacokinetics of drugs influencing fluid and electrolyte balance and drugs used in the management of renal diseases. (F)

**4130 Pharmacotherapeutics III: Immunology and Inflammatory Disorders; Hematology. Cr. 2**

Prereq: PSC 3310, PSC 3320, PPR 3230. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are immunomodulators and drugs that are used to treat inflammatory and hematologic and thromboembolic disorders. (F)

**4140 Principles of Pharmacotherapy III. Cr. 4**

Prereq: PSC 3310, PSC 3320, second professional year status. Pharmacotherapeutic principles in endocrine, respiratory and gastrointestinal diseases. (F)

**4150 Principles of Pharmacotherapy II. Cr. 4**

Prereq: PSC 3310, PSC 3320, second professional year status. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of diseases of the cardiovascular system. (F)

**4160 Pharmacotherapeutics VI: Gastroenterology/Nutrition. Cr. 2**

Prereq: PHA 4110, 4120, 4130. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of diseases of the gastrointestinal system. Factors involved in nutritional support in normal and abnormal physiology. (F)

**4170 Pharmacotherapeutics VII: Oncology. Cr. 2**

Prereq: PHA 4120, 4130. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of neoplastic diseases. (F)

**4210 Principles of Pharmacotherapy IV. Cr. 6**

Prereq: PSC 3310, 3320, second professional year status. Pharmacotherapeutic principles in infectious diseases and dermatology. (W)

**4220 Principles of Pharmacotherapy V. Cr. 4**

Prereq: PSC 3310, 3320, second professional year status. Pharmacotherapeutic principles in neurology, psychiatry, and drug abuse. (W)

**4230 Pharmacotherapeutics X: Psychiatry/Drug Abuse. Cr. 2**

Prereq: PHA 4220. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of psychiatric diseases and those drugs and chemical entities that are commonly associated with abuse. (W)

**4240 Principles of Pharmacotherapy VI. Cr. 4**

Prereq: PSC 3310, 3320, second professional year status. Pharmacotherapeutic principles in oncology, clinical toxicology, and special patient populations. (W)

**4250 Pharmacotherapeutics XII: Special Patient Populations. Cr. 4**

Prereq: PHA 4240. Pharmacology, medicinal chemistry, pharmacokinetics and therapeutic applications of drugs to special patient populations. (W)

## PHARMACY PRACTICE (PPR)

**3020 Introduction to Patient Care I. Cr. 2**

Prereq: admission to pharmacy program. Concepts in pharmaceutical care, introduction to the health care system and pharmacist's roles, communication techniques and inter-professional communication. Material fee as indicated in the Schedule of Classes. (F)

**3040 Patient Care Laboratory I. Cr. 1**

Prereq: admission to pharmacy program. Hands-on training in the compounding and dispensing of pharmaceutical products, role playing in the interaction of pharmacists with patients and other professionals. Material fee as indicated in the Schedule of Classes. (F)

**3060 Introduction to Patient Care II. Cr. 2**

Prereq: PPR 3040. Second course in the patient care aspects of the pharmacy profession. (W)

**3070 Patient Care Laboratory II. Cr. 2**

Prereq: PPR 3050. Introduction to concepts in patient communication, prescription dispensing and compounding. Material fee as indicated in the Schedule of Classes. (W)

**3110 Pharmaceutical Calculations. Cr. 1**

Prereq: admission to professional curriculum. The application of the systems of weights and measures and mathematical calculations involved in pharmaceutical procedures and practices. (Formerly PPR 300.) (F)

**3120 Pharmacy Jurisprudence. Cr. 2**

Prereq: P S 1010; PPR 3020, 3040; admission to professional curriculum in pharmacy. Various state and federal regulations affecting pharmacy practice and drug control. (F)

**3210 Orientation to Pharmacy. Cr. 1**

Prereq: admission to professional curriculum. Offered for S and U grades only. Overview of the profession of pharmacy; visit to professional practice site. (Formerly PPR 3050.) (W)

**3230 Non-Prescription Medication. Cr. 3**

Prereq: IHS 3100; coreq: IHS 3200, IHS 3210. Various therapeutic classes of non-prescription medication with particular reference to rationale for use, products available, comparative effectiveness and contraindications. Material fee as indicated in the Schedule of Classes. (F)

**3240 Pharmaceutical Compounding and Dispensing. Cr. 2**

Prereq: PSC 3120, PPR 3110, PPR 3120; coreq: 3250. Elements of compounding and dispensing. Material fee as indicated in the Schedule of Classes. (W)

**3250 Pharmaceutical Compounding and Dispensing: Laboratory. Cr. 1**

Prereq: PSC 3120; PPR 3110, PPR 3120; coreq: 3240. (W)

**4110 Patient Education and Counseling. Cr. 2**

Prereq: admission to professional curriculum. Pharmacy-related communication skills; health beliefs and adherence behaviors; oral and written patient counseling techniques. Modes of instruction include lectures, group discussions and workshops, role-playing with videotaping. (F)

**4120 Patient Care Laboratory III. Cr. 1**

Prereq: PPR 3040, 3070. Early patient care experiences in pharmacy practice. Material fee as indicated in the Schedule of Classes. (F)

**4210 Pharmacy Management. Cr. 4**

Prereq: PPR 3210, 3220. Principles of management as applied to the hospital/institutional organization and community pharmacy practice. (W)

**4220 Patient Care Laboratory IV. Cr. 1**

Prereq: PPR 4120. Early patient care experiences in pharmacy practice. Material fee as indicated in the Schedule of Classes. (F)

**5000 (WI) Drug Literature Evaluation. Cr. 2**

Prereq: PHA 4110, 4140, 4150, 4210, 4220, 4230; third professional year standing. Principles and methods of evaluating the medical literature with an emphasis on that relating to the practice of pharmacy. Writing Intensive course in third professional year; in-class and out-of-class writing assignments required. (W)

**5100 Clinical Pharmacy Clerkship Orientation. Cr. 1-2**

Prereq: last professional year standing. Orientation to and basic information necessary for effective participation in externship/clerkship experiences. (T)

**5120 (WI) Hospital Pharmacy Externship. Cr. 4-7**

Prereq: PHA 4250, PPR 4110, PPR 4210. Practicum experience in institutional pharmacy practice including aspects of drug information services, intravenous additive services, ambulatory pharmacy services, clinical pharmacy services and hospital pharmacy administration. Material fee as indicated in the Schedule of Classes. (F,W)

**5130 Community Pharmacy Externship. Cr. 4-7**

Prereq: PHA 4250, PPR 4110, PPR 4210. Practicum experience includes community pharmacy management, medication dispensing, and patient-oriented services such as consultation on the use of prescription and non-prescription medications, monitoring patient profiles and obtaining medication histories. (F,W)

**5190 Pre-Pharm.D. Externship/Clerkship. Cr. 1-15**

Prereq: admission to Pharm.D. program. Special pharmacy externship/clerkship experience conducted at selected approved sites and offered solely to students who have been admitted to the Doctor of Pharmacy Program. Credit assigned is based on departmental review of program objectives and time commitment. (I)

**5220 Special Clinical Pharmacy Clerkship/Externship. Cr. 1-15**

Prereq: last professional year standing; consent of clerkship/externship coordinator. Clinical pharmacy clerkship/externship experiences at selected approved sites with established experiential programs. Credit assigned is subsequent to departmental review of program and time commitment. (T)

**5230 Health Care Topics. Cr. 4**

Modern health care delivery systems and services. (F,W)

**5240 Advanced Self-Care. Cr. 2**

Instruction in assisting patients to provide self-care. (F,W)

**5280 Ethics and Professional Responsibility. Cr. 2**

Prereq: PPR 3120, 4210, 3210, 3220 and third professional year status. General ethical principles and how these principles relate to legal duties and rights to guide professional pharmacy practice and conduct. (Y)

**5290 Pharmacy Practice and the Health Care System. Cr. 3**

Prereq: PPR 4210. Offered for S and U grades only. Review of the history, development and present status of the health care system in the United States. Discussion of trends and projected future development of the system; discussion of the roles and strategies for effective pharmacy practice within the system. (W)

**5300 Critical Analysis of Drug Related Problems. Cr. 2**

Prereq: fifth year standing. Development of ability to analyze and solve pharmacotherapeutic problems using a student-centered, problem-based learning model. (Y)

**5700 Special Topics in Community Pharmacy Practice. Cr. 2-3**

Prereq: last professional year standing. Discussion of current professional problems in community pharmacy practice. (F)

**5750 Oncology Therapeutics. Cr. 3**

Prereq: last professional year standing. Lecture and discussion on terminology and the basic principles of therapy of the major malignancies, including pathophysiology and therapy. Ancillary therapy of patients with malignancies. Material fee as indicated in the Schedule of Classes. (Y)

**5800 History of Pharmacy. Cr. 2**

Prereq: last professional year standing. History of pharmacy from antiquity to modern times; emphasis on development since eighteenth century, especially in Western Europe and the United States. (W)

**5990 Directed Study in Pharmacy Practice. Cr. 1-3 (Max. 3)**

Prereq: consent of instructor. Open only to undergraduates in good academic standing. (T)

**5992 Professional Seminar. Cr. 1-3**

Instruction in presentation skills. (F,W)

**6050 Critical Care Therapeutics. Cr. 2**

Prereq: admission to Pharm. D. program. Pharmacotherapy and pathophysiology related to problem solving in critical illness. (W)

**6070 Principles of Pharmacoeconomics. Cr. 3**

Prereq: consent of instructor. Principles and tools used in economic evaluation of medications and technologies used in pharmaco-economic research. Material fee as indicated in the Schedule of Classes. (F)

**6100 Legal Environment in Pharmacy. Cr. 3**

Prereq: PPR 3120, 5280, 4210, 5290, graduating senior or graduate student status. Formulation, interpretation, performance and discharge of contracts and liabilities for breach; various tort liabilities, including pharmacy malpractice; insurance issues; regulation of business professional and trade practices in pharmacy; employment laws. (I)

**6110 Drug-Induced Diseases. Cr. 2**

Prereq: PHA 4250. Understanding the pathology associated with the use of drugs. Mechanisms and examples of how drugs damage different organ systems. Material fee as indicated in the Schedule of Classes. (Y)

**6120 Home Health Care. Cr. 3**

Prereq: PHA 4250, PPR 4110, PPR 4210; or graduate or graduate professional standing. Review of the availability and applications of surgical appliances and other health-care devices used in patient care. Material fee as indicated in the Schedule of Classes. (F)

**6130 Advanced Health Care Topics. Cr. 4**

Prereq: PHA 4110, 4140, 4150, 4210, 4220, 4230, third professional year standing or admission to Pharm.D. program. Advanced concepts in modern health care delivery systems and services. (F)

**6160 Advanced Therapeutic Problem Solving I. Cr. 5**

Prereq: PHA 4110, 4140, 4150, 4210, 4220, 4230, third professional year standing or admission to Pharm.D. program. Problem-based, student-centered approach to patient management. (F)

**6180 Advanced Ethics and Professional Responsibility. Cr. 2**

Prereq: PHA 4110, 4140, 4150, 4210, 4220, 4230, third professional year standing or admission to Pharm.D. program. Advanced concepts in health care provision. (F)

**6210 Intravenous Therapeutics. Cr. 2**

Prereq: PHA 4250, or graduate or graduate professional standing. The physiology of fluid balance, fluid balance abnormalities, acid-base balance, treatment of fluid abnormalities, maintenance require-

ments, electrolyte replacement, and diseases commonly associated with fluid imbalance. Material fee as indicated in the Schedule of Classes. (F,W)

**6220 Health Care Outcomes. Cr. 2**

Prereq: PHA 4110, 4140, 4150, 4210, 4220, 4230, third professional year standing or admission to Pharm.D. program. Tracking and analyzing population health care outcomes in various settings. (W)

**6260 Advanced Therapeutic Problem Solving II. Cr. 5**

Prereq: PHA 4110, 4140, 4150, 4210, 4220, 4230, third professional year standing, PHA 6160 or admission to Pharm.D. program. Continuation of PPR 6160. (W)

**6600 (PPR 6600) Biostatistics. (PSC 6600) Cr. 3**

Prereq: last professional year, graduate, or graduate professional standing. Use and interpretation of statistical tools in the pharmaceutical and clinical literature. (F)

**6610 Disease Processes and Therapeutics I: Cardiology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: cardiology. Material fee as indicated in the Schedule of Classes. (Y)

**6620 Disease Processes and Therapeutics II: Infectious Diseases. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: infectious diseases. Material fee as indicated in the Schedule of Classes. (Y)

**6630 Diseases Processes and Therapeutics III: Hematology/Oncology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: hematology and oncology. Material fee as indicated in the Schedule of Classes. (Y)

**6640 Disease Processes and Therapeutics IV: Psychiatry/Neurology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: psychiatry and neurology. Material fee as indicated in the Schedule of Classes. (Y)

**6650 Disease Processes and Therapeutics V: Gastroenterology/Endocrinology. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: gastroenterology and endocrinology. (Y)

**6660 Disease Processes and Therapeutics VI: Nephrology/Fluid and Electrolytes. Cr. 1-3**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: nephrology and fluid electrolytes. Material fee as indicated in the Schedule of Classes. (Y)

**6670 Disease Processes and Therapeutics VII: Rheumatology, Pediatrics and Patient Assessment. Cr. 2**

Prereq: admission to Pharm.D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: rheumatology, pediatrics, patient assessment. Material fee as indicated in the Schedule of Classes. (Y)

**6680 Disease Processes and Therapeutics VIII: Immunology/Pulmonary/Toxicology. Cr. 2**

Prereq: admission to Pharm. D. program. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: immunology, pulmonary, and toxicology. Material fee as indicated in the Schedule of Classes. (F)

**6710 Advanced Pharmacotherapeutics: Surgery. Cr. 2**

Prereq: B.A. in Allied Health with concentration in pharmaceutical science. Advanced course in management of conditions encountered in surgical patients. Emphasis on perioperative assessment and optimization, pharmacotherapeutic and nutritional considerations, and management of surgical patients with complications and disease states. (F,W)

**6720 Pharmacotherapeutics of Diabetes Mellitus. Cr. 2**

Prereq: PHA 4140. Multidisciplinary course. Knowledge and skills required to effectively manage patients with diabetes. (F)

**6860 Principles of Pediatric Pharmacy. Cr. 2-3**

Prereq: last 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)

# PHARMACY STUDENT and ALUMNI ACTIVITIES

The College has a Chapter of the *Academy of Students in Pharmacy (ASP)*, an affiliate of the American Pharmaceutical Association (APhA). The purpose of ASP is to encourage an early respect for pharmacy as a profession, and to promote student activities on a professional level. The Chapter accomplishes these goals by supporting professional functions at the College, by encouraging student attendance at local, state, and national conventions, and by promoting membership in professional associations.

A chapter of the *Student National Pharmaceutical Association (SNPhA)* was established at Wayne State University in 1976. The purpose of this organization is to plan, organize, supplement and coordinate a comprehensive program to improve the health, educational and social environment of minority groups in the United States; to aid both individuals and families in achieving a rich sense of dignity and self-respect. SNPhA hopes to provide a greater opportunity by which health-oriented minority students can achieve greater self awareness and a larger representation in colleges and universities of the United States.

The Alpha Chi Chapter of *Rho Chi* is the national honor society of pharmacy, with a fundamental objective of promoting the advancement of the pharmaceutical sciences through the encouragement and recognition of academic excellence. High standards of scholarly attainment are required for selection to membership. Students ranking in the top twenty percent of the class and having at least a 3.0 g.p.a. are eligible for selection, which takes place in the beginning of the second and third professional years (P2 and P3).

*The Arab-American Pharmacy Student Organization (AAPSA)* is a non-profit organization founded in 1999 by a promising new generation of pharmacy students. The mission of AAPSA is to prepare members to be pharmacy professionals who provide and promote patient-oriented pharmaceutical care, and the promotion of the pharmacy profession among the Arab-American public.

## *Pharmaceutical Fraternities*

*Kappa Psi Fraternity* (Mu Omicron Pi Chapter) is the largest and oldest professional fraternity in pharmacy with over 100 years experience in assisting the pharmacy student to grow professionally and socially. Kappa Psi is a training ground of leadership and maintains resident housing, study accommodations, and recreational facilities.

*Lambda Kappa Sigma* (Omicron Chapter) is an international professional fraternity that promotes women in pharmacy and promotes professionalism within the College. Through publications, meetings and conventions, members maintain the ties of good fellowship and understanding.

*Phi Delta Chi Pharmacy Fraternity* (Alpha Eta Chapter) was formed in 1883 to aid its members to become part of the profession. The objectives of Phi Delta Chi include the advancement of the science of pharmacy, the fostering of a fraternal spirit among its members, and the development of projects to aid the patient and the health care system.

## Pharmacy Alumni Association

The WSU Pharmacy Alumni Association was established to advance pharmacy programs of the College. The Association fosters a professional spirit and promotes mutual improvement among alumni, as well as supporting College endeavors through seminars, scholarships, and tutorial programs offered to students.

# ACADEMIC REGULATIONS

For complete information regarding academic rules and regulations of the University, students should consult the section beginning on page 5. The following additions and amendments pertain to baccalaureate pharmacy students admitted or readmitted to the professional program for the Fall term 1998 and thereafter.

For purposes of these academic rules and regulations, the following definitions apply:

1. *Professional course* means any course required in the professional pharmacy curriculum and any course approved for professional elective credit and elected by the student for that purpose.
2. *Satisfactory grade* means a grade of 'C' or above, or a grade of 'S.'
3. *Unsatisfactory grade* means 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* means a restricted status in the program (see below).
5. *Dismissal* from the 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 effected.

## Academic and Professional Progress

The Faculty of Pharmacy expects its students to develop professional competence and to satisfy the same high standards of exemplary character, appearance, and ethical conduct expected of professional pharmacists.

To merit confidence and esteem, both personally and in the health care professions, appropriate dress and demeanor are expected of each student in the academic and professional program in pharmacy. The Committee on Academic and Professional Progress (CAPP) reviews 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.

## Outside Employment

The undergraduate curriculum has been arranged with the presumption that the student will devote full time and energy to the program. Pharmacy internship and other pharmaceutical employment is recognized as an integral part of the academic and professional growth of the pharmacy student. The student, however, is 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 the specific attendance required of students as part of the successful completion of the course.

## Course Elections

The program must be elected on a full-time basis, following the curriculum as outlined in this bulletin, unless specifically directed otherwise 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 Passed-Not Passed basis, is permitted only for elective credits 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 the student's 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 CAPP. If a student requests and is granted an immediate leave of absence during a term, the student must withdraw from all courses enrolled in for that term.

A leave of absence must be requested no later than the end of the twelfth 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 adviser 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 CAPP.

## Time Limitations

The program must be completed within five calendar years of admission unless an extension is granted by the Committee on Academic and Professional Progress (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 by reason of academic failure and/or leaves of absence beyond the five-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 CAPP in consultation with appropriate faculty.

## Minimum Grade Requirement

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.

## Grade Appeals

Following is the grade appeals policy in the College of Pharmacy and Allied Health Professions:

At the beginning of each term the instructor is to inform students (in writing where feasible and appropriate) 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 by appropriate means. Students should be encouraged to discuss with the instructor any class-related problems.

Instructors are expected to evaluate student work according to sound academic standards. Equal demands 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 substantially from announced procedures.

It is the instructor's prerogative to assign grades in accordance with his/her academic/professional judgment, and the student assumes the burden of proof in the appeals process.

Grounds for appeal are: (1) the application of non-academic criteria in the grading process, as listed in the University's Non-Discrimination and Affirmative Action Statute: race, color, sex, national origin, religion, age, sexual orientation, marital status, or handicap; (2) sexual harassment; or (3) evaluation of student work by criteria not directly reflective of performance relative to course requirements.

This policy does not apply to allegations of academic dishonesty. Academic dishonesty matters should be addressed under the Student Due Process Statute (see 'Academic Dishonesty,' below.)

Questions regarding grades, whether a grade on an individual course component or a final grade, properly should be directed to the instructor for resolution. The formal appeal of the grade in question must be initiated in writing within twenty-one calendar days following the student's receipt/knowledge of the grade (for example, return of marked paper, posting of marks, official report of grades). The instructor and each appeal officer in the College shall respond in writing within ten calendar days. Failure of the instructor or any appeal officer to respond within ten days of the formal written appeal entitles the student to proceed to the next level of appeal. In no case should there be any assumption that a failure to respond at any level signifies a granting of the appeal.

If an appeal is not resolved at the instructor's level, further appeals may be directed to the departmental chairperson. If the departmental chairperson agrees with the instructor's determination, the student may appeal, upon the same bases, to the Dean of the College. If the position of the student is upheld, a recommendation to the instructor that a 'Change of Grade' be effected may be made. If the instructor refuses and there is, in the opinion of the Dean, evidence that the instructor has been arbitrary or capricious in the grade decision, appropriate administrative procedures may be initiated and an administrative 'Change of Grade' may be effected.

## 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 pharmacy fraternities, student professional organizations, and pharmacy 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.

## Dismissal from the Program

A student *will be dismissed* from the program for the following reasons:

- A. Failing to earn a satisfactory grade when repeating professional course.
- B. Earning unsatisfactory grades in seven or more credits of professional course work in a single term.
- C. Accumulating unsatisfactory grades in ten or more credits of professional course work. Unsatisfactory grades count towards this cumulative total even if a satisfactory grade was earned upon repetition of the course(s).
- D. Inability to complete the program within the time limitations outlined above unless granted an extension by the CAPP or the Faculty.
- E. Failing to meet any special conditions required by the CAPP or the Faculty for the student's continuation in the program.

## Academic Review Process

If, upon notification of probation or dismissal, it appears that the action was based on incorrect information or that these academic policies and procedures were not appropriately applied, the Chairperson of the CAPP should be immediately notified in writing on the

form provided, so that the action can be reviewed. Extenuating personal circumstances will only be considered in cases involving dismissal and/or an extension of the time limitation. Written notice of the CAPP determination will be promptly provided.

Following notice of the decision of CAPP, the student may request a review by the Dean. Following a final decision by the Dean, a procedural review may be sought from the Provost.

Note that this academic review process does not apply to grades. The CAPP will not review the assignment of grades within a course. All appeals regarding grades must follow the procedures described in the 'Grade Appeals' section, above.

## Readmission Following Academic Dismissal

Applications for readmission from students who have been dismissed from the program for academic reasons will only be considered when the applicant has earned a Bachelor of Science or higher degree in one of the physical or life sciences (biology, chemistry, or physics) subsequent to the dismissal.

If a readmission is granted, the student may be required to repeat some or all of the previously completed professional courses, if the material covered in the courses has changed to the extent that the student's preparation has become outdated; such determination will be made by the Committee on Academic and Professional Progress in consultation with the Admissions Committee and appropriate faculty. Readmitted students will be required to complete all requirements of the curriculum in effect at the time of readmission. This policy applies to any students excluded at the end of the Fall term 1989 and thereafter.

## Student Conduct

Every student is subject to all regulations set forth by the University, the College, and the Faculty of Pharmacy, governing student activities, student behavior, and in use of their facilities. The University, College, and Faculty have the responsibility of 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 appropriate faculty member and/or the Dean's office.

There are obligations inherent in registration as a student in the College. Students entering the profession of pharmacy are expected to have the highest standards of personal conduct so as to be a credit to themselves, the College, the University, and the profession. 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.

## Academic Dishonesty

In any instance of academic dishonesty occurring in any course offered by the College of Pharmacy and Allied Health Professions, 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.

## Dean's List of Honor Students

A regular undergraduate student who achieves a grade point average of 3.7 or more for at least twelve credits of course work in a given semester is placed on the Dean's List of Honor Students.



# FINANCIAL AID, SCHOLARSHIPS, LOANS, and AWARDS

Students in good academic standing may apply directly for federal financial aids (both scholarship and/or loan programs) at the University Office of Scholarships and Financial Aids, 3 West, Helen Newberry Joy Student Services Center.

*Federal Financial Aid* awards are available to pharmacy students who demonstrate exceptional financial need as defined by the federal government. Contact the Office of Scholarships and Financial Aid for further information.

*Exceptional Financial Need Pharmacy Scholarship:* Award open to students in pharmacy who demonstrate exceptional financial need as defined by the Federal Government. Contact Office of Scholarships and Financial Aid.

Additionally, the College offers private scholarship and short-term loan funds for students. Students in good academic standing enrolled in the pharmacy curriculum of the College may apply for these funds by completing the Pharmacy Financial Assistance Application form that can be obtained from the Office of Student Services, 139 Shapero Hall.

*Private Scholarships:* Information about privately-funded pharmacy scholarships that are administered outside of the College and the University is available from the Office of Student Services, 139 Shapero Hall. Deadlines for special interest scholarships vary.

## Private Scholarships and Awards

Private scholarships are awarded to pharmacy students in good academic standing, based on recommendations from faculty and criteria determined by the contributors. Based on recommendations from faculty and students, awards for outstanding achievement are given to pharmacy students in either the baccalaureate or Doctor of Pharmacy program

*American Pharmaceutical Association (APhA) McNeil Mortar and Pestle Dean's Award:* A distinctive replica of an antique Revolutionary War mortar and pestle is awarded annually to the graduating student who, in the judgment of the faculty, exhibits exceptional interest, aptitude, and achievement in pharmaceutical administration. The student is eligible for a competitive \$2000 scholarship.

*American Pharmaceutical Association (APhA) / 3M Pharmaceuticals Partner for a Healthy Community Scholarship:* A \$500 scholarship which recognizes one pharmacist and one full-time pharmacy student in each of the eight APhA/ASP regions who provide leadership and service in the delivery of patient education-based health services programs and are members of APhA. Selection is made by APhA/3M. Application deadline is January 1.

*American Pharmaceutical Association / Academy of Students of Pharmacy (APhA/ASP) Senior Recognition Certificate:* A framed certificate of commendation is issued annually by the ASP to the graduating student who, upon recommendation of the adviser and an APhA member, has contributed most in developing membership and encouraging participation in the activities of the student chapter of the College.

*American Society of Health System Pharmacists (ASHP) Student Leadership Certificate* is given to a second professional year pharmacy student who has demonstrated unusual personal and professional development, strong involvement in professional organizations, academic excellence and leadership, and who ranks academically in the upper half of the class.

*CVS Pharmacies Drug Award:* \$1000 and a commemorative plaque is awarded annually by Arbor Drug/CVS to a graduating student in recognition of superior achievement in community pharmacy practice.

*Fred W. Arnold Pharmacy Scholarship:* An award of \$500 is made to a pharmacy student in recognition of achievement in the pharmacy program.

*Sidney Barthwell (Alumni) Pharmacy Scholarship:* \$1000 awarded to an African American pharmacy student with desirable qualities of character and leadership.

*Alfred Berkowitz Pharmacy Scholarship:* This \$1000 scholarship was established to encourage continual progress and to provide financial assistance to students in the College. The scholarship is awarded to students who demonstrate scholastic achievement and qualities of leadership.

*Bristol Myers Squibb Pharmacy Award:* An appropriate book is awarded annually to the baccalaureate student who, in the judgment of the faculty, shows the greatest professional growth and excellence in the clinical curriculum. Presented locally by Rich McFarland.

*Bristol Myers Squibb Doctor of Pharmacy Clinical Award:* An appropriate book is awarded annually to a Doctor of Pharmacy candidate who, in the judgment of the faculty, has shown overall excellence in the clinical practice component of the curriculum. Presented locally by Rich McFarland.

*Paul C. and Nettie Deutch Scholarship:* Scholarships of \$1,000 are awarded to pharmacy students who have completed a minimum of four academic courses in the professional program with a minimum grade point average of 3.0. The applicant must demonstrate financial need.

*Bernard Thomas Downs Pharmacy Scholarship:* This scholarship is established to assist African American second, third or fourth professional year full-time undergraduate pharmacy students. Recipients are selected on the basis of scholastic achievement with a minimum 2.7 overall grade point average, with qualities of character, leadership, and financial need.

*Melvin F. Dunker Award:* A distinctive plaque and \$100 is presented to recognize the achievements of a graduating pharmacy student who through diligent, hard work has completed degree requirements having overcome a handicap.

*Facts and Comparison Pharmacy Award of Excellence in Clinical Communication:* An annual award of copies of Drug Facts and Comparison, American Drug Index, and Professional's Guide to Patient Drug Facts, and a set of marble bookends is presented to a graduating student in recognition of high academic achievement and outstanding clinical communication skills, who ranks academically in the top twenty-five per cent of his/her class.

*Glaxo Wellcome Doctor of Pharmacy (Pharm.D.) Scholarship Award:* At least \$500 is given in the name of distinguished alumnae, to a graduating Pharm.D. student with demonstrated financial need and academic achievement.

*John Helfman Endowed Pharmacy Scholarship Fund:* Established by the estate of John Helfman, an award of \$2500 is made to a Wayne State pharmacy student, on admission to the professional pharmacy program, based on merit and completion of all pharmacy prerequisites at Wayne State University. Application deadline is July 1; scholarship is renewable when student maintains an appropriate g.p.a.

*Robert C. Johnson Scholarship:* \$1000 is awarded to a pharmacy student in the final professional year who has a grade point average of at least 2.8, and has demonstrated leadership, qualities of good character, and financial need.

*Kappa Psi Graduate Chapter Award:* An engraved plaque is awarded annually by the Detroit Graduate Chapter of Kappa Psi Pharmaceutical Fraternity to the graduating student with the highest scholastic average.

**Kappa Psi Pharmaceutical Fraternity Award:** An engraved plaque is awarded annually to the graduating member of Mu Omicron Pi Chapter of Kappa Psi Pharmaceutical Fraternity who attains the highest scholastic average.

**Kappa Psi Pharmaceutical Fraternity Grand Council Award:** A distinctive recognition key and certificate are awarded by Kappa Psi Pharmaceutical Fraternity to a member of the Fraternity who attains the highest scholastic average in the College graduating class.

**Dick Kuchinsky Scholarship:** An award of \$300 is made to a pharmacy student entering the second, third or fourth professional year in good academic standing and with demonstrated financial need.

**Jack Kutnick Pharmacy Scholarship:** This annual scholarship for graduating pharmacy students was established by alumnus Jack Kutnick to provide a \$100 scholarship to a pharmacy student who has demonstrated financial need, scholastic achievement and desirable characteristics of leadership.

**Lambda Kappa Sigma Ruth Davies Flaherty Award:** A certificate is presented by the Grand Council of Lambda Kappa Sigma International Pharmaceutical Fraternity for Women to a member of the Omicron Chapter of the Fraternity to recognize outstanding chapter loyalty and service.

**Lambda Kappa Sigma Ethel J. Heath Scholarship Key:** A distinctive honor key is awarded by Omicron Chapter of Lambda Kappa Sigma International Pharmaceutical Fraternity for Women, to each graduating member in good standing who has attained a cumulative scholastic rank academically in the upper ten percent of all candidates eligible for graduation.

**Lambda Kappa Sigma Recognition Key:** A recognition key is presented by Omicron Chapter of Lambda Kappa Sigma International Pharmaceutical Fraternity when, in the opinion of the Fraternity, a graduating member has displayed distinguished service to the Fraternity and College, and is in good standing academically and professionally.

**Roche 'Hospital Preceptor of the Year' Award:** Upon recommendation of the graduating pharmacy students, a suitably engraved plaque is awarded by Roche Pharmaceuticals to a pharmacy practitioner in recognition of outstanding participation in the externship component of the pharmacy curriculum.

**The Lilly Achievement Award:** Upon recommendation of the faculty, a gold medal encased in a suitable plastic mounting is awarded annually by Eli Lilly and Company, to a graduating student for superior scholastic and professional achievement, leadership qualities, and professional attitude.

**Macomb County Pharmacists' Association (MCPA) Pharmacy Scholarship:** Award of at least \$500, given to a full-time pharmacy student in good academic standing.

**Meijer's Pharmacy Scholarship:** \$1000 is given to a pharmacy student based on academic achievement and demonstrated interest in community pharmacy.

**Merck Award:** A set of books consisting of The Merck Index and The Merck Manual, personally embossed, are awarded annually to two or three graduating students for outstanding academic achievement.

**Michigan Pharmacists' Association Dean's Professionalism Award:** This annual award is presented to the graduating student selected by the Dean as most likely to achieve leadership in pharmacy practice and advance the ethics and standards of the profession of pharmacy. Awardee is appointed to the M.P.A. Public and Professional Affairs Committee with a complimentary one-year M.P.A. membership.

**Michigan Society of Health-System Pharmacists Award:** \$100 is given to an undergraduate pharmacy student who has demonstrated interest in hospital pharmacy, significant academic achievement, and professional extracurricular activity.

**Mylan Pharmaceuticals Excellence in Pharmacy Award:** A distinctive certificate and a subscription to *Drug Interaction Facts* is presented

annually to the graduating baccalaureate pharmacy student who has demonstrated superior proficiency in the provision of drug information services as well as outstanding professional motivation. The recipient must rank academically in the top twenty-five per cent of the graduating class.

**National Association of Chain Drug Stores (NACDS) Pharmacy Scholarship:** In honor of John Enokian (alumnus), for outstanding contributions to the profession on behalf of Wayne State pharmacy students; this \$1000 award is made to a student entering the third professional year (P3).

**National Community Pharmacists' Association (NCPA) Presidential Scholarship:** A \$2000 nationally-competitive scholarship, which is based on leadership qualities and academic achievement, awarded by NCPA. Application deadline is in March.

**Oakland County Pharmacist Scholarship:** \$500 and a handsome engraved plaque are presented to a pharmacy student in accordance with established criteria.

**Perrigo Pharmacy Award for Excellence in Nonprescription Medication Studies:** An award of \$200 is presented to a graduating student who has excelled in the non-prescription medication course taught in the first professional year, as well as in the non-prescription medication components of community pharmacy externship.

**Pfizer U.S. Pharmaceuticals Outstanding Leader Award:** Upon recommendation of the practice faculty, a suitably engraved plaque and \$500 is awarded by Pfizer Laboratories to a graduating student who has demonstrated extraordinary leadership abilities.

**Pharmacists Mutual Pharmacy Scholarship:** \$1000 is awarded to a pharmacy student entering either the second, third, or fourth professional year.

**Phi Delta Chi Alpha Eta Alumni Award:** Each year the name of the graduating member of Alpha Eta Chapter of Phi Delta Chi Fraternity who attains the highest scholastic average of all graduating students is engraved on a plaque, which is presented to the student by the fraternity.

**Robert Rembisz Memorial Pharmacy Scholarship:** An award of approximately \$500 is given to a pharmacy student, in recognition of achievement in the pharmacy program; preference is given to a member of Kappa Psi, Mu Omicron Chapter.

**Rite Aid Corporation Endowment Minority Pharmacy Student Scholarship:** An award of \$1000 given to a minority student entering the senior year. Student must be in good academic standing, committed to practicing community pharmacy, and have exhibited good communication and leadership skills.

**Rite Aid Pharmacy, Inc., Intern Scholarship:** \$1000 is awarded to a graduating Rite Aid intern with the highest scholastic average in the program, to recognize scholastic achievement and to encourage continued progress.

**Rite Aid Pharmacy, Inc., Scholarship:** \$1000 awarded to a pharmacy student with a grade point average of at least 3.0 and an interest in community pharmacy, to recognize scholastic achievement. Open to all pharmacy students.

**Roche Pharmaceuticals Communications Award:** Roche presents an annual award to the graduating student who has demonstrated qualities and abilities necessary to the practice of community pharmacy, to recognize and promote effective pharmacist/patient communication as a vital aspect of pharmacy service.

**Schering Pharmacy Scholarship:** \$500 awarded to a first (P1) professional year student for outstanding achievement in jurisprudence studies.

**Smith Kline Beecham Patient Care Award:** A plaque is presented annually to a graduating baccalaureate student in recognition of excellent performance during the pharmacy internship, with emphasis on superior patient relations in hospital and community practice.

*Southeastern Michigan Society of Hospital Pharmacists:* \$1000 is awarded to a second, third, or fourth professional year pharmacy student with a grade point average of at least 2.8, an interest in hospital pharmacy, and desirable qualities of character and leadership.

*Sarah Stier Memorial Pharmacy Scholarship:* Award of approximately \$500, given to a pharmacy student in recognition of superior achievement in the pharmacy program.

*Substance Abuse Educator Scholarship:* \$200 presented to the graduating student who, upon recommendation of faculty and students, has demonstrated active involvement in substance abuse education.

*Frank O. Taylor Pharmacy Scholarship:* An award of \$1000 is made to a pharmacy student with an interest in pursuing a career in industrial pharmacy.

*TEVA Pharmaceuticals USA Outstanding Student Award:* Upon recommendation of the faculty, a plaque and \$100 is awarded by the TEVA Company to a graduating baccalaureate student who excels in the study of pharmacy.

*Wal-Mart Stores, Inc., Pharmacy Scholarship:* Wal-Mart, Inc., annually awards a \$1000 scholarship to a full-time pharmacy student with high scholastic standing, who has demonstrated outstanding qualities of character and leadership. Emphasis is placed on financial need and a desire to enter community pharmacy practice.

*Wayne County Pharmacists Association Scholarships:* The members of the Wayne County Pharmacist Association award one scholarship of at least \$500 to a full time second (P2) professional year pharmacy student, and one scholarship of at least \$500 to a full-time third (P3) professional year pharmacy student. Each student must have a core g.p.a. of at least 2.8 and demonstrated involvement in professional activities.

*WSU Pharmacy Alumni Association Scholarship:* The pharmacy alumni of Wayne State University award an annual scholarship of at least \$500 to a full-time second (P2) professional year pharmacy student with a g.p.a. of at least 2.8 and demonstrated involvement in professional activities.

### *Faculty Awards*

*WSU Third (P3) Professional Year Pharmacy Student Faculty Awards of the Year:* Upon recommendation and selection by the graduating class, one or two faculty members receive the Faculty of the Year Award for outstanding contribution to the class.

*WSU Second (P2) Professional Year Pharmacy Student Faculty Award of the Year:* Upon recommendation and selection by the second professional year class, one faculty member receives the Faculty of the Year Award for outstanding contribution to the class.

*WSU First (P1) Professional Year Pharmacy Student Faculty Award of the Year:* Upon recommendation and selection by the first professional year class, one faculty member receives the Faculty of the Year Award for outstanding contribution to the class.

*Elizabeth Green Wize (Alumna) Scholarship:* An award of approximately \$500 to a full-time African American student with a grade point average of at least 3.0, financial need, and an interest in community pharmacy.

## Short-Term (Emergency) Loans

Short-term emergency student loans are awarded to pharmacy students in good academic standing. The student is usually obligated to repay the loan before graduation from the College. For information, contact the Assistant Dean of Students.

*Alfred Berkowitz Pharmacy and Allied Health Professions Student Loan Fund:* This fund was established by Mr. Alfred Berkowitz to provide financial assistance to needy students in the College.

*Louis Bloch Student Loan Fund:* Offers loans to qualified third- or fourth-year professional pharmacy students in good academic standing.

*Concord/Wrigley Drugs, Inc., Pharmacy Student Loan:* A loan in the amount of \$1000 was established by Alan Stotsky and is awarded annually by Concord/Wrigley Drugs, Inc., to a pharmacy student in good standing with an interest in community pharmacy practice. Recipients have the opportunity for reimbursement through an agreement with Concord/Wrigley Drugs, Inc.

*G. Oliver Daniel Pharmacy Student Loan:* This fund was established by the family of G. Oliver Daniel for the benefit of Afro-American pharmacy students in good academic standing. The loan is intended primarily for fees, books, and supplies, for not more than two academic semesters.

*Robert L. Fleischer Memorial Pharmacy Student Loan:* This fund was established by friends of the Fleischer family to honor the memory of Mr. Fleischer, a 1933 pharmacy graduate of Detroit Institute of Technology. It provides financial assistance to pharmacy students in good standing for fees, books and supplies.

*Arthur Koorhan Pharmacy Student Loan:* Arthur Koorhan is the first recipient of the Harold W. Pratt Award sponsored by the National Association of Chain Drug Stores, Inc. Mr. Koorhan donated the monetary award to the College for loans to pharmacy students who are in good academic standing and need financial assistance for fees, books, and supplies.

*Roland T. Lakey Pharmacy Student Loan:* A loan fund was established in honor of Dean Emeritus Roland T. Lakey by the Pharmacy Alumni Association, Rho Pi Phi Fraternity, and friends of Dean Lakey. Pharmacy students are eligible for loans from this fund when students have completed twelve credits in the College with a grade point average of at least 2.2.

*Bernard J. Levin Pharmacy Student Loan:* This fund established in memory of Mr. Levin, a pharmacy graduate of Detroit Institute of Technology, provides financial assistance to pharmacy students in good academic standing for fees, books and supplies.

*Burton J. Platt Student Loan:* This loan was established as a memorial to Mr. Burton J. Platt in February 1975 and is available to students in good academic standing in the Pharmacy program.

*Morris Rogoff Student Loan:* The family and friends of Mr. Morris Rogoff, a dedicated alumnus of the College, have established a loan fund in his memory. These funds provide financial assistance for pharmacy students in the undergraduate and graduate programs and are intended primarily for fees, books and supplies.

# FACULTY of ALLIED HEALTH PROFESSIONS

## Programs

Anesthesia, clinical laboratory science, occupational and environmental health sciences, occupational therapy, pathologists' assistant, physical therapy, and physician assistant studies are among the allied health programs which contribute in vital ways to the practice of medicine and provision of health care. Mortuary science offers students a professional degree program in funeral service education. These fields of study lead to interesting and rewarding careers.

**Anesthesia:**\* The nurse anesthetist is a specialist who, as a member of a health-care team, is qualified to administer anesthesia to patients for all types of operations under the direction of a physician. The anesthetist is also prepared in the management of cardiopulmonary resuscitation and in the application of modern methods and procedures of respiratory care.

**Clinical Laboratory Science:**\* Students in clinical laboratory science learn the scientific principles and theories behind the many laboratory tests performed to aid the diagnosis of disease. During the latter part of their curriculum, they become proficient in the performance of these tests and familiar with the practical aspects of the clinical laboratory. The work of the clinical laboratory scientist is indispensable to effective care of the sick, because results of their analytical work often establish a basis for diagnosis which must be made before medical care can be instituted.

**Cytotechnology:** Students in the clinical laboratory science--cytotechnology concentration enter a challenging field involving the microscopic inspection and evaluation of slide preparations of various human cells and/or organs. A cytotechnologist practices under the direction of a pathologist in identifying changes in the body's cells. While the majority of cytotechnologists work in hospitals, graduates are also prepared for positions in research laboratories, private and clinical laboratories, and in cytotechnology education.

**Forensic Investigation:** This certificate program is designed for students who have obtained a degree in another discipline from an accredited college or university who wish to acquire competence in the area of forensic investigation. This program is not designed to train forensic investigators; rather, its aim is to educate personnel whose professional scope and practice interfaces with the criminal justice system.

**Occupational and Environmental Health Sciences:**\* The complex industrial environment of today exposes the worker to many physical and chemical factors capable of provoking stress or irreversible damage to health. The Department of Occupational and Environmental Health Sciences offers the Master of Science degree with specialization in industrial hygiene or industrial toxicology.

The profession of industrial hygiene, devoted to the prevention of occupational illness, is founded on the belief that safe and healthful working conditions can be established by proper control of environmental stresses. Industrial toxicology, upon which industrial hygiene is largely based, concerns itself with determining the amounts of potentially toxic substances which may be safely tolerated and the mechanisms by which these substances cause harm.

Engineers, physicians, chemists, physicists, biologists and other scientists will find these disciplines stimulating, with opportunities for research and application continually increasing. The scarcity of well-trained professionals in these fields and the heightened interest of federal, state and local legislators in health problems have resulted in excellent employment prospects for qualified persons with good remuneration and opportunities for advancement.

**Occupational Therapy:** Undergraduate and graduate education in occupational therapy prepares the student to assume clinician, researcher, educator, and consultative roles that assist individuals who are limited in the ability to perform tasks required in normal routines of daily living: self-care, work, and play/leisure. Students learn theoretical concepts and their application related to the restoration, development, and maintenance of physical, psychological, social, emotional, and cognitive functions. The theory-based curriculum includes instruction in the use of specific evaluative procedures; the application of a wide variety of activities related to daily living tasks, including creative and manual skills; and the procedures for functioning as a member of a health care team. The occupational therapist's goal is to promote meaningful occupations and maximize functional independence in collaboration with the client.

**Physical Therapy:** Undergraduate education in physical therapy prepares students for the Master in Physical Therapy program. The curriculum, didactic and clinical, provides opportunities for the student to learn basic skills and techniques in evaluation, treatment procedures, and selection of appropriate therapeutic procedures, primarily affecting the neuro-musculo-skeletal system, to meet the needs of the individual. The physical therapist is an integral member of the medical team in the planning, implementation and evaluation of the patient's health-care program.

**Mortuary Science:** The program in mortuary science prepares students for a career in funeral service. The curriculum provides the study of the fundamentals of applied biological and physical sciences as background for understanding techniques and procedures applicable to the preparation and disposition of human bodies and to public health and safety measures. Other areas of study include a thorough understanding of the theory and a proficiency in the practice of the technical skills pertinent to funeral service, and the instillation of high standards of ethical conduct required to foster and uphold the dignity of funeral service.

**Pathologists' Assistant:** The pathologists' assistant program trains personnel to assist the pathologist in the performance of postmortem examinations and in the preparation of surgical specimens for study. Additional training prepares the student to take responsibility for tasks designated by a supervising pathologist such as budgetary, superintendence, and teaching duties.

**Physician Assistant Studies:**\* The mission of the physician assistant studies program is to train highly-qualified physician assistants for primary care in inner-city and other under-served areas of the State of Michigan. The graduate program is a professional health program designed to meet the need for qualified medical professionals; it is two years in length, and classes begin in May of each year.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information section of this bulletin, beginning on page 5. The following additions and amendments pertain to allied health students.*

## Recommended High School Preparation

Students who plan to enter the University as freshmen should have included in their high school programs at least three years of English, one year of algebra, one year of plane geometry, at least one course in a laboratory science and at least two years of a foreign language. Some programs require additional work in mathematics and science.

## Admission to Preprofessional Programs

Preprofessional programs in clinical laboratory science, mortuary science, occupational therapy, and physical therapy are taken in the College of Science and all students must apply for admission to that College, requirements for which are satisfied by general undergraduate admission to the University. The Office of Admissions is located at 3 East, Helen Newberry Joy Student Services Center, Wayne State University, Detroit, Michigan 48202; telephone: 577-3577. Admissions counselors are available for personal conferences to aid the prospective student.

## Admission to Professional Programs

Each of the Allied Health programs is limited in the number of applicants that can be accepted. This limitation is created not only by the number of faculty members available, but also by the number of positions available in health care facilities where much of the field work experience is conducted at a 1:1 or 1:2 faculty-to-student ratio.

Students are admitted to the professional program annually. In the sophomore year the student should make application to the program of his/her choice. However, because of special requirements for each program, students are urged to contact the department for counseling and application deadline dates a year before they plan to enter.

For admission to the professional Allied Health programs, applicants must have acquired a minimum of sixty credits (or their equivalent) and have completed all equivalent preprofessional course and other requirements. Students admitted to the professional program usually have a grade point average of 2.5 ('A'=4.0) or better.

Although academic achievement is important, personal qualities are considered of equal importance since the students selected will eventually be working as members of a team in the delivery of health care. Therefore, criteria for selection are also based on such qualities as maturity, motivation, knowledge of the profession, ability to communicate, personal integrity and empathy for others. Consequently, evaluations from faculty and academic advisers, as well as a personal interview, are given great weight in the selection of candidates by admissions committees.

## Academic Advising

A staff of academic advisers is available in the University Advising Center, 3 West, Joy Student Services Building, for students interested in allied health professions.

Students, during their sophomore year, should confer with the professional program adviser of the Allied Health profession of their choice whenever they have questions about degree requirements, academic regulations, course elections, programs of study, or difficulties in their academic work. Course elections are arranged in consultation with the professional program advisers.

## Normal Program Load

The requirements for graduation are based upon a normal program of fifteen credits per semester for eight to ten semesters. Because courses are of varying length, students cannot always arrange programs of exactly fifteen credits; hence the normal load is fourteen to eighteen credits.

## Probation

If a student's work falls below the required cumulative average for professional studies, he/she will be placed on probation. If a student incurs a serious grade point deficiency in a semester, or remains on probation for more than one semester, he/she will not be allowed to re-register in the College unless he/she obtains permission from the Office of the Dean. Such permission will be granted only after an appraisal of the student's situation and some assurance from the student that the previous causes of failure will not be operative in the proposed program.

**Program Probation:** A student whose semester grade point average falls below the required average will be placed on program probation. Each student must meet the academic and probationary requirements of his or her program.

**Removal of Probation:** The student will be removed from probation at the end of any semester in which he/she achieves the average required.

**Academic Honesty:** Students are expected to abide by the principle of honesty which is fundamental to the life of a scholarly community. If any act of academic dishonesty (cheating or plagiarism) is discovered, the instructor is expected to take appropriate action, which can include one or more of the following: reprimand, repeat of assignment, a failing grade for the assignment, a failing grade for the course. Serious acts of dishonesty can lead to suspension or dismissal. The instructor will notify the student of the alleged violation and inform him/her of any action being taken. Both the student and the instructor are entitled to academic due process should the instructor's action be contested.

Further information can be obtained from the College's Office of the Dean.

## Student Conduct

Students are expected to abide by the principle of honesty. Dishonesty in the academic community is a deliberate attempt to deceive the educational process by submitting work which is not the product of one's own intellect and diligence. Attempts to give a false impression of academic performance may take many forms, such as the unauthorized use of notes, direct copying from another's examination paper, or collusion between students to exchange information during an examination. Acts of deception may also include plagiarism, or the submission under the guise of personal achievement of any material or idea resulting from unauthorized assistance.

Academic dishonesty or cheating not only tends to destroy an individual's character and integrity, but also diminishes confidence in the educational system on the part of persons who exert honest effort. Students, faculty, and support staff all have a duty to eliminate dishonesty from the educational system.

A faculty member has inherent responsibility for the academic conduct and moral character of each course he/she teaches. If the teacher suspects academic dishonesty within a class, appropriate steps should be taken to ascertain the facts in the matter, consistent with the rights of the parties involved, before invoking sanctions commensurate with the nature of the offense. A copy of the complete policy of the College may be obtained from the Registrar's Office, 139 Shapero Hall.

## Dean's List of Honor Students

Full-time students whose grade point averages are 3.7 or above in a given term are eligible for citation for distinguished scholarship. Part-time students are eligible for inclusion in the Dean's List of Honor Students after each accumulation of twelve credits.

## Attendance

Regularity in attendance is necessary for success in college work. Each instructor, at the beginning of the course, will announce attendance requirements.

## Student Rights and Responsibilities

The Faculty reserves the right to dismiss at any time a student who does not appear to be suited for the work or whose conduct or academic standing is regarded as unsatisfactory. Students are urged to review the specific policies of their respective department.

## BACHELOR'S DEGREE REQUIREMENTS

Specific requirements for the several bachelor's degrees offered by the Faculty of Allied Health Professions are enumerated in the departmental sections of this bulletin. Following are general College and University policies governing baccalaureate programs.

## University General Education Requirements

For complete description, see section beginning on page 29.

**University Requirement in American Government** -- see pages 29 and 33.

**University Proficiency Requirements in English and Mathematics:** All undergraduate students who register for the first time at Wayne State University in Fall Semester 1983 or thereafter will be required to demonstrate proficiency in English and mathematics by the time they have earned sixty semester credits toward a bachelor's degree. For full particulars of these requirements, see the General Information section of this Bulletin, pages 29-39.

## Residence

The last thirty credits of work applicable to the degree, exclusive of credit by special examination, must be completed in an undergraduate college or school of Wayne State University.

## Time Limitation

Because of rapid changes in technology and in the methods and concepts of patient care, students in the allied health programs must complete their preprofessional science credits within the six years just prior to admission to the professional program and must complete their professional program within three years, unless exception is granted by the Department Chairperson. Students who interrupt their academic program will have to apply for reinstatement on an individual basis to have their performance evaluated. They may be required to pass examinations comparable to those given to current students at that level sought for re-entry into the program.

## Financial Aid

See Office of Scholarships and Financial Aid, page 20.

*Alfred Berkowitz Pharmacy and Allied Health Professions Student Loan Fund:* This fund was established by Mr. Alfred Berkowitz in March 1975 to provide financial assistance to needy students in the College.

## Outside Employment

The undergraduate curriculum has been arranged with the presumption that students will devote full time and energy to their college and university experience. Students are encouraged to limit their outside

employment in order to benefit from the full complement of academic and cultural opportunities that are a vital part of higher education.

## Requirements for Graduation

In addition to the formal academic requirements for graduation, students in the Allied Health Professions must demonstrate traits of character, stamina and emotional stability appropriate for work in a health-care field. Students may be required to withdraw from the College when, in the judgment of a committee of the faculty, they are deficient in these qualities so as to make them unsuitable for their chosen profession.

*Graduation with Distinction:* See page 39.

# CLINICAL LABORATORY SCIENCE

Office: 233 Shapero Hall; 313-577-1384

Program Director: Carol Watkins

## Associate Professors

Michelle Alfa, Dorothy M. Skinner Brown (Emerita)

## Assistant Professors

Janet Brown Castillo, Jean Garza, M. Ann Wallace (Emerita)

## Adjunct Associate Professors

Barbara Anderson, Gilbert Herman

## Adjunct Assistant Professors

Linda Cardine, Elena Dvorin, Craig Foreback, Gwen Gordon, Carma Huff, Patti King, Sue Kozlowski, Joseph Melvin, Elizabeth Peters, Joyce Salancy, Mary Ann Weller, Lynn Williams

## Adjunct Instructors

Frank Bahorski, Deborah Cyzeska, Steven Duskey, Eric Emme, Stella Fratarcangeli, Kathleen Hay, Carol Hillman-Wiseman, Charlene Kretch, Ross LaVoie, Rosemarie May, Bernarda Wroblewski

## Degree Programs

*BACHELOR OF SCIENCE in Clinical Laboratory Science*

*BACHELOR OF SCIENCE in Allied Health Sciences  
with concentrations in cytotechnology and laboratory science*

*POST-BACHELOR'S CERTIFICATE in Clinical Laboratory  
Science*

*\*MASTER OF SCIENCE in Clinical Laboratory Science*

The Program in Clinical Laboratory Science is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAA-CLS), 8410 W. Bryn Mawr Avenue, Suite 670, Chicago, Illinois 60631 (773-714-8880).

Clinical laboratory science is a health profession offering many challenging opportunities for men and women with an aptitude in the basic sciences and an interest in a career devoted to giving indispensable aid to the effective practice of medicine. The Clinical Laboratory Science Program at Wayne State University provides the interested student with the technical knowledge and specialized skills necessary to the profession. The work of the clinical laboratory scientist involves:

1. Provision of accurate diagnostic information to the physician through performance of a vast array of laboratory tests.
2. Comparative evaluation and utilization of the best possible methods of performance of these tests.
3. Operation of sophisticated laboratory equipment.
4. Effective teaching and supervision of students and auxiliary laboratory personnel.

While the majority of clinical laboratory scientists work in hospital or other clinical laboratories, graduates are also prepared for positions

in federal, state and local health departments, in industrial or research laboratories and in clinical laboratory science education.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

The programs offered by the Department of Clinical Laboratory Science utilize the facilities of the School of Medicine, the Faculty of Allied Health Professions and the pathology departments and clinical laboratories of hospitals affiliated with the Department of Clinical Laboratory Science.

## Bachelor of Science in Clinical Laboratory Science

The program leading to the Bachelor of Science degree in Clinical Laboratory Science fulfills the requirements for clinical laboratory science education. A graduate from Wayne State University with this Bachelor of Science degree is eligible to take a national certification examination in clinical laboratory science. The degree program consists of a preprofessional curriculum and a professional curriculum, as follows:

The freshman and sophomore years constitute the preprofessional program comprising the liberal arts and science courses taught by the faculty of the College of Liberal Arts and the College of Science.

The junior year begins the professional program and is taught by the faculty of the Department of Clinical Laboratory Science and the School of Medicine.

The senior year may consist of didactic coursework and/or clinical experience in the laboratories in one of the affiliated hospitals.

## Admission

**Preprofessional:** Students seeking admission to the preprofessional program in the College of Liberal Arts should refer to the admission requirements of the University, page 15. High school prerequisites for applicants pursuing the Bachelor of Science in Clinical Laboratory Science are:

*high school units*

Biology . . . . .	1
Chemistry . . . . .	1
Algebra . . . . .	1.5
Geometry . . . . .	1
Trigonometry . . . . .	0.5

**Recommended:** One to two units of a foreign language, one to two units in advanced English, and computer use skills.

Although the College of Science does not offer course work in the first unit of algebra, some mathematics deficiencies can be eliminated by taking Mathematics 0993 or 0995 (see page 438). Students with NO preparedness in mathematics will have to remedy this deficiency at a high school. Before the first course in college chemistry or college mathematics can be taken, the student must pass a placement test.

A deficiency of any of the above high school units may extend the time required for completion of the courses prerequisite to beginning the professional curriculum in the junior year, or it may restrict the electives which may be taken. Any entrance deficiencies should be made up as early as possible, preferably in the first year.

## PREPROFESSIONAL PROGRAM

*In addition to the completion of the following, both English and Mathematics Proficiency Examinations must be passed prior to admission to the Professional Program.* Courses in this program are taken under direction of the College of Science, the College of Liberal Arts, and the College of Nursing.

## First Year

credits

BIO 1510 --(LS) Basic Life Mechanisms . . . . .	4
CHM 1220 -- (PS) Chemical Structures, Bonding and Reactivity . . . . .	4
CHM 1230 --Chemical Principles Laboratory . . . . .	1
CHM 1240 -- Principles of General/Organic Chemistry . . . . .	4
CHM 1250 -- General/Organic Chemistry Laboratory. . . . .	1
MAT 1800 --Elementary Functions . . . . .	4
UGE 1000 --(GE) Information Power . . . . .	1
ENG 1020 --(BC) Introductory College Writing . . . . .	4
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	2-3
CLS 2080 -- Clinical Laboratory Science Seminar . . . . .	1
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
NUR 1110 or CSC 1000 (or Competency Examination)	
-- (CL) Intro. to Computers & Technology: Health Care . . . . .	0-2
-- (CL) Intro. to Computer Science . . . . .	0-3
Total: 32-40	

## Second Year

CHM 2220 or CHM 2280	
-- Organic Chemistry . . . . .	3
-- Chemical/Analytical Principles . . . . .	3
CHM 2230 or CHM 2290	
-- Preparative Organic Chemistry Lab . . . . .	2
-- Chemical/Analytical Principles Lab . . . . .	2
ENG 3010 or ENG 3050	
-- (IC) Intermediate College Writing . . . . .	3
-- (IC) Technical Communication I (recommended) . . . . .	3
BIO 2200 -- (LS) Introduction to Microbiology. . . . .	4
PHI 1050 -- (CT) Critical Thinking (or Competency Examination) . . . . .	0-3
STA 1020 -- Statistics . . . . .	3
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
Either:	
BIO 2870 and NUR 2030	
-- Anatomy and Physiology . . . . .	5
-- Pathophysiology: Nursing Practice. . . . .	2
or:	
IHS 3100 and IHS 3200 (recommended)	
-- Basic Mechanisms of Human Disease I . . . . .	5
-- Basic Mechanisms of Human Disease II . . . . .	5
Total: 31-40	

**Professional Program Admission:** The junior class is admitted to the professional curriculum in September only. An application for admission to the program must be submitted to the Department of Clinical Laboratory Science by April 15 of the year one wishes to enter the professional program.

The Admissions Committee is composed of clinical laboratory scientists on the faculty and adjunct faculty of the Department of Clinical Laboratory Science. The Admissions Committee will interview and consider for admission all those students who:

1. Have the following cumulative grade point averages by the end of the second semester of the year preceding admission to the professional program:
  - (a) 2.5 or greater overall average; and
  - (b) 2.5 or greater combined science average (biology, chemistry, computer science, mathematics).
2. Have a grade of 'C' or better in ALL preprofessional courses.
3. Have no more than two marks of 'R' or two marks of 'W' in science courses. (If all courses are withdrawn in a single semester, it counts as one 'W'.)
4. Will have completed all preprofessional courses (see above) by the end of the summer semester prior to admission to the professional program.

5. Have taken the English Proficiency Examination prior to the beginning of the fall program (test is given during the week preceding the beginning of each semester; see the University Schedule of Classes for date and time).

6. Submit, in addition to the application, the following:

(a) References (reference forms available in the University Advising Office) from: One employer and one science faculty member (If no employer, two science faculty references may be submitted).

(b) If the student has transferred to Wayne, official transcripts from all former undergraduate schools must be included.

Since the clinical positions are limited, the Admissions Committee must consider each applicant individually. A sound academic background, a familiarity with the profession and its demands, together with a desire to advance the field of clinical laboratory science through research, teaching or service are important factors for consideration. Emotional stability, maturity and the ability to communicate are among the criteria used in considering the student.

The decision of the Admissions Committee will be: (1) Accepted, (2) Denied, or (3) Conditional Acceptance. (If applicants have courses in progress which are prerequisites to the program, acceptance will not be final until satisfactory completion of the requirements.)

All requests for additional information should be addressed to the Department of Clinical Laboratory Science, College of Pharmacy and Allied Health Professions.

Professional courses and/or professional program admission requirements are subject to change without notification. The curriculum is subject to change due to changes in requirements for entry into professional practice, which may be separate from academic requirements. It is the student's responsibility to obtain current information regarding the program from the Department of Clinical Laboratory Science.

## Degree Requirements

Candidates for the Bachelor of Science in Clinical Laboratory Science must complete 127-128 credits in course work, plus sufficient credits to fulfill the University General Education Requirements not satisfied by either required courses or the student's choice of electives in the preprofessional program. The distribution of the total credits for the degree will be between the preprofessional program (see above) and the professional program as follows:

### PROFESSIONAL PROGRAM

Basic science courses in this program are taken under the direction of the faculty of the Department of Clinical Laboratory Science in cooperation with the faculty of the School of Medicine and staff of affiliated clinical institutions.

### Third and Fourth Years

credits

BMB 5010 --General Biochemistry Lectures . . . . .	2
CLS 5500--Principles of Immunology . . . . .	2
CLS 5510 --Bacteriology . . . . .	2
CLS 5520 -- Virology/Mycology . . . . .	2
CLS 3040 --Immunohematology . . . . .	2
CLS 3050 -- Hematology Lecture . . . . .	2
CLS 3080 -- Clinical Lab. Methods and Instrumentation . . . . .	3
CLS 3090 -- Clinical Laboratory Science Professional Seminar . . . . .	1
CLS 3100 --Clinical Microscopy. . . . .	2-3
CLS 3140 -- Immunohematology Laboratory. . . . .	2
CLS 3150 -- Hematology Laboratory. . . . .	2
CLS 3180 --Clinical Lab. Methods and Instrumentation Laboratory . . . . .	1
CLS 3280 --Introduction to Clinical Chemistry. . . . .	4
CLS 4040 -- Laboratory Administration & Instruction . . . . .	2
CLS 4230 -- Hemostasis . . . . .	2
CLS 4990 -- Directed Study . . . . .	1
CLS 5550 -- Applied Genetics Technology . . . . .	4



CLS 5150 -- Medical Informatics . . . . .	2
CLS 5993 -- (WI) Writing Intensive Course in CLS . . . . .	0
HS, VP, FC, SS, AI, or PL General Education Requirements . . . . .	3-4

**Six-Month Clinical Experience  
(Second Semester/Fourth Year)**

CLS 4000 -- Clinical Hematology . . . . .	5
CLS 4010 -- Clinical Chemistry . . . . .	3
CLS 4020 -- Clinical Blood Bank . . . . .	4
CLS 4030 -- Clinical Microbiology . . . . .	5
CLS 4050 -- Clinical Immunology . . . . .	1
CLS 4990 -- Directed Study . . . . .	1
CLS 5070 --Clinical Pathology Correlation . . . . .	2

CLS 4000, 4010, 4020, 4030, 4050, and/or 4990 will be taken at a hospital affiliated with the College of Pharmacy and Allied Health Professions.

**Academic Standing--Dismissal and Readmission:** No senior student will be graduated with a grade of less than 'C' in any clinical course. Juniors will not be admitted to the clinical year with less than a 2.5 overall g.p.a.

Any student with a semester g.p.a. less than 2.0 is subject to dismissal. The student who receives a final grade of 'E' and/or a second 'D' in a junior (first professional) or senior year course is automatically dismissed from the program. No student will be admitted to the clinical year with an overall g.p.a. of less than 2.5.

Students who have been dismissed for academic reasons and wish to be readmitted to the clinical laboratory science professional curriculum will have the opportunity to do so only once. Students must receive a 'C' or above in all repeated courses in order to continue in the program. The decision to readmit a student will be on a competitive basis and readmission is not guaranteed. If, upon readmission, the student fails to meet the academic standards of this Department he/she will be dismissed and not readmitted any time thereafter.

Any student who has been dismissed for academic reasons during the first admission to the program but has successfully completed clinical laboratory science or cytotechnology coursework with a grade of 'C' or better need not repeat these courses upon final readmission. All courses receiving a final grade of 'D' or 'E' must be repeated. It may be necessary for the student to change status from full-time to part-time in order to repeat the academically substandard courses. If more than one year elapses from the time these courses were successfully completed, and the student is readmitted, it may be necessary to repeat the entire course of study. The faculty reserves the right to recommend repetition of courses for any student who is readmitted to the professional program and, in specific cases, may alter this policy and assign a directed study.

**Change of Status:** Any student wanting to have their status changed from full-time to part-time must comply with the following guidelines:

1. Request the status change no later than the ninth week of classes from the Department Chairperson.
2. Present a reason or reasons acceptable to this Department as determined by the faculty, realizing that this decision will be final.
3. Continue as a part-time student under the predetermined curriculum as set forth by this Department.
4. Understand that this option may be limited by current and future enrollment; again, the decision of the faculty on this basis is final.

**Health and Liability Insurance:** Clinical Education is provided throughout the professional program along with didactic courses. A portion of the Senior Year is spent in one or more 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 bloodborn pathogens, and the risk of possible mishaps in patient care. Therefore, all students are required to maintain health insurance coverage

and liability insurance, both of which must be in effect prior to and during all periods in which the student is involved in clinical education. The student is responsible for the cost of these insurances and all other costs (such as travel, meals, living expenses) associated with the clinical education portion of the program.

**Residence:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 374.

**Time Limitation:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 374.

**Bachelor of Science  
in Allied Health Sciences  
-- Cytotechnology Concentration**

Cytotechnology is a challenging field involving the microscopic inspection and evaluation of slide preparations of various human cells and/or organs. A cytotechnologist practices under the direction of a pathologist in identifying changes in the body's cells. Microscopic examinations of specially stained slides are made to detect cytoplasmic or nuclear changes of cells which may differentiate healthy cells from those suspected of being cancerous or of having other structural abnormalities. While the majority of cytotechnologists work in hospitals, graduates are also prepared for positions in research laboratories, private and clinical laboratories and in cytotechnology education.

The freshman and sophomore years constitute the preprofessional curriculum with courses taught by the faculty of the College of Science (or equivalent courses at another accredited institution). The junior year begins the professional curriculum and is taught by the faculties of the Department of Clinical Laboratory Science, the College of Science, and the College of Education. The senior year consists of an eleven month clinical experience in the laboratory of an affiliated hospital.

**Accreditation:** The degree program in cytotechnology is four years in duration, culminating in the degree Bachelor of Science in Allied Health Sciences with a concentration in cytotechnology. The four-year program fulfills the requirements for cytotechnology education of the National Accrediting Agency for Clinical Laboratory Science in collaboration with the American Society of Cytology. A graduate from Wayne State University with a degree in Allied Health Sciences with a concentration in cytotechnology is eligible to take a national certification examination in cytotechnology.

**Admission**

**Preprofessional:** Students seeking admission to the preprofessional program in the College of Science should refer to the admission requirements of the University as stated on page 15. High school prerequisites for applicants pursuing the Bachelor of Science in Allied Health Sciences with a concentration in cytotechnology are:

*high school units*

Algebra . . . . .	1.5
Biology . . . . .	1
Chemistry . . . . .	1
Geometry . . . . .	1
Trigonometry . . . . .	0.5

**Recommended:** one to two units of a foreign language, one to two units in advanced English, and computer use skills.

Although the College of Science does not offer course work in the first unit of algebra, some mathematics deficiencies can be made up by taking MAT 0993 or 0995 (see page 438). Students with NO preparedness in mathematics will have to remedy this deficiency at a high school. Before the first course in college mathematics or college chemistry can be taken, the student must pass qualifying examinations in these subjects.

A lack of any of the high school units listed may extend the time required for completion of the courses which are prerequisite to beginning the professional curriculum in the junior year, or may restrict the electives which may be taken. Any entrance deficiencies should be made up as early as possible, preferably in the first year.

### PREPROFESSIONAL PROGRAM

Courses in this program are taken under the direction of the College of Science and the College of Liberal Arts. *Students must pass the required preprofessional courses with a grade of 'C' or better.*

*In addition to the completion of the following, both English and Mathematics Proficiency Examinations must be passed prior to admission to the Professional Program.* Courses in this program are taken under direction of the College of Science, the College of Liberal Arts, and the College of Nursing:

#### First Year

	<i>credits</i>
BIO 1510 --(LS) Basic Life Mechanisms . . . . .	4
CHM 1220 -- (PS) Chemical Structures, Bonding and Reactivity . . . . .	4
CHM 1230 --Chemical Principles Laboratory . . . . .	1
CHM 1240 -- Principles of General/Organic Chemistry . . . . .	4
CHM 1250 -- General/Organic Chemistry Laboratory. . . . .	1
MAT 1800 --Elementary Functions . . . . .	4
UGE 1000 --(GE) Information Power . . . . .	1
ENG 1020 --(BC) Introductory College Writing . . . . .	4
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	2-3
CLS 2080 -- Clinical Laboratory Science Seminar . . . . .	1
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
NUR 1110 or CSC 1000 (or Competency Examination)	
-- (CL) Intro. to Computers & Technology: Health Care . . . . .	0-2
-- (CL) Intro. to Computer Science . . . . .	0-3
Total:	30-38

#### Second Year

CHM 2220 or CHM 2280	
-- Organic Chemistry . . . . .	3
-- Chemical/Analytical Principles . . . . .	3
CHM 2230 or CHM 2290	
-- Preparative Organic Chemistry Lab . . . . .	2
-- Chemical/Analytical Principles Lab . . . . .	2
ENG 3010 or ENG 3050	
-- (IC) Intermediate College Writing . . . . .	3
-- (IC) Technical Communication I (recommended) . . . . .	3
BIO 2200 -- (LS) Introduction to Microbiology. . . . .	4
PHI 1050 -- (CT) Critical Thinking (or Competency Examination) . . . . .	0-3
STA 1020 -- Statistics . . . . .	3
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement. . . . .	3-4
Either:	
BIO 2870 and NUR 2030	
-- Anatomy and Physiology . . . . .	5
-- Pathophysiology: Nursing Practice. . . . .	2
or:	
IHS 3100 and IHS 3200	
-- Basic Mechanisms of Human Disease I . . . . .	5
-- Basic Mechanisms of Human Disease II . . . . .	5
Total:	31-40

**Residence:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 374.

**Time Limitation:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 374.

**Professional Program Admission:** The junior class is admitted to the professional curriculum in the Fall Semester only. An application for admission to the program must be submitted to the Department of

Clinical Laboratory Science by April 15 of the year one wishes to enter the professional program. Professional program admission requirements are the same as for the general Bachelor of Science in Clinical Laboratory Science; see page 376. For further information, write: Department of Clinical Laboratory Science, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

Professional courses and/or professional program admission requirements are subject to change without notification. The curriculum is subject to change due to changes in requirements for entry into professional practice, which may be separate from academic requirements. It is the student's responsibility to obtain current information regarding the program from the Department of Clinical Laboratory Science.

### Degree Requirements

Candidates for the allied health sciences degree Bachelor of Science with a concentration in cytotechnology must complete 125-126 credits in course work, plus sufficient credits to fulfill the University General Education requirements not satisfied by either required courses or the student's choice of electives in the preprofessional program. The distribution of the total credits for the degree will be between the preprofessional program (see above) and the professional program as follows:

#### PROFESSIONAL PROGRAM

Basic science courses in this program are taken under the direction of the faculty of the Department of Clinical Laboratory Science in cooperation with the College of Science and the staff of the affiliated clinical institutions. The third year begins ONLY in September.

#### Third Year

	<i>credits</i>
BIO 2600 -- Cell Biology . . . . .	3
BIO 3070 -- Genetics . . . . .	4
BIO 5630 --Histology . . . . .	4
CLS 3050 -- Hematology . . . . .	2
CLS 3090 -- CLS Professional Seminar . . . . .	1
CLS 3100 --Clinical Microscopy. . . . .	2
CLS 3150 -- Hematology Laboratory. . . . .	2
CLS 3380 -- Basic Cytotechnology Technique and Research. . . . .	3
CLS 4040 -- Laboratory Administration and Instruction. . . . .	2
CLS 4490 -- Cytotechnology Technique: Female Genital Tract. . . . .	4
CLS 5150 -- Medical Informatics . . . . .	2
CLS 5993 -- (WI) Writing Intensive Course in CLS . . . . .	0
M S 4150 -- Histochemistry . . . . .	3
HS, VP, FC, SS, AI, or PL General Education Requirement . . . . .	3-4

#### Fourth Year

CLS 4500 --Cytotechnology Non-Gynecological Technique I . . . . .	13
CLS 4510 --Cytotechnology Non-Gynecological Technique I . . . . .	16

### Bachelor of Science in Allied Health Sciences

#### -- Laboratory Science Concentration

The Laboratory Science Program prepares the student for clinical training, cytogenetics training at an affiliate hospital, or further schooling in forensic testing, occupational and environmental health sciences (OEHS), physician assistant studies (PAS), and other graduate programs.

At Wayne State, the freshman and sophomore years constitute the preprofessional curriculum with courses taught by the faculty of the College of Science (or equivalent courses at another accredited institution). The junior year and senior year begin the professional curriculum and is taught by the faculties of the Department of Clinical Laboratory Science, the College of Science, and the College of Education. The clinical experience is scheduled post-baccalaureate.

**Accreditation:** The degree program in laboratory science is four years in duration, culminating in the degree Bachelor of Science in Allied Health Sciences with a concentration in laboratory science.

## Admission

**Preprofessional:** Students seeking admission to the preprofessional program in the College of Science should refer to the admission requirements of the University as stated on page 15. High school prerequisites for applicants pursuing the Bachelor of Science in Allied Health Sciences with a concentration in laboratory science are:

<i>high school units</i>	
Algebra	1.5
Biology	1
Chemistry	1
Geometry	1
Trigonometry	0.5

**Recommended:** one to two units of a foreign language, one to two units in advanced English, and computer use skills.

Although the College of Science does not offer course work in the first unit of algebra, some mathematics deficiencies can be made up by taking MAT 0993 or 0995 (see page 438). Students with NO preparedness in mathematics will have to remedy this deficiency at a high school. Before the first course in college mathematics or college chemistry can be taken, the student must pass qualifying examinations in these subjects.

A lack of any of the high school units listed may extend the time required for completion of the courses which are prerequisite to beginning the professional curriculum in the junior year, or may restrict the electives which may be taken. Any entrance deficiencies should be made up as early as possible, preferably in the first year.

## PREPROFESSIONAL PROGRAM

Courses in this program are taken under the direction of the College of Science and the College of Liberal Arts. *Students must pass the required preprofessional courses with a grade of 'C' or better.*

*In addition to the completion of the following, both English and Mathematics Proficiency Examinations must be passed prior to admission to the Professional Program.* Courses in this program are taken under direction of the College of Science, the College of Liberal Arts, and the College of Nursing:

### First Year

	<i>credits</i>
BIO 1510 --(LS) Basic Life Mechanisms	4
CHM 1220 -- (PS) Chemical Structures, Bonding and Reactivity	4
CHM 1230 --Chemical Principles Laboratory	1
CHM 1240 -- Principles of General/Organic Chemistry	4
CHM 1250 -- General/Organic Chemistry Laboratory	1
MAT 1800 --Elementary Functions	4
UGE 1000 --(GE) Information Power	1
ENG 1020 --(BC) Introductory College Writing	4
SPB 1010 -- (OC) Oral Communication: Basic Speech	2-3
CLS 2080 -- Clinical Laboratory Science Seminar	1
HS, VP, FC, SS, AI, or PL General Education Requirement	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement	3-4
NUR 1110 or CSC 1000 (or Competency Examination)	
-- (CL) Intro. to Computers & Technology: Health Care	0-2
-- (CL) Intro. to Computer Science	0-3
<b>Total:</b>	<b>32-38</b>

### Second Year

CHM 2220 or CHM 2280	
-- Organic Chemistry	3
-- Chemical/Analytical Principles	3
CHM 2230 or CHM 2290	
-- Preparative Organic Chemistry Lab	2

-- Chemical/Analytical Principles Lab	2
ENG 3010 or ENG 3050	
-- (IC) Intermediate College Writing	3
-- (IC) Technical Communication I (recommended)	3
BIO 2200 -- (LS) Introduction to Microbiology	4
PHI 1050 -- (CT) Critical Thinking (or Competency Examination)	0-3
STA 1020 -- Statistics	3
HS, VP, FC, SS, AI, or PL General Education Requirement	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement	3-4
HS, VP, FC, SS, AI, or PL General Education Requirement	3-4
Either:	
BIO 2870 and NUR 2030	
-- Anatomy and Physiology	5
-- Pathophysiology: Nursing Practice	2
or:	
IHS 3100 and IHS 3200	
-- Basic Mechanisms of Human Disease I	5
-- Basic Mechanisms of Human Disease II	5
<b>Total:</b>	<b>31-40</b>

**Residence:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 374.

**Time Limitation:** See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 374.

**Professional Program Admission:** The junior class is admitted to the professional curriculum in the Fall Semester only. An application for admission to the program must be submitted to the Department of Clinical Laboratory Science by April 15 of the year one wishes to enter the professional program. Professional program admission requirements are the same as for the general Bachelor of Science in Clinical Laboratory Science; see page 376. For further information, write: Department of Clinical Laboratory Science, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

Professional courses and/or professional program admission requirements are subject to change without notification. The curriculum is subject to change due to changes in requirements for entry into professional practice, which may be separate from academic requirements. It is the student's responsibility to obtain current information regarding the program from the Department of Clinical Laboratory Science.

## Degree Requirements

Candidates for the allied health sciences degree Bachelor of Science with a concentration in laboratory science must complete 125-126 credits in course work, plus sufficient credits to fulfill the University General Education requirements not satisfied by either required courses or the student's choice of electives in the preprofessional program. The distribution of the total credits for the degree will be between the preprofessional program (see above) and the professional program as follows:

### PROFESSIONAL PROGRAM

Basic science courses in this program are taken under the direction of the faculty of the Department of Clinical Laboratory Science in cooperation with the College of Science and the School of Medicine. The third year begins ONLY in September.

### Third Year

BIO 2600 -- Cell Biology	3
BIO 3070 -- Genetics	4
BMB 5010 --General Biochemistry Lecture	2
CLS 3100 --Clinical Microscopy	2
CLS 5500 -- Immunology (with lab)	3
CLS 5510 -- Bacteriology (with lab)	3
CLS 5993 -- (WI) Writing Intensive Course in CLS	0
PHY 2130 or PHY 2170	
-- (PS) General Physics	3

-- (PS) General Physics .....	4
PHY 2131 or PHY 2171 .....	
-- General Physics Laboratory .....	1
-- General Physics Laboratory .....	1
PHY 2140 -- General Physics .....	3
HS, VP, FC, SS, AI, or PL General Education Requirement .....	3-4

**NOTE:** The sequence PHY 2170-2171 is recommended for students who intend to pursue OEHS, medical school, or PAS studies.

#### Fourth Year

CLS 3040 -- Immunohematology .....	2
CLS 3050 -- Hematology .....	3
CLS 3080 -- Clinical Lab Methods & Instrumentation .....	3
CLS 3090 -- CLS Professional Seminar .....	1
CLS 3140 -- Immunohematology Lab .....	2
CLS 3150 -- Hematology Laboratory .....	2
CLS 3180 -- Clinical Lab Methods & Instrumentation Laboratory .....	1
CLS 3280 -- Intro. to Clinical Chemistry (with lab) .....	4
CLS 4040 -- Laboratory Administration and Instruction .....	2
CLS 4230 -- Hemostasis (with lab) .....	2
CLS 4990 -- CLS Professional Directed Study .....	1
CLS 5150 -- Medical Informatics .....	2
CLS 5520 -- Virology & Mycology .....	2
CLS 5550 -- Applied Genetics Technology (with lab) .....	3
CLS 5993 -- (WI) Writing Intensive Course .....	0
Either:	
NFS 2030 -- (LS) Introductory Nutrition .....	3
or	
CLS elective .....	3

#### DMC Clinical Experience (Post-Baccalaureate)

CLS 4000 -- Clinical Hematology .....	5
CLS 4010 -- Clinical Chemistry .....	2-4
CLS 4020 -- Clinical Blood Bank .....	4
CLS 4030 -- Clinical Microbiology .....	5
CLS 4050 -- Clinical Immunology .....	1
CLS 4060 -- Clinical Serology .....	1
CLS 4070 -- Special Chemistry .....	4-5
CLS 4008 -- Clinical Coagulation .....	1
CLS 4090 -- Special Microbiology .....	1
CLS 4990 -- Directed Study .....	1
CLS 5070 -- Clinical Pathology Correlation .....	1-2

A Post-baccalaureate CLS Certificate will be awarded upon successful completion of the Clinical Experience.

**Health and Liability Insurance:** Clinical Education is provided throughout the professional program along with didactic courses. The Senior Year of the program is spent in one or more assignments in selected clinical facilities in the metropolitan Detroit area. Patient care involves inherent risk of exposure to potential diseases, particularly bloodborne pathogens, and the risk of possible mishaps in patient care. Therefore, all students are required to maintain health insurance coverage and liability insurance, both of which must be in effect prior to and during all periods in which the student is involved in clinical education. The student is responsible for the cost of these insurances and all other costs (such as travel, meals, living expenses) associated with the clinical education portion of the program.

**Academic Standing--Dismissal and Readmission:** For procedures regarding probation and dismissal, students should refer to the paragraphs immediately following the general Bachelor of Science professional program, page 377.

### Post-Bachelor's Certificate in Clinical Laboratory Science

This post-baccalaureate certificate program is designed to provide students with clinical training and necessary course work in the field

of clinical laboratory science. The certificate program is structured to assist candidates in obtaining training through an NAACLS-accredited institution. Graduates of the program will receive the post-baccalaureate Certificate in Clinical Laboratory Science and will be eligible to sit for the national registration examination for professional certification.

**Admission:** The Program is open to graduates of baccalaureate programs in clinical laboratory science/medical technology who have (1) a cumulative grade point average of 2.50 or better overall; (2) a 2.5 or better combined science grade point average (biology, chemistry, computer science, mathematics); (3) earned grades of 'C' or better in ALL professional courses; and (4) submitted, in addition to the application for admission (see page 15), the following: references from one employer and one science faculty member (or two science faculty members, if no employer); and official transcripts from all former undergraduate schools.

For additional information, deadline dates, and application forms, contact the Department.

**CERTIFICATE REQUIREMENTS:** The candidate for the post-baccalaureate Certificate in Clinical Laboratory Science must complete the following program with a grade point average of 2.50 or above and must have earned a minimum of eighteen semester credits at Wayne State University.

#### REQUIRED COURSES (Thirty Credits):

CLS 5070 -- Clinical Pathology Correlation .....	2
CLS 4000 -- Clinical Hematology .....	5
CLS 4010 -- Clinical Chemistry .....	4
CLS 4020 -- Clinical Blood Bank .....	4
CLS 4030 -- Clinical Microbiology .....	6
Plus nine credits from the following options:	
CLS 4040 -- Laboratory Administration and Instruction .....	2
CLS 5150 -- Medical Informatics .....	2
CLS 5550 -- Applied Genetics Technology .....	4
CLS 4990 -- Professional Directed Study .....	2-8
Total: 30	

The clinical training portion of the program is full-time and is based on the schedules of the individual hospitals involved. The student is required to complete the clinical training within a six-month period. Other coursework may be accomplished on a part-time basis.

### Student 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 Aids, 2 East, Helen Newberry Joy Student Services Center, Detroit, Michigan 48202.

*The Medical Technology/Clinical Laboratory Science Alumni Association* has established a scholarship fund available to junior year full-time clinical laboratory science and cytotechnology students. Information is available through the Clinical Laboratory Science Department Secretary, 233 Shapero Hall.

*The Dr. Alexander Wallace III Scholarship* is available to a junior year clinical laboratory science or cytotechnology student. For further information, contact the Department secretary, 233 Shapero.

### Medical Technology/ Clinical Laboratory Science Alumni Association

Organized in 1978, the Medical Technology/Clinical Laboratory Science Alumni Association was established for the purpose of developing and maintaining rapport between the graduates and the faculty of the Department of Clinical Laboratory Science. In addition to being supportive of the University, one of the main functions of the Alumni Association is to provide continuing educational opportunities and social activities for alumni, faculty and students of the Clinical Laboratory Science Department.

*Student Professional Activities:* All CLS students may participate in the local, state and national organizations of the American Society for Clinical Laboratory Science. Cytotechnology students have the opportunity to join the national CT Society during their senior year.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### CLINICAL LABORATORY SCIENCE (CLS)

#### **2080 Clinical Laboratory Science Seminar. Cr. 1**

Offered for S and U grades only. Introduction to clinical laboratory sciences. Opportunities and responsibilities. (F,W)

#### **2990 Preprofessional Directed Study. Cr. 1-3**

Prereq: enrollment in pre-clinical laboratory science program. Offered for S and U grades only. Independent study under faculty supervision. (F,S)

#### **3040 Immunohematology. Cr. 2**

Prereq: junior in clinical laboratory science or consent of instructor. Principles of immunology and theory of procedures employed in the clinical blood bank. Survey of the organization and operation of a blood bank. (S)

#### **3050 Hematology. Cr. 2-3**

Prereq: CLS 3020. In-depth study of blood and blood forming organs (normal and pathological) from the standpoint of interpretation and diagnosis. (W)

#### **3080 Clinical Laboratory Methods and Instrumentation. Cr. 2-3**

Prereq: junior standing in clinical laboratory science or consent of instructor. Introduction to fundamental laws of electronics, the theoretical basis of instrument design, and quality control in laboratory testing. Application of instrumental methods, including spectrophotometric, fluorometric, electroanalytical, and chromatographic methods to the clinical laboratory. Material fee as indicated in the Schedule of Classes. (W)

#### **3090 Clinical Laboratory Science Professional Seminar. Cr. 1**

Prereq: junior in clinical laboratory science program. Weekly group discussion on medical technology matters. Medical ethics and professionalism. (W)

#### **3100 Clinical Microscopy. Cr. 2-3**

Prereq: junior in clinical laboratory science program or consent of instructor. Specimen collection, preparation, and examination of urine and other body fluids such as spinal fluid, semen, and synovial fluid. Review of parasitology and laboratory methods for examination. Interdisciplinary case studies involving methods selection and interpretation of findings. Material fee as indicated in the Schedule of Classes. (S)

#### **3140 Immunohematology Laboratory. Cr. 2**

Prereq: junior in clinical laboratory science program. Practice of procedures employed in the clinical blood bank. Material fee as indicated in the Schedule of Classes. (S)

#### **3150 Hematology Laboratory. Cr. 2**

Laboratory exercises relative to in-depth study of blood and blood forming organs; normal and pathological blood forms. Material fee as indicated in the Schedule of Classes. (W)

#### **3180 Clinical Laboratory Methods and Instrumentation Laboratory. Cr. 1**

Prereq: CLS 3080. Introduction to the function and use of clinical laboratory instruments. Material fee as indicated in the Schedule of Classes. (F)

#### **3280 Introduction to Clinical Chemistry. Cr. 4**

Prereq: CLS 3180. Methodologies and interpretations of results of clinical chemistry diagnostic tests. Material fee as indicated in the Schedule of Classes. (W)

#### **3380 Basic Cytotechnology Technique and Research. Cr. 3**

Prereq: junior standing in clinical laboratory science, cytotechnology concentration. Introduction to basic laboratory methodology including microscopy, laboratory safety, pipetting, quality control/assurance, specimen collection and handling, laboratory statistics and calculations, selected laboratory instrumentation, and related carcinoma topics. Field work includes in-depth study of cytopathology topic. Material fee as indicated in the Schedule of Classes. (F)

#### **4000 Clinical Hematology. Cr. 5**

Prereq: senior standing in clinical laboratory science program. Theory and principles for evaluation of the quantity, morphology and function of cellular components of blood. (S)

#### **4010 Clinical Chemistry. Cr. 2-4**

Prereq: senior standing in clinical laboratory science program. Biochemical analysis of blood and other body fluids to determine values of various chemical substances, using routine methods and automation. (F)

#### **4020 Clinical Blood Bank. Cr. 1-4**

Prereq: senior standing in clinical laboratory science program. Theory and principles involving antigen-antibody reactions of blood. Obtaining, storage and preparation of whole blood or blood components for infusion. (F)

#### **4030 Clinical Microbiology. Cr. 5-6**

Prereq: senior standing in clinical laboratory science. Obtaining, culturing, identification and antibiotic sensitivity of microorganisms causing infection or infestation. (W)

#### **4040 Laboratory Administration and Instruction. Cr. 2**

Prereq: junior standing in clinical laboratory science. Educational aspect includes discussion of basic instructional techniques and methodologies; preparation of educational objectives and test questions. Administration portion includes discussions of interaction with patients, fellow workers, employers, other allied health professions. (F,W)

#### **4050 Clinical Immunology. Cr. 1**

Prereq: senior standing in clinical laboratory science program. Study of diseases related to diagnostic immunology. (Y)

#### **4060 Clinical Serology. Cr. 1**

Prereq: senior standing in clinical laboratory science. Theory and procedures for identification of antibodies produced as a result of infection by microorganisms and collagen diseases. (W)

#### **4070 Special Chemistry. Cr. 4-5**

Prereq: senior standing in clinical laboratory science program. Areas of analysis including hormonal studies, electrophoretical determinations, tumor markers, drug analysis, other esoteric component measurements. (Y)

#### **4080 Clinical Coagulation. Cr. 1**

Prereq: senior standing in clinical laboratory science program. Study of process that maintains flowing blood in a fluid state and prevents loss of blood from sites of vascular disruption. (Y)

#### **4090 Special Microbiology. Cr. 1**

Prereq: senior standing in clinical laboratory science program. Study of diseases related to diagnostic medical microbiology. (Y)

**4230 Hemostasis. Cr. 2-3**

Prereq: junior in clinical laboratory science or consent of instructor. Systematic concepts of hemostasis and coagulation. Platelet function in hemostasis and platelet disorders. Mechanism of coagulation; bleeding disorders. Interdisciplinary case studies; application of laboratory methods to diagnosis and treatment of coagulopathies. (F)

**4250 Laboratory Techniques. Cr. 2-4**

Prereq: junior in CLS/HST Program. Basic techniques common to testing in clinical laboratory disciplines. Safety policies and regulations. Calculations necessary for preparation of solutions. Specimen collection and handling. Preparation of blood and fluid smears and staining techniques. Microscope use. Material fee as indicated in the Schedule of Classes. (F)

**4490 Cytotechnology Technique: Female Genital Tract. Cr. 4**

Prereq: junior standing in clinical laboratory science, cytotechnology concentration. Study and analysis of cells in the female genital tract that are spontaneously exfoliated, mechanically dislodged by irritation, brushing or scraping, or forcibly removed by needle aspiration for detection and diagnosis of cancer. (S)

**4500 Cytotechnology Non-Gynecologic Technique I. Cr. 4-17**

Prereq: senior standing in clinical laboratory science, cytotechnology concentration. Study and analysis of cells from the respiratory tract, breast, urinary and GI tract. Cytologic emphasis on detection and diagnosis of cancerous cells. (F)

**4510 Cytotechnology Non-Gynecologic Technique II. Cr. 1-16**

Prereq: CLS 4500. Study and analysis of cells from effusion, the eye and CSF including cytopreparatory methodology. Cytologic emphasis on detection and diagnosis of cancerous cells. (W)

**4990 Professional Directed Study. Cr. 1-8**

Prereq: enrollment in clinical laboratory science program. Offered for S and U grades only. Independent study under faculty supervision. (T)

**5070 Clinical Pathology Correlation. Cr. 1-2**

Prereq: senior standing in clinical laboratory science or consent of instructor. Correlation of laboratory data and clinical history through the analysis of case studies. (W,S)

**5150 Medical Informatics. Cr. 2**

Prereq: junior standing or above. Information system models in an interdisciplinary healthcare environment. Survey of hardware and software platforms; patient information data repositories; medical imaging; applications to clinical pathways, utilization review, financial analysis, managed care. Material fee as indicated in the Schedule of Classes. (W)

**5500 Principles of Immunology. Cr. 2**

Open only to clinical laboratory science students; others by written consent of instructor. Lectures and laboratory exercises in basic immunology, including the relevance to human medicine. Material fee as indicated in the Schedule of Classes. (F)

**5510 Bacteriology. Cr. 3**

Open only to clinical laboratory science students; others by written consent of instructor. Lectures and laboratory exercises in the fundamentals of microbiology, including bacteria, viruses and fungi, and a detailed consideration of the role of those agents in disease. Material fee as indicated in the Schedule of Classes. (W)

**5520 Virology and Mycology. Cr. 2**

Prereq: CLS 5510. Open only to clinical laboratory science students; others by written consent of instructor. Lecture and laboratory course in diagnostic and clinical virology and mycology. (S)

**5550 Applied Genetics Technology. Cr. 4**

Prereq: junior in CLS Program. Review of molecular biology applicable to current testing systems. Laboratory techniques to elucidate molecular structure and disease states; DNA hybridization, agarose

gel electrophoresis; southern and western blot techniques; DNA sequencing. Material fee as indicated in the Schedule of Classes. (W)

**5993 (WI) Writing Intensive Course in Clinical Laboratory Science. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 3000-level or higher course in the department and written consent of chairperson. Offered for S and U grades only. No degree credit. Required for all majors. Disciplinary writing assignments under the direction of a faculty member. Course must be elected in conjunction with designated corequisite; see Schedule of Classes for corequisites available each term. Satisfies University General Education Writing Intensive Course in the Major requirement. (T)

# MORTUARY SCIENCE

Office: 5439 Woodward Ave.; 577-2050

Interim Chairperson: Peter D. Frade

## Associate Professor

Peter D. Frade, Mary L. Fritts-Williams (Emerita)

## Assistant Professors

Melinda Forster (Clinical), Robert C. Huntoon (Clinical)

## Part-Time Instructors and Instructional Assistants

Karen Appoloni, Bryce Dennison, Sharon Gee, Constance Justice, Rob Justice, E. David Ladd, Thomas Rosko, Benjamin True, Keith Vansen, Michael Wilk, Robert Will, Thomas E. Zaremba

## Adjunct Associate Professors

Priscilla Chamberlain, Gilbert Herman, Sawait Kanluen, Edward J. Kerfoot, Eugene V. Perrin, Nilsa Ramirez

## Degree Programs

*BACHELOR OF SCIENCE in Mortuary Science*

*BACHELOR OF SCIENCE in Pathologists' Assistant*

*POST-BACHELOR'S CERTIFICATE in Forensic Investigation*

The Mortuary Science Department offers programs designed to enable public health personnel to deal effectively with personal and practical matters attendant on death and dying.

The degree Bachelor of Science in Mortuary Science meets the requirements for licensure in Michigan, and meets or exceeds the licensure requirements of most other states. The program is accredited by the American Board of Funeral Service Education.

The Department also offers the degree Bachelor of Science in Pathologists' Assistant, which is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

The services and facilities characteristic of a major university are available to students in this program. In addition to its own full-time faculty, the instructional staff is selected from the various departments of the University as well as from the core of experienced practitioners in the community. The professional programs offer extensive opportunity to participate in clinical/practicum training.

Prospective students should direct inquiries to: Department of Mortuary Science, 5439 Woodward Ave., Detroit, Michigan 48202; telephone: (313) 577-2050; Fax: (313) 577-4456.

## ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University and of the Faculty of Allied Health Professions, students should consult the sections in this bulletin beginning on pages 5 and 373, respectively. The following additions and amendments pertain to the Department of Mortuary Science.*

## Attendance

Students are expected to adhere to departmental attendance requirements. Anticipated absence from lecture or laboratory classes should be reported to the appropriate faculty member.

## Leaves of Absence

Leaves of absence may be granted to students with documented health problems or to those pursuing appropriate educational opportunities outside the college.

## Promotion/Dismissal

Evaluation of students is primarily the responsibility of faculty teaching in various programs of the department. Students are evaluated promptly by the primary evaluators, who make recommendations to the Promotions Committee; these recommendations may include: promotion, reexamination, repetition of all or part of the curriculum, interruption or suspension or probation of a student's program, or dismissal.

The Promotions Committee is chaired by the chairperson of the department and consists of nine members: two students plus seven faculty members, to include two teaching faculty of each department program. Student members serve for one year and have full discussion privileges. Their votes are advisory to the committee. The Promotions Committee meets at the close of each semester, as needed.

A student may be excluded from a program for irresponsible attendance and/or irresponsible performance in clinical/practicum assignments. Students in these programs must demonstrate traits of character, stamina, and emotional stability appropriate to the profession. Students may be required to withdraw from the program if, in the judgment of the Promotions Committee, they fail to maintain appropriate standards of conduct and progress.

Questions of suitability for study and practice on other than academic grounds are handled according to the University Guidelines for Assisting Persons with Behavioral Problems.

Students have the right to appeal 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 has the right to be heard by the Committee and has the right to 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.

## Outside Employment

The professional curricula have been arranged with the presumption that students will devote full time and energy to their university responsibilities. Students are thus encouraged to limit outside employment.

## Appellate Procedure for Course Grade Review

Following the departmental submission of grades in a professional course area and in the event of a student's objection to the submitted grade, the student is advised to utilize the published grade appeal process of the College of Pharmacy and Allied Health Professions (College Policy and Procedures No. 01). The appellate procedure should be initiated by directing a letter of request for such a review to the Chairperson, Department of Mortuary Science.

## Financial Aid

Students in the Department of Mortuary Science are eligible for the *Gordon W. Rose Scholarship* as well as other scholarships and loans available to all University students. Inquiries should be directed to the University Office of Scholarships and Financial Aid, 3 West, Helen Newberry Joy Student Services Center, Detroit, MI 48202, and/or the Department.

In addition, students enrolled in the third year of the mortuary science program are eligible to apply for scholarships made available by the Michigan Mortuary Science Foundation and the American Board of Funeral Service Education. Inquiries should be directed to the

Department. The application for financial aid from the Office of Scholarships and Financial Aid is January 15. For further information, contact: Office of Scholarships and Financial Aid, 3 West, Helen Newberry Joy Student Services Building; telephone: (313) 577-3378.

## Vocational Guidance and Placement

Men and women contemplating careers in mortuary science or as pathologists' assistants may take advantage of the Department's and University's counseling services. Every effort is made by the Department staff to acquaint the applicant with the vocational aspects of the professions. Students are assisted in securing part-time employment in funeral homes upon request.

## Advanced Placement

Applicants wishing to transfer professional course work from other accredited institutions must submit the catalog description of each course, and a copy of each course syllabus. In addition, applicants may be required to successfully complete with a grade of 'C' or better an equivalency examination administered by the Department.

## Bachelor of Science in Mortuary Science

The program leading to the Bachelor of Science in Mortuary Science fulfills the requirements for licensure in the State of Michigan and most other states. A graduate from Wayne State University with this degree is eligible to take the International Conference Examination. The degree program consists of a pre-professional and professional component as follows:

**Preprofessional Program:** This program incorporates course work required to satisfy University General Education Requirements, as well as that required for licensure in the State of Michigan.

Applicants interested in obtaining licensure in states other than Michigan are required to consult with the Department of Mortuary Science prior to admission, for clarification of their course of study, as pre-professional coursework will vary.

Students entering as freshmen and intending to pursue a degree in mortuary science must complete the preprofessional program (see below) offered by the College of Liberal Arts and the College of Science. The admission requirements for these colleges are those for regular undergraduate admission to the University; see page 15.

Students must pass the required preprofessional courses (indicated by an asterisk) with a grade of 'C' or better.

### PREPROFESSIONAL PROGRAM (Minimum sixty credits)

Preprofessional course work must include the courses below indicated by an asterisk (\*).

	<i>credits</i>
* Accounting (Economics prerequisite) . . . . .	6
* Biology (biology/zoology/anatomy) (LS) . . . . .	6
* Chemistry (lecture and laboratory) (PS) . . . . .	8
* English (composition) (BC) (IC) . . . . .	6
* Psychology (general/death and dying/gerontology) (LS) . . . . .	6
* Computer Science (CL) . . . . .	3
* Speech (public speaking/communications) (OC) . . . . .	3
Total required by state licensing regulations: 38	

In addition, applicants to the professional program must have completed twenty credits from the following:

Historical Studies (HS) (HIS 1100 or 1200 recommended) . . . . .	4
PHI 1050 -- (CT) Critical Thinking . . . . .	3
PHI 2320 -- (PL) Introduction to Ethics . . . . .	3
American Society & Institutions (AI) . . . . .	4
Visual & Performing Arts (VP) . . . . .	4
(SS) SOC 2000 or ECO 2010 and 2020 . . . . .	3-8
Foreign Culture (FC) . . . . .	3

MAT 1800 -- Elementary Functions . . . . .	4
UGE 1000 -- (GE) Information Power . . . . .	1

Credit granted by examination (e.g., CLEP) is acceptable. For information on CLEP examinations, contact: Office of Testing and Evaluation, (313) 577-3400.

## PROFESSIONAL PROGRAM

**Admission:** The Department will consider for admission applicants who:

1. have completed sixty credits in preprofessional course work as defined in the preprofessional program description above.
2. have an overall cumulative grade point average of 2.5.
3. have been admitted to Wayne State University.
4. have successfully taken the English Proficiency Examination.
5. have submitted a complete application to the Department of Mortuary Science by April 15 of the year one wishes to enter the program.

**Conditional/Probationary Admission:** Applicants to the professional program in mortuary science having at least fifty-two semester credits in science/liberal arts course work with a grade point average of less than 2.5 may, at the discretion of the Departmental Admissions Committee, be admitted on a part-time, conditional basis for the semester of initial registration. A student admitted within this category will be limited to a maximum of thirteen credits in professional course work. The conditional registrant must earn a minimum grade point average of 2.5 to qualify for subsequent semesters of professional program enrollment.

**Physical Examination:** All applicants, including transfer students from Colleges within Wayne State University, are required to submit to the Department the results of a TB test administered within six months preceding their entrance into the program. Immunization against Hepatitis B Virus (HBV) is strongly advised; enrollees declining immunization are required to do so in writing.

**Time Limitation:** Students are strongly encouraged to enroll full-time for three consecutive semesters. Part-time enrollment will be limited to six consecutive semesters.

<b>Third Year</b>	
<i>Fall Semester</i>	<i>credits</i>
M S 3100 -- Chemistry . . . . .	3
M S 3300 -- Religions, Values, and Death . . . . .	3
M S 3500 -- Embalming I . . . . .	3
M S 3800 -- Funeral Directing . . . . .	4
M S 3830 -- Psychology of Death and Dying . . . . .	3
M S 4050 -- Human Anatomy and Physiology . . . . .	3
Total: 19	
<i>Winter Semester</i>	
M S 3400 -- Mortuary and Business Law I . . . . .	3
M S 3510 -- Embalming II . . . . .	3
M S 3600 -- Restorative Art and Modeling I . . . . .	2
M S 3810 -- Mortuary Management and Administration . . . . .	3
M S 3840 -- Psychosocial Aspects of Grief . . . . .	2
M S 4250 -- Medical Microbiology . . . . .	3
Total: 16	
<i>Spring/Summer Semester</i>	
M S 0999-- Practicum . . . . .	0
M S 3410-- Mortuary and Business Law II . . . . .	3
M S 3610-- Restorative Art and Modeling II . . . . .	2
M S 3760 -- Past and Future Trends in Funeral Service . . . . .	3
M S 4300 -- Introduction to the Study of Disease . . . . .	2
M S 4450 -- Small Business Financial Management . . . . .	3
M S 5350 -- (WI) Applied Grief Counseling: Aftercare . . . . .	2
Total: 15	



**DEGREE REQUIREMENTS:** The candidate for the degree of Bachelor of Science in Mortuary Science must satisfactorily complete, with a grade point average of at least 2.5, a minimum of 120 credits, including the following:

1. Sixty-eight General Education credits as listed in the preprofessional program.
2. Fifty credits in the basic mortuary science professional program curriculum.
3. The Mortuary Science Senior Seminar, M S 5996.

Completion of this program satisfies all departmental subject area group requirements, as well as the University General Education Requirements.

## Michigan State Licensure in Funeral Service

To become eligible for licensure in the State of Michigan one must fulfill the following educational requirements:

1. Complete two academic years (sixty semester credits or ninety quarter credits) of instruction at an accredited or recognized college or university, with at least a 2.5 grade point average;
2. Complete, with at least a 2.5 grade point average, an accredited program of academic instruction in mortuary science as defined by the American Board of Funeral Service Education;
3. Pass examinations as determined by the State Board;
4. Fulfill the requirements for resident training.

Direct inquiries for further information to: State of Michigan Department of Commerce, Bureau of Occupational and Professional Regulation, 2501 Woodlake Circle, Okemos MI 48864-5955 (telephone: 517-241-9236; Fax: 517-241-9280).

## Bachelor of Science Pathologists' Assistant Program

The Pathologists' Assistant program trains personnel to assist the pathologist in the performance of postmortem examinations and in the preparation of surgical specimens for study, as well as to take responsibility for certain tasks delegated by supervising pathologists such as budgetary, superintending, and teaching duties.

**Admission -- Preprofessional Program:** Courses in this program are taken under the guidance of the College of Liberal Arts and the College of Science. Students seeking admission to the program in the College of Liberal Arts and the College of Science should refer to the admissions requirements of the University as stated on page 15. Students must pass the required pre-professional courses with a grade of 'C' or better.

**Admission -- Professional Program:** The junior class is admitted to the professional program in September ONLY. An Application for Admission to the program must be submitted to the Department of Mortuary Science by April 15 of the year one wishes to enter the professional program. Applications for the professional program are available from the Department of Mortuary Science, Pathologists' Assistant Program Director, 5439 Woodward Ave., Detroit, MI 48202 (telephone: (313) 577-2050; Fax: (313) 577-4456).

The Admissions Committee is composed of faculty and graduates of the program. The Admissions Committee will interview and consider for admission all students who:

1. have a cumulative g.p.a. of 2.5 overall, and 2.3 or better in science;
2. have completed all pre-professional courses by the time of admission;
3. have successfully completed the English Proficiency Examination (see page 30);

4. have submitted a complete application to the Department of Mortuary Science by April 15 of the year one wishes to enter the program.

In addition, if the prospective applicant will be transferring to Wayne State, application for admission must be made to the University.

This is a competitive program limited by available clinical teaching affiliations. In reviewing applications, work experience, letters of evaluation/recommendation, science grades, and overall g.p.a. will be considered. Although academic achievement is important, knowledge of the profession, ability to communicate, and personal qualities of maturity, motivation and integrity are equally important. Consequently, evaluations from faculty advisers and employment supervisors as well as personal interviews are given great weight in selection of candidates by the Admissions Committee.

**DEGREE REQUIREMENTS:** The candidate for the degree of Bachelor of Science -- Pathologists' Assistant must satisfactorily complete the preprofessional and professional programs as outlined below, with a grade point average of 2.5 or above. Completion of this program satisfies all Departmental subject area group requirements as well as the University General Education Requirements. Graduates of this program are eligible to sit for the AAPA fellowship examination.

### PREPROFESSIONAL PROGRAM

#### First Year

	<i>credits</i>
BIO 1500 -- Basic Life Diversity . . . . .	4
BIO 1510 -- (LS) Basic Life Mechanisms. . . . .	4
CHM 1020 -- (PS) General Chemistry I . . . . .	4
CHM 1030 -- General Chemistry II . . . . .	4
ENG 1020 -- (BC) Introductory College Writing . . . . .	4
MAT 1800 -- Elementary Functions . . . . .	4
PHI 1050 -- (CT) Critical Thinking . . . . .	3
SPB 1010 -- (OC) Oral Communication: Basic Speech . . . . .	3
Social Science (SS) elective . . . . .	3
UGE 1000 -- (GE) Information Power . . . . .	1
<b>Total:</b>	<b>34</b>

#### Second Year

BIO 2200 -- (LS) Introductory Microbiology . . . . .	4
CSC 1000 -- (CL) Introduction to Computer Science . . . . .	3
ENG 3050 -- (IC) Technical Communication I . . . . .	3
Historical Studies (HS) elective (HIS 1100 or HIS 1200 preferred) . . . . .	4
Visual and Performing Arts (VP) elective . . . . .	4
PHI 2320 -- (PL) Introduction to Ethics . . . . .	4
Foreign Culture (FC) elective . . . . .	4
American Society and Institutions (AI) elective . . . . .	4
<b>Total:</b>	<b>30</b>

**Professional Program:** Courses in this program are taken under the direction of the faculty of the Department of Mortuary Science in cooperation with the School of Medicine and the College of Science. The third year begins *only* in September.

### PROFESSIONAL PROGRAM

#### Third Year

##### Fall Semester

BIO 5630 -- Histology . . . . .	4
M S 4050 -- Human Anatomy and Physiology . . . . .	3
M S 4100 -- Medical Photography . . . . .	3
M S 5020 -- Biochemical Basis of Pathophysiology . . . . .	3
M S 5050 -- Clinical Terminology & Methodology . . . . .	3

##### Winter Semester

BIO 5610 -- Vertebrate Embryology . . . . .	4
M S 4150 -- Histochemistry . . . . .	3
M S 4250 -- Medical Microbiology . . . . .	3
M S 4420 -- Laboratory Management . . . . .	3
M S 5420 -- Future Trends in Pathology Practice . . . . .	2

Spring/Summer Semester

M S 4200 -- Introduction to Forensic Anatomic Pathology . . . . .	3
M S 5250 -- (WI) Applied General Pathology . . . . .	4

**Fourth Year**

M S 4500 -- Clinical Autopsy Pathology . . . . .	6
M S 4550 -- Clinical Histopathologic Technique . . . . .	3
M S 4600 -- Clinical Forensic Pathology . . . . .	5
M S 4650 -- Clinical Surgical Pathology . . . . .	5
M S 4700 -- Clinical Pathology . . . . .	3
M S 4800 -- Clinical Photography . . . . .	2
M S 4850 -- Clinical Academic Pathology . . . . .	6

These courses are taken at facilities affiliated with the College of Pharmacy and Allied Health Professions.

**Time Limitations:** Students must complete their preprofessional program within six years and their professional program within three years. Students who interrupt their academic program must apply for reinstatement on an individual basis. Examination may be required for readmission.

**Physical Examination:** Prior to clinical rotation, all applicants are required to submit a completed physical examination form to the Department, which must include a complete immunization record, evidence of HBV antibody titre and TB status.

**Scholarship:** Students in this program are subject to high academic and professional standards. A grade of 'C' or above is required in each professional course. All didactic course requirements must be completed prior to clinical rotation. Students dismissed for academic reasons seeking readmission to the Pathologists' Assistant professional program will have the opportunity to do so only once. Decisions to readmit students are made on an individual basis, and readmission is not guaranteed.

### Post-Bachelor's Certificate in Forensic Investigation

The Certificate Program in Forensic Investigation is designed for students who have obtained a degree in another discipline from an accredited college or university who wish to acquire competence in the area of forensic investigation. This program is not designed to train forensic investigators; rather, its aim is to educate personnel whose professional scope and practice interfaces with the criminal justice system. The Program is offered by the Department in cooperation with Oakland Community College, Police Evidence and Technology, and the Offices of the Wayne County Medical Examiner.

**Admission:** The Program is open to graduates of baccalaureate programs in any accredited college or university who have a grade point average of 2.50 or better. Students whose degree is from Wayne State should apply directly to the Department of Mortuary Science; those from other institutions must submit the Application for Undergraduate Admission (see page 15). All application materials must be received by July 1 for Fall and Winter admission, and by November 1 for Spring/Summer admission.

For information and application forms, contact the Department of Mortuary Science, 5439 Woodward Ave., Detroit MI 48202; telephone (313) 577-2050; Fax: (313) 577-4456.

**CERTIFICATE REQUIREMENTS:** The candidate for the post-baccalaureate Certificate in Forensic Investigation must complete the following program with a grade point average of 2.50 or above and have earned a minimum of eighteen semester credits at Wayne State University.

*Required Courses (taken at Wayne State University):*

M S 4200 -- Introduction to Forensic Anatomic Pathology . . . . .	3
M S 4010 -- Basic Forensic Analysis . . . . .	3
M S 5010 -- Advanced Forensic Analysis . . . . .	2

*Required Courses (taken at Oakland Community College)*

PLS 215.4 -- Ballistics, Firearms and Explosives Identification . . . .	4
PLS 220 or CRJ 3260	
-- Criminal Investigation and Case Preparation . . . . .	4
-- Investigation . . . . .	3
PLS 231 -- Interview and Interrogation Techniques . . . . .	3

NOTE: Courses above designated PLS are available only at Oakland Community College; CRJ 3260 is a Wayne State course.

In addition, the candidate must complete a minimum of six semester credits from the following:

*Internship*

M S 4600 -- Clinical Forensic Pathology . . . . .	3
BIO 6020 -- Methods of Analysis . . . . .	2-4

*Expert Witness*

M S 5550 -- Special Topics . . . . .	1
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*Independent Study*

M S 5990 -- Directed Studies . . . . .	3
BIO 3990 -- Directed Study . . . . .	1-2

*Loss, Grief and Stress*

M S 5996 -- Seminar . . . . .	2
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### UNDERGRADUATE COURSES (M S)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

NOTE: Admission to the Professional Curriculum is a required prerequisite to all Professional M S courses.

**0999 Practicum Cr. 0**

Prereq: admission to department, consent of practicum coordinator; prereq. or coreq: M S 3510, 3810, 3840. No certificate or degree credit. Student placement in a licensed funeral service facility to acquire practical experience in basic funeral service skills. Enrollees work a minimum of eight hours a week. (Y)

**3100 Chemistry. Cr. 3**

Review of general inorganic chemistry; survey of organic and biochemistry; applications to postmortem changes, biologic preservation, and embalming chemistry. Material fee as indicated in the Schedule of Classes. (F)

**3300 Religions, Values, and Death. Cr. 3**

Various religious, secular, and philosophical views regarding the value of life, the meaning of death, and life after death. (F)

**3400 Mortuary and Business Law I. Cr. 3**

Business law and legal environment affecting practice of mortuary science. Introduction to American legal system, court structure, and contract law. Survey of tort law; regulation of businesses with emphasis on mortuary practice regulation; property law including zoning and mortuary practice regulations; personal property and insurance law. (W)

**3410 Mortuary and Business Law II. Cr. 3**

Prereq: M S 3400 Business and legal principles affecting mortuary practice with special emphasis on forms of business organization, law of sales, federal disclosure rules, legal responsibilities of the funeral service provider, probate law, and related federal/state laws. (Y)

**3500 Embalming I. Cr. 3**

Prereq: consent of instructor of record; prereq. or coreq: M S 3100. Open only to funeral service enrollees. Theories, practices, and techniques of biologic preservation and disinfection of human remains;

case analyses; methods of application of embalming chemicals; use of special instruments and equipment; special case embalming. Laboratory teaching of all practical aspects of embalming. Material fee as indicated in the Schedule of Classes. (F)

**3510 Embalming II. Cr. 3**

Prereq: M S 3500. Dynamics of decomposition; influence of disease and its treatment on the embalming process; public health considerations; anatomical embalming; disaster response; evaluation of embalming techniques. Material fee as indicated in the Schedule of Classes. (W)

**3600 Restorative Art and Modeling I. Cr. 2**

Prereq: M S 3500. Theories, methods, and techniques used in the restoration of superficial tissues and features; color theory, cosmetology, facial proportions, skin tones correlated with reconstruction; clay and wax modeling; actual restorations performed on human remains. Material fee as indicated in the Schedule of Classes. (W)

**3610 Restorative Art and Modeling II. Cr. 2**

Prereq: M S 3600. Continuation of M S 3600. Material fee as indicated in the Schedule of Classes. (S)

**3760 Past and Future Trends in Funeral Service. Cr. 3**

Basic human need to memorialize the dead, examined throughout history. Funeralization as a process affected by social and religious change. The funeral service professional in a socio-temporal context. Possible future practices based on understanding of historical record and current trends. (S)

**3800 Funeral Directing. Cr. 4**

Funeral service operations. Practical applications including field trips. From first call to final disposition. Terminology, government regulations, ethics, professional conduct, vital statistics records, necessary forms. Religious, ethnic, fraternal and military variations. Computer technologies applications. (F)

**3810 Mortuary Management and Administration. Cr. 3**

Prereq: M S 3800. Continuation of M S 3800. Marketing, merchandising, public relations, preneed planning, personnel management, job-seeking skills, licensing requirements; planning, building and establishing of funeral home. Government regulations. (W)

**3830 Psychology of Death and Dying. Cr. 3**

Various social and cultural perspectives; psychosocial changes related to death, dying, and disposition; special cases: sudden, violent or unexpected death. (F)

**3840 Psychosocial Aspects of Grief. Cr. 2**

Prereq: M S 3830. Psychology of funeral service practices; social role of funeral service practitioner in the dynamics of grief; psychosocial interpretations of changing attitudes toward death; normal and abnormal grief responses. attitudes toward death. (W)

**4010 Basic Forensic Analysis. Cr. 3**

Prereq: admission to post-bachelor forensic investigation program. The forensic lab, its organization, accreditation, and regulation; quality control, safety, and documentation; discussion and demonstration of methods for collection and processing of specimens. (F)

**4050 Human Anatomy and Physiology. Cr. 3**

Open only to students seeking funeral service licensure. Detailed systemic study of human anatomy and physiology. Laboratory work consists of demonstrations and selected dissections; emphasis on vascular anatomy and adjacent structural relationships; anatomic guides. Material fee as indicated in the Schedule of Classes. (F)

**4100 Medical Photography. Cr. 3**

Theory and behavior of light and lenses; principles of exposure, color, and filters; macro- and microphotography. (F)

**4150 Histochemistry. Cr. 3**

Prereq: M S 4050; prereq. or coreq: BIO 5630. Study of techniques involved in the preparation of tissues prior to microscopic examination. Material fee as indicated in the Schedule of Classes. (W)

**4200 Introduction to Forensic Anatomic Pathology. Cr. 3**

Role of medical examiner, early signs of death, medical investigation of cause of death, methods for identification of remains, medicolegal aspects of forensic science, toxicology specimen techniques. (S)

**4250 Medical Microbiology. Cr. 3-4**

A study of pathogenic microbial agents; host-parasite relationships; disinfection-decontamination; immunology; epidemiology of infectious disease. Microscopy, staining technology; differentiation and identification of bacteria; evaluation of chemical disinfectants. Lecture and laboratory. Material fee as indicated in the Schedule of Classes. (W)

**4300 Introduction to the Study of Disease. Cr. 2**

Prereq: M S 4050, 4250. Causes of disease; tissue reactions to injury, gross and microscopic; neoplasia; select systemic pathologies; comparative roles of various specialties in pathology. (S)

**4420 Laboratory Management. Cr. 3**

Interpersonal and technical management techniques for the laboratory setting. (W)

**4450 Small Business Financial Management. Cr. 3**

Prereq: ACC 3020. Financial aspects of starting and operating a small business; dealings with fellow professionals and government agencies. (S)

**4500 Clinical Autopsy Pathology. Cr. 2-6**

Prereq: senior standing in pathologist assistant program. Autopsy procedures, including data retention, dissection techniques, selection of tissue for microscopic examination, and methods of body restoration prior to release. (T)

**4550 Clinical Histopathologic Technique. Cr. 3**

Prereq: senior standing in pathologist assistant program. Organization of a histology laboratory, proper handling of specimens for processing, available procedures and techniques. (T)

**4600 Clinical Forensic Pathology. Cr. 2-5**

Prereq: senior standing in pathologists' assistant program or consent of department chairperson. Assisting pathologist in determining cause of death; basic methods for identifying remains with regard to age, sex, and race; techniques of photographic record keeping. (T)

**4650 Clinical Surgical Pathology. Cr. 5**

Prereq: senior standing in pathologist assistant program. Principles and theories related to gross surgical dissections. (T)

**4700 Clinical Pathology. Cr. 3**

Prereq: senior standing in pathologist assistant program. Students become familiar with the operational requirements of the clinical chemistry and microbiology laboratories. (T)

**4800 Clinical Photography. Cr. 2**

Prereq: senior standing in pathologist assistant program. Techniques required to photographically record gross and microscopic specimens. (T)

**4850 Clinical Academic Pathology. Cr. 6**

Prereq: senior standing in pathologist assistant program. Principles and theories of surgical diagnostic pathology and mechanisms of disease. (T)

**5010 Advanced Forensic Analysis. Cr. 2**

Prereq: M S 4010; admission to post-bachelor forensic investigation program. New developments in the forensic laboratory; current areas of research and potential applications. (W)

**5020 Biochemical Basis of Pathophysiology. Cr. 3**

Prereq: BIO 1510, CHM 1030; coreq: BIO 2870 or M S 4050. Pathophysiology of some important biochemical disorders; correlation with relevant basic sciences; discussions of case studies. (F)

**5050 Clinical Terminology and Methodology. Cr. 3**

Clinical and surgical methods for analysis and treatment of human disease. (W)

**5060 Human Anatomy and Physiology: Pathologists' Assistant. Cr. 4**

Prereq: admission to pathologists' assistant program. Detailed systematic study of human anatomy and physiology; emphasis on cranial, thoracic, and abdominal structures. Laboratory: full human dissection. Material fee as indicated in the Schedule of Classes. (F)

**5200 Medical Microbiology for the Technical Professional. Cr. 3**

Prereq: BIO 2220. Detailed study of commensal organisms of the human and mechanisms of resistance. Identification, by anatomical location, of organisms likely to cause infection; methods required for collection and transportation of microbiological specimens. Material fee as indicated in the Schedule of Classes. (W)

**5250 (WI) Applied General Pathology. Cr. 4**

Prereq: M S 4050, BIO 5630. Special emphasis on clinical correlation. (Y)

**5350 (WI) Applied Grief Counseling: Aftercare. Cr. 2**

Prereq: M S 3830, 3840. Specific factors in the dynamics of grief; grief manifestations in death and in states of chronic diseases; development of general counseling and referral skills; communication skill-building and self-care practices for the death-field professional. (S)

**5420 Future Trends in Pathology Practice. Cr. 2**

Discussion of changing parameters of clinical pathology practice. (W)

**5550 Special Topics in Mortuary Science. Cr. 1-3 (Max. 3)**

Prereq: consent of instructor. Lectures and discussions; invited speakers on current topics in the profession. Topics to be announced in Schedule of Classes. (Y)

**5990 Directed Studies. Cr. 3**

Open only to department enrollees. Library and/or laboratory study of current or pending professional development; study of an existing problem, study or development of new procedures or techniques. Assigned project under the guidance of departmental faculty member. (T)

**5996 Senior Seminar. Cr. 2**

Open only to Department enrollees. (T)

# OCCUPATIONAL THERAPY

Office: 311 Shapero Hall; (313) 577-1435; Fax: (313) 577-5822

Interim Chairperson: Joseph M. Pellerito, Jr.

Interim Program Director: Nancy J. Powell

## Professor

Susan A. Esdaile

## Adjunct Professor

Elizabeth J. Yerxa

## Professors Emerita

Miriam C. Freeling, H. Barbara Jewett, Suesetta McCree, Martha E. Schnebly

## Associate Professors

Joseph M. Pellerito, Jr., Nancy J. Powell

## Assistant Professors

Karmen Brown, Catherine L. Lysack

## Senior Lecturer

Doreen Y. Head

## Adjunct Assistant Professors

Janet P. Andrews, Linda M. Roth

## Adjunct Faculty

Diane Brazen, JoAnn Bush

## Part-Time Faculty

Lori Anspach, Angie Bayci, Tina Briggs, Donna Case, Collette Duggan, Bernadette Jaroslowski, Celeste Latcha, Regina Parnell, Susan Robosan-Burt, Susan Siporin

## Part-Time Instructional Assistants

Michael Barrett, Kishore Lingala

## Cooperating Faculty

William Crossland, Merlin Ekstrom, Rita Granda, Patricia Jarosz, Amelia Jones, Mary Ann Kiess, Eberhard Mammen, Jerry Mitchell, Martha Rodin, Thomas Sullivan, C. Winnega

## Michigan Field Work Educators

Laurie Aguilera OTR, Gita Amini, Beth Angst OTR, Lou Ann Audette OTR, Marilyn Bird OTR, Sheryl Boyle OTR, Tina L. Briggs OTR, Sandra Brown, Bernard Burk OTR, Barbara Butyer, Merisa Campbell OTR, Rosemary Cassasa OTR, Laurel Conklin OTR, James Cox OTR, Mary Kay Currie, Pam Damman, Delores Dedenback OTR, Kathy DeFault OTR, Nancy Demkin, Jodi DiMaria OTR, Rebecca Donnelly, Carrie Erickson-Schroder OTR, Susan Evans, Sherry Foster OTR, Joyce Fraker OTR, Tamara Gerber OTR, Deborah Gill OTR, Danielle Giras OTR, Sandy Glovak OTR, Leslie Gold OTR, Deborah Grant OTR, Cindy Grider OTR, Cheryl Grimske, Carol Habel OTR, Cindy Hemphil OTR, Kay Hoehn OTR, Gabrielle Holland, Kathy Ingles OTR, Mary Kaye OTR, Jan Kitzman OTR, Sherry Kodrich, Susan Koziattek OTR, Marilyn Kroll OTR, Ann Ladak-Tymowski

OTR, Lisa Lemke OTR, Sal Lograsso OTR, Renee Madris OTR, Tracy Marsh OTR, Kathy Martin (Liken) OTR, Patti Meier OTR, Susan Meyer OTR, Meghan Mitchell OTR, Susan Mominee OTR, Florence Monnier OTR, Cindy Muszynski OTR, Paula Myers OTR, Sheila Norwood OTR, Judy Oberdier OTR, Karen Oldham, Connie O'Rourke OTR, Carrie Oslazewski OTR, Sue Parker, Kay Preston OTR, Ann Petriches OTR, Sheryl Price, Lisa Riley OTR, Barbara Rinault OTR, John Rizzo OTR, Joyce Rosal OTR, Lauren Rosenberg OTR Supervisor, Lisa Schlicker OTR, Linda Schmidt, Marla Schoenborn OTR, Deborah Schofield OTR, Hildy Scholab OTR, Robin Schwellingbach OTR, Lauren Seebom OTR, Lisa Sicken OTR, Lisa Singer OTR, Karen Smith, Donna Sokoly OTR, Georgia Stachura OTR, Andrea Stahl OTR, Diane Stall OTR, Rhonda Stewart, Jennifer Stone OTR, Amy Summer OTR, Kim Truehart OTR, Cathy Turner OTR, Jean Weygandt OTR, Rose Wisniewski OTR, Beverly Wolfe-Boyd, Jane Yatzak OTR, Karmen Zaytho COTA

## Degree Programs

### *BACHELOR OF SCIENCE in Occupational Therapy*

#### *\*MASTER OF SCIENCE in Occupational Therapy*

The Department of Occupational Therapy's vision encompasses education, research, and service excellence, in the promotion of occupations of meaning within a multicultural urban community.

Occupational therapy is the use of purposeful occupations with individuals who are limited by physical injury or illness, psychosocial dysfunction, developmental or learning disabilities, poverty and cultural differences, or the aging process, in order to maximize independence, prevent disability and maintain health. The practice encompasses evaluation, treatment and consultation. Specific occupational therapy services include teaching daily living skills; developing perceptual-motor skills and sensory integrative functioning; developing play skills and prevocational and leisure capacities; designing, fabricating, or applying selected orthotic and prosthetic devices or selected adaptive equipment; using specifically designed activities and exercises to enhance functional performance; administering and interpreting tests such as manual muscle and range of motion; and adapting environments for people with disabilities. These services are provided individually, in groups, or through social systems.

**Programs:** This department offers occupational therapy education leading to a baccalaureate degree. The bachelor's degree program, consisting of two years of preprofessional course work and two and one-half years of professional study, is designed for the incoming freshman to the University. Students who hold a baccalaureate degree acceptable to Wayne State University and who complete all professional program requirements are granted a second baccalaureate degree.

The professional program, taken in the College of Pharmacy and Allied Health Professions, is designed for full-time or part-time enrollment. Students must be formally accepted by the College of Pharmacy and Allied Health Professions before admission to the professional courses.

The department is working towards development of an entry-level professional degree, Master of Occupational Therapy (MOT), which will be offered beginning Fall Semester 2003 or after. For details about prerequisite study and updates on the new MOT, contact the department.

**Accreditation:** Wayne State University offers courses of study which are accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), the accrediting body of the American Occupational Therapy Association (AOTA), and which prepare the student to take the national certification examination.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Science in Occupational Therapy

**Preprofessional Admission:** Incoming freshmen, intending to pursue the Bachelor of Science in Occupational Therapy degree, must first complete two years of preprofessional study in the College of Liberal Arts. The admission requirements for that College are satisfied by regular undergraduate admission to the University; see page 15.

The following curriculum is required of all degree candidates for subsequent admission to professional study in the Department of Occupational Therapy. Core courses (see below) must be completed by the end of the fall semester prior to application for admission to the professional program. The courses listed under Additional General Education Requirements, below, may be completed during the winter semester, while making the application.

### *PREPROFESSIONAL PROGRAM* *credits*

#### CORE COURSES

American Society & Institutions (AI) course . . . . .	3
BIO 1510--(LS) Basic Life Mechanisms. . . . .	4
BIO 2870 --Anatomy and Physiology. . . . .	5
CHM 1020 --(PS) General Chemistry I . . . . .	4
ENG 1020 --(BC) Introductory College Writing . . . . .	4
ENG 3010 --(IC) Intermediate Writing . . . . .	3
PHY 2130 -- (PS) General Physics . . . . .	4
PHY 2131 -- General Physics Lab . . . . .	1
PSY 1020 -- (LS) Elements of Psychology . . . . .	3
PSY 3310 -- Abnormal Psychology . . . . .	4
Social Sciences (SS) course (excluding Geography courses) . . . . .	3
SPB 1010 --(OC) Oral Communication: Basic Speech . . . . .	3
SPC 3270 -- Group Communication and Human Interaction. . . . .	3
Statistics course (STA 1020 or PSY 3010 or other). . . . .	3

#### ADDITIONAL GENERAL EDUCATION REQUIREMENTS:

Critical Thinking (CT) competency requirement . . . . .	3
Foreign Culture (FC) course <sup>1</sup> . . . . .	3
Historical Studies (HS) course . . . . .	3
NUR 1110 -- (CL) Intro.: Computers & Technol. for Health Profnlis . . . . .	2
PHI 2320 -- (PL) Introduction to Ethics (or another PL course). . . . .	3
Mathematics Competency (MC) requirement . . . . .	3
PHI 1050 --(CT) Critical Thinking. . . . .	3
UGE 1000 --(GE) Information Power. . . . .	1
Visual and Performing Arts (VP) course . . . . .	3
Mathematics Competency (MC) requirement	
English Proficiency (EP) requirement	

**Professional Program Admission:** An application for admission to the professional program may be submitted to the Department of Occupational Therapy between November and January prior to the spring semester of the year the student wishes to be considered for enrollment. In addition to the application, the student must:

1. hold a minimum cumulative grade point average of 2.8 ('A'=4.0) for the preprofessional courses listed above.
2. complete forty hours of contact with a registered occupational therapist. These contact hours may be in one facility with one therapist, or with a variety of facilities and therapists. The total contact hours must equal forty. Documentation must be completed by the therapist(s) with whom the student had the contact experience(s) on the form provided by the Department.
3. complete a Department of Occupational Therapy Personal/ Professional Statement.
4. submit one 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.

1. NUR 4800, (FC) Transcultural Health Through the Life Cycle, is recommended for students who have completed at least sixty credits.

## Degree Requirements

The Bachelor of Science degree requires a minimum of 136 credits in course work including preprofessional study (see above), and professional courses (see below). The professional program consists of six semesters of full-time academic work followed by six months of full-time field work experience. During the professional program the student must complete the following courses in basic and medical science, and occupational therapy theory and practice, as well as related health science courses. Upon satisfactory completion of the degree, the graduate is eligible for examination and certification procedures of the National Board of Certification in Occupational Therapy.

### PROFESSIONAL PROGRAM

credits

ANA 3030 --Anatomy . . . . .	3
ANA 3040 --Human Neuroanatomy and Neurophysiology . . . . .	2
O T 2050 -- Leisure/Play as Occupation . . . . .	2
O T 3000 --Introduction to Occupational Therapy . . . . .	3
O T 3020 -- Developmental Assessment & Performance Tech. . . . .	2
O T 3070 -- Intro. to Research in OT . . . . .	2
O T 3100 --Clinical Psychiatry. . . . .	4
O T 3200 -- Life Tasks. . . . .	2
O T 3300 --Concepts in Kinesiology for Occupational Therapy . . . . .	3
O T 3400 --Clinical Medicine . . . . .	4
O T 4070 --Roles and Functions I . . . . .	2
O T 4080 --Roles and Functions II . . . . .	2
O T 4200 --Theory and Practice I . . . . .	4
O T 4210 --Theory and Practice II. . . . .	4
O T 4220--Theory and Practice III. . . . .	3
O T 4230--Theory and Practice IV . . . . .	5
O T 4250 -- Level I Field Work in Schools. . . . .	1
O T 4260 --Level I Field Work Experience . . . . .	1
O T 4270 -- Mental Health Level I Field Work Experience . . . . .	1
O T 4300 --Client Issues in Occupational Therapy . . . . .	2
O T 4350 -- O T Seminar . . . . .	1-3
O T 4500 --Social and Organizational Aspects of Health Care. . . . .	2
O T 4600 --Group Process as an Occupational Therapy Modality . . . . .	1
O T 4998 --Field Work I (see below) . . . . .	5
O T 4999--Field Work II (see below) . . . . .	5
O T 5993 -- (WI) Writing Intensive Course in O T . . . . .	0
O T 6070 -- Research in OT . . . . .	2
O T 6800 --Culture and Disability . . . . .	2-3

PLUS: One required pre-professional course which may be completed during the junior year of the professional program:

AED 5360 --Wood, Metal & Plastic: Methods & Materials. . . . .	2
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**Fieldwork:** During students' didactic preparation, they participate in fieldwork experiences that are designated to meet course objectives (O T 4250, 4260, and 4270). In the final portion of the curriculum, students must participate in two full-time three-month field experiences (O T 4998, 4999) which serve to integrate the theoretical aspects of occupational therapy with practical application under the supervision of qualified therapists. These field experiences may take place within and outside the Detroit metropolitan area. Students may be required to take one fieldwork placement out of state. All placements are carefully selected to provide experiences essential to enhance the application of the student's knowledge of the profession.

## Second Bachelor's Degree Program

**Admission:** Applicants to the second bachelor's degree program must comply with the professional program core course admission requirements (see above). Additional General Education Requirements are not required for second bachelor's degree students.

## Academic Regulations

Once a student is enrolled in the professional program, a cumulative grade point average (g.p.a.) of 2.5 or above must be maintained.

**Probation:** A student whose g.p.a. falls below 2.5 in an academic semester is placed on curriculum probation for the following semester. The student must raise his/her g.p.a. in that semester, and must reach at least a 2.5 cumulative average at the end of the following semester; failure to accomplish this will result in dismissal from the program. A student is allowed a maximum of two semesters of probation during his/her entire enrollment in the occupational program. A student on probation may not register during mail registration, as semester grades must be received prior to registration.

**Repeating Courses:** A grade of 'C-minus' or below in a prerequisite to a professional course, or in a professional course, indicates unsatisfactory performance, and the course must be repeated. A grade of 'C-minus' through 'D-minus' in a professional course may not remain on a student's transcript. A grade of 'C-minus' through 'D-minus' in a sequential course prohibits election of further courses in the sequence until that course is successfully repeated. No more than two professional courses may be repeated.

A course from which a student withdraws prior to the end of the semester, and in which he/she has maintained a 'C-minus' average, is counted as one of the two courses which the student is allowed to repeat. A failing grade ('E') in a professional course is unacceptable, and the student is automatically dismissed from the occupational therapy program. Failure in a Level I or Level II field experience may also result in dismissal from the program.

## Student 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 Aids, 2 East, Helen Newberry Joy Students Services Center, Detroit, Michigan 48202.

In addition, a limited amount of financial assistance is available to qualified students in the professional level occupational therapy program. Information may be obtained from the Chairperson of the Department.

## Scholarships, Honors and Awards

*The Honor Graduate of the Year Award* recognizes the senior student who, upon completion of his/her academic program, has attained the highest scholarship of the senior class.

*The Barbara Jewett Scholarship Award* is presented by the Wayne State University Occupational Therapy Alumnae Association, to deserving professional students to assist them in their educational pursuits.

*The Faculty Award* is awarded to a graduating senior who, while in the professional program, displayed outstanding departmental involvement.

*The Occupational Therapy Chairman's Awards* are presented to those senior students who, while in the professional program, demonstrated outstanding accomplishments in occupational therapy scholarship, leadership, or professional interest.

*The Ruth Marion Miller Memorial Student Loan Fund* provides loans to qualified occupational therapy students.

## Student Professional Activities

All professional level students are encouraged to become members of the American Occupational Therapy Association, as well as the Michigan Occupational Therapy Association, and any of the local professional organizations: the Detroit District, the North Metro, and the Huron Valley Occupational Therapy Associations.

*The Occupational Therapy Club* at Wayne State University is open to all preprofessional and professional level occupational therapy students and faculty. Meetings provide opportunities to develop professional understanding, to participate in service projects and to enjoy contact with other occupational therapy students and faculty.

The African American Occupational Therapy Student Organization's primary efforts are to introduce minority students to the field of occupational therapy, to recruit prospective high school minority students into the occupational therapy program, and, most specifically, to take necessary measures to retain minority students within the program. This organization contributes service and support to community health care organizations.

*Pi Theta Epsilon, Eta Chapter*, is the occupational therapy honor society. To be eligible, a student must 1) be in the top thirty-five percent of the class, 2) have achieved a 3.5 ('A'=4.0) cumulative grade point average, and 3) have successfully completed all prerequisite classes for the curriculum. High academic standing is recognized and opportunities are provided for members to participate in service projects and professional activities in the community and the college.

## UNDERGRADUATE COURSES (O T)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### **2050 Leisure/Play as Occupation. Cr. 2**

Open only to OT Professional Program students; others by consent of instructor. Lectures, discussions, demonstrations and practical experience involving the leisure/play occupation. Issues, concepts and application as related to lifestyles. (F,W)

### **3000 Introduction to Occupational Therapy. Cr. 3**

Prereq: admission to the occupational therapy professional program. Introduction to the processes and procedures utilized by the occupational therapist: observation, interview, communication and skills gained through interaction with normal individuals from infancy through senescence. Material fee as indicated in the Schedule of Classes. (F)

### **3020 Developmental Assessment and Performance Techniques. Cr. 2**

Prereq: PSY 1020; BIO 1050, BIO 2870; SOC 2000; admission to OT professional program. Lecture, discussions, field observations on interaction of environmental factors with sensorimotor, cognitive, psychosocial, physiological components. Normal skills and activities inherent in different life roles through the life stages. Continuum of healthy or well lifestyles in lifespan. Material fee as indicated in the Schedule of Classes. (F)

### **3070 Introduction to Research in Occupational Therapy. Cr. 2**

Prereq: admission to occupational therapy program. Basic concepts and principles of research, terminology used to describe research, and effective use of research information for evidence-based practice in occupational therapy. (Y)

### **3100 Clinical Psychiatry. Cr. 4**

Prereq: consent of adviser. Study of the major categories of psychiatric conditions and their clinical treatment including psychiatric interview and crisis intervention techniques. Lecture, demonstration, participation and field experience. (W)

### **3200 Life Tasks. Cr. 2**

Open only to OT Professional Program students; others by consent of instructor. Performance, adaptation and utilization of processes involved in selected creative and manual tasks and activities which have therapeutic value. Principles and methods of teaching appropriate to the therapist. Material fee as indicated in the Schedule of Classes. (T)

### **3300 Concepts in Kinesiology for Occupational Therapy. Cr. 3**

Prereq: PHY 2130, ANA 3030. Lecture and laboratory on human movement concepts prerequisite to the understanding of occupational therapy procedures applicable to patients with physical or sensory-integrative dysfunction. Material fee as indicated in the Schedule of Classes. (F)

### **3400 Clinical Medicine. (P T 3400) Cr. 4**

Prereq: consent of adviser. A series of interdisciplinary presentations on the clinical manifestations and management of selected problems due to disease states or injury; includes etiology, assessment, course and medical specialty management of the problems. Material fee as indicated in the Schedule of Classes. (W)

### **4070 Roles and Functions I. Cr. 2**

Prereq: consent of adviser. Basic introduction to research and statistical methods in occupational therapy. Elementary computer use in occupational therapy research. (F)

### **4080 Roles and Functions II. Cr. 2**

Prereq: consent of adviser. Organizational and administrative structure and functions of occupational therapy service programs; emphasis on communication techniques, personnel management and supervision, program and space planning, budgeting and legal implications of a service unit. Development of occupational therapy services and programs. Course cannot be taken out of sequence. (W)

### **4200 Theory and Practice I. Cr. 4**

Prereq: O T 3100 and consent of adviser. Occupational therapy in mental health practice; evaluation, treatment planning, reporting and an overview of mental health theories. Lecture, class participation and field experience. Material fee as indicated in the Schedule of Classes. (F,W)

### **4210 Theory and Practice II. Cr. 4**

Prereq. or coreq: O T 3400; prereq: 3300, consent of adviser. Instruction, laboratory and field experience in occupational therapy theory and procedures. Includes activities of daily living, leisure time activities, therapeutic exercise, splinting and prevocational evaluation. Material fee as indicated in the Schedule of Classes. (F)

### **4220 Theory and Practice III. Cr. 3**

Prereq: O T 4210. Continuation of O T 4210. Material fee as indicated in the Schedule of Classes. (W)

### **4230 Theory and Practice IV. Cr. 5**

Prereq: ANA 3040, O T 3400, consent of adviser. Study of the neurophysiologically-based treatment approaches in occupational therapy for patients with central nervous system dysfunction; includes occupational therapy in school systems. Material fee as indicated in the Schedule of Classes. (F,W)

### **4250 Level I Field Work in Schools. Cr. 1**

Prereq: ANA 3040; coreq: O T 4230. On-site first level experience in school systems. (F,W)

### **4260 Level I Field Work Experience. Cr. 1**

Prereq: consent of occupational therapy adviser. Offered for S and U grades only. Experience in affiliated agencies under supervision of on-site occupational therapist. (F)

### **4270 Mental Health Level I Fieldwork Experience. Cr. 1**

Prereq: O T 3100, consent of adviser. Offered for S and U grades only. Field work experience in affiliating agencies under supervision of registered, on-site occupational therapist. (T)

### **4300 Client Issues in Occupational Therapy. Cr. 2**

Prereq: senior standing in occupational therapy. Workshop presentation of role of the occupational therapist in various aspects of patient management. (F)

**4350 Occupational Therapy Seminar. Cr. 1-3**

Prereq: consent of adviser. Correlation of social, cultural, physical, economic and psychological aspects of illnesses with occupational therapy theory and practice. Discussion and field experience. (I)

**4500 Social and Organizational Aspects of Health Care. Cr. 2**

Prereq: introductory sociology courses. Health care systems, organization and financing of health care services and resources available. Course cannot be taken out of sequence. (W)

**4600 Group Process as an Occupational Therapy Modality. Cr. 1**

Prereq: consent of adviser. Experiential approach to learning group dynamics and effective group skills. Development of self-awareness and social skills necessary in building practical group skills. (F,W)

**4990 Directed Study. Cr. 1-2 (Max. 5)**

Prereq: consent of adviser. (T)

**4998 Field Work I. Cr. 5**

Prereq: consent of adviser. Three months of supervised field work experience in affiliated health care agencies. Course cannot be taken out of sequence. (T)

**4999 Field Work II. Cr. 5**

Prereq: consent of adviser. Three months of supervised field work experience in affiliated health care agencies. (T)

**5993 (WI) Writing Intensive Seminar in Occupational Therapy. Cr. 0**

Prereq: enrollment in occupational therapy program; coreq: O T 3000. 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 designated corequisite; consult Schedule of Classes for corequisites available each term. Satisfies University General Education Writing Intensive Course in the Major requirement. (T)

**6070 Research in Occupational Therapy. Cr. 2-3**

Offered for three credits only to M.S. in OT students; offered for two credits only to senior OT students. Prereq: O T 4070 or O T 3070. Application of research principles and methods to solving occupational therapy problems. (F)

**6150 (ELE 6010) Family Centered Collaboration in Early Childhood Intervention. (PSY 6010) (S W 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)

**6620 (ECE 6100) Enabling Technology. (BME 6500) Cr. 4**

Prereq: consent of instructor. Principles of application of enabling technology: across life stages, for differing ethnic and cultural backgrounds, for individuals with varying functional abilities. (Y)

**6800 Culture and Disability. Cr. 2-3**

Prereq: senior level graduate admission status. How cultural context affects interpretation of disability; ways of measuring disability. Principles of health statistics, rationale for rehabilitation programs and disability policy, cultural variations in concepts of disability. (Y)

# PHYSICAL THERAPY

Office: 439 Shapero Hall; 577-1432

Chairperson: Louis Amundsen

*Professor*

Louis Amundsen

*Associate Professor*

Thomas Birk

*Assistant Professors*

Christine Carlson, Jacqueline Drouin, Nancy McNevin, Fredrick Pociask, Susan Talley

*Part-Time Faculty*

Sara Arena, Kathleen Bowser, Jacqueline Femminineo, Michael Gilbert, Nicole Gordon, Isabelle Hauswirth, Kathleen J. Kovacek, Peter Kovacek, Amy Kubo, Aruna Nieshoff, Wendy Rzeppa, Barbara Rubenstein, Mable Sharp, Edward Yuiska

*Adjunct Assistant Professors*

Douglas Creighton, Peter Kovacek, Kornelia Kulig, Mable Sharp

*Cooperating Faculty*

Herman Engels, Rita Granda, Robert Louis-Ferdinand, Howard Normile, David Penny, John Wirth

*Center Coordinators of Clinical Education*

Leo Adewusi, PT; Judith Aikman, PT; Ethel Angeles, PT; Lisa Babcock, PT; Barb Balamucki, MPT; Victoria Barkoff, MPT; Raymond Bentley, PT; Barb Bishop, PT; Margaret G. Blanchard, PT; David Borman, Pt, SCS, ATC; Audrey Boyles, PT; Ron Brickey, PT; Tina Briggs, PT; Jan Brock, PT; Marj Bryen, PT; Dan Chilcoat, PT; Kathy Cook, PT; Renee Cotrell, PT; Karen Crute, PT; Deanna Cueny, PT; Chris Davis, PT; Iwona Deka, PT; Janet Downey, PT; Franz D'Sousa, PT; Patricia Ealy, PT; Liz Estes, MA, PT; Timothy L. Fifer, PT; Rebecca Ford, PT; Arthur Fossen, PT; Sara Gilbert, PT; Judy Goik, PT; Jennifer Gowin, PT; Jackie Grabinski, PT; Linda Grandstaff, PT; Cameron Griffith, PT; Sharon Grogg, PT; Stan Guest, PT; Gavin Hamer, PT; Samir Hanna, PT, Ph.D.; Maryann Herman, PT; Cindy Huffman, PT; Linda Isbell, PT; Brad Jackson, MS, PT; Kristy Johnson, MS, PT; Bryan Jones, PT; Yvonne Katharopoulos, PT; Barbara Kaye, MHS, PT; Pam Knickerbocker, MS, PT, OCS; Greg Kopp, PT; Aimee Kottman, PT; Ann Kowalski, PT; Martha Kramer, PT; Elizabeth Lauhoff, PT; Ted Lezotte, PT; Laura LoVasco, MPT; Connie Machnacki, PT; Valerie McPherson, MHS, PT; Ashok Mahure, M.Sc., PT; Todd May, PT; Sherry McLaughlin, MS, PT; Cindy Mercier, PT; Grant Middleton, PT; Lori Mizoguchi, PT; Theresa Moyer, PT; Kirti Narsey; Elaine Nevells, PT; Hanna L. Newell, ATC; Julie Noble, PT; Lee Ann Odom, PT; Christine Oglesby, PT; Swadi Patel, PT; Mary Pawlicki, PT; Steve Pedley, PT; Julie Perkins, PT; Kathi J. Piepenbrok, PT; Joanna Podleska-Ely, PT; Anne Marie Potter, PT; Kirk Randall, PT; Karen Reyhl, PT; Terri Ricketts, PT; Reva Rosen, PT; David M. Ross, PT, ATC; Dakshesh Sanghavi, MS, PT; Tom Saye, PT; Kathleen Scafaldi, PT; Kim Scalise, PT; Martha Schiller, PT; Kim Schwartz, PT; Alex Sciaky, PT; Jessica Shelton, PT; Ken Soave, PT; Lisa Stogner, PT; Cheryl Strong, PT; Lisa Swartzendruber, PT; Polly Swingle, PT; Craig Taylor, PT; Nathan Tear, PT; Laurie Templeton, PT; Barb Tipton, PT; Terry Trip, PT; Jennifer Turner, PT; Jim Turnipseed, PT; Janet Van Wieren, PT; Elaine Wade, PT; Carl P. Weaver, PT, ATC, MTC; Karen Wells, PT; Brian Whalen, PT; Wally Witkowski, PT; Jennifer Wolffis, PT; Gary Wreford, PT; Kris Yackel-Friend, PT; Jan Zehms-Stankrauff, PT



## Degree Programs

### BACHELOR OF SCIENCE in Allied Health Sciences

--Pre-Physical Therapy Concentration

#### \*MASTER OF PHYSICAL THERAPY

## The Physical Therapy Profession

Physical Therapy is a health care profession with an established theoretical base and widespread clinical applications -- particularly in the preservation, development and restoration of maximum physical functions. Physical therapists seek to prevent injury, impairments, functional limitations, and disability; to maintain and promote fitness, health, and quality of life; and to ensure availability, accessibility, and excellence in the delivery of physical therapy services to the patient. As essential participants in the health care delivery system, physical therapists assume leadership roles in prevention and health maintenance programs, in the provision of rehabilitation services, and in professional and community organizations. They also play important roles in developing health policy and appropriate standards for the various elements of physical therapy practice.

## Bachelor of Science in Allied Health Sciences Pre-Physical Therapy Concentration

The program leading to the Bachelor of Science in Allied Health Sciences (Pre-Physical Therapy Concentration) is offered by the College of Pharmacy and Allied Health Professions of Wayne State University in cooperation with the College of Liberal Arts, College of Science, and School of Medicine. This degree, awarded upon completion of a minimum of 120 semester credits (approximately seventy-five pre-professional semester credits and forty-five professional program semester credits), is a prerequisite for entry into the graduate component of the professional program, leading to the professional entry-level Master in Physical Therapy degree.

Students who are admitted to the physical therapy program, successfully complete the requirements of the B.S. Pre-Physical Therapy Concentration, and meet requirements for admission to the Graduate School at Wayne State University are guaranteed admission to the graduate component of the program. Students who already hold an undergraduate degree are eligible to receive a second bachelor's degree.

The program of study in physical therapy has received an interim accreditation from the Commission on Accreditation in Physical Therapy Education for the Master in Physical Therapy program. Graduates who receive a Master in Physical Therapy degree are eligible to take physical therapy licensure examinations and for active membership in the American Physical Therapy Association. The Bachelor of Science in Allied Health Sciences (Pre-Physical Therapy Concentration) does not qualify the holder for licensure.

## Admission

**Preprofessional Program:** The applicant must satisfy the admission requirements to the University (see page 15). Applicants to the professional program must also fulfill all prerequisite courses for the physical therapy program, as well as the Wayne State University General Education Requirements (see page 29). Applicants who already hold an undergraduate degree are exempt from the General Education Requirements. Decisions regarding the fulfillment of program prerequisites are made by the Department of Physical Therapy. Application forms for admission to the University may be obtained from the University Office of Admissions.

Prior to admission to the professional program, the following prerequisites, or their equivalent, must be completed:

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## PREPROFESSIONAL PROGRAM

credits

BIO 1500 --Basic Life Diversity . . . . .	4
BIO 1510 --(LS) Basic Life Mechanisms . . . . .	4
PSL 3220 -- Fundamentals of Human Physiology . . . . .	4
BMB 5010 or CHM 1030	
-- General Biochemistry Lecture . . . . .	2
-- General Chemistry II . . . . .	4
CHM 1220--(PS) Chemical Structures, Bonds & Reactions . . . . .	4
CHM 1230 -- Chemical Principles Lab. . . . .	1
PHY 2130 --(PS) General Physics. . . . .	3
PHY 2131 -- General Physics Lab. . . . .	1
PHY 2140 --General Physics. . . . .	3
PHY 2141 -- General Physics Lab. . . . .	1
PSY 3010 -- Statistical Methods in Psychology . . . . .	4
MAT: Math. Proficiency Exam./Math. Competency	
PSY 1010 --(LS) Introductory Psychology. . . . .	4
PSY 2400 -- Developmental Psychology. . . . .	4
ENG 1020 --(BC) Introductory College Writing . . . . .	4
ENG 3010 --(IC) Intermediate Writing . . . . .	3
HEA 2330-- First Aid and CPR . . . . .	3

In addition to the above, the following General Education Requirements (see page 29) must also be satisfied:

- (AI) American Society and Institutions
- (CL) Computer Literacy Competency
- (CT) Critical Thinking Competency
- (EP) English Proficiency Requirement
- (FC) Foreign Culture Group Requirement
- (HS) Historical Studies Group Requirement
- (OC) Oral Communication Competency
- (PL) Philosophy and Letters Group Requirement
- (SS) Social Studies Group Requirement
- (VP) Visual and Performing Arts Group Requirement

**Professional Program Admission:** The professional program in physical therapy is three years in length and consists of an undergraduate component and a graduate component. Progression to the graduate component is achieved only through successful completion of the undergraduate component. Courses in the professional program are taken on a full-time basis in the College of Pharmacy and Allied Health Professions. The professional program begins in the spring semester of each year.

For admission to the professional program in physical therapy, applicants must submit an Application for Admission to Professional Program, College of Pharmacy and Allied Health Professions. Applications are available November 15 from the Office of the Registrar of the College, 139 Shapero Hall. Application deadline is January 15 for admission to the program the following May. Admission is competitive. Completion of prerequisites with minimum requirements does not guarantee admission.

Applicants to the professional program must satisfy the following requirements:

1. Be admitted to Wayne State University (see page 15 for admission requirements).
2. Submit proof of completion of all science prerequisite classes by January 15 of the year for which admission was sought.
3. Submit proof of completion of all Wayne State University General Education Requirements, or their equivalent, by May 1 of the year for which admission is sought.
4. Have a minimum grade point average of 3.0 in all preprofessional course work, and prerequisite science and mathematics courses; and a minimum cumulative grade point average of 3.0. Grades of 'D' in required preprofessional courses will not be accepted by the Department. Science courses must be completed within the six years prior to admission to the professional program.

5. Possess the qualifications necessary for the professional responsibilities of a physical therapist.
6. Successful completion of English and Mathematics Proficiency Examinations by May 1. (Information on Proficiency Examinations may be obtained from the Office of Testing and Evaluation: 313-577-3400.)
7. Applicants whose first language is not English must pass the Test of English as a Foreign Language (TOEFL) and spoken English test.

**Reapplication:** Applicants who are not initially accepted for admission to the professional program may reapply. Applicants applying for the second time are encouraged to meet with a representative of the Physical Therapy Department for advice. Applicants considering a third application are required to meet with a representative of the Physical Therapy department before submitting an application.

A personal or written interview may be scheduled for qualified applicants. The interview will assist the Department in determining whether the applicant possesses the personal qualifications and characteristics necessary for the profession by assessing maturity, motivation and communication skills. Students will also be expected to be able to articulate their knowledge of self, physical therapy, and health care in general.

Professional courses and/or professional program admission requirements are subject to change without notification. The curriculum is subject to change due to changes in requirements for entry into professional practice, which may be separate from academic requirements. It is the student's responsibility to obtain current information regarding the program from the Department of Physical Therapy.

## Degree Requirements

Candidates for the Bachelor of Science in Allied Health Sciences (Concentration in Pre-Physical Therapy) must complete a minimum of 120 credits (including General Education Requirements and professional program prerequisites). These credits are distributed between the preprofessional program (see above) and the undergraduate phase of the professional program. The undergraduate phase of the professional program consists of four semesters (forty-five credits), as follows. (Course work listed is subject to change without notice.)

### PROFESSIONAL YEAR ONE and TWO

	<i>credits</i>
ANA 3030 --Anatomy . . . . .	3
ANA 3040 --Human Neuroanatomy and Neurophysiology . . . . .	2
IHS 3100 --Basic Mechanisms of Human Disease I . . . . .	5
IHS 3200 --Basic Mechanisms of Human Disease II . . . . .	5
IHS 3300 --Pharmacology for Allied Health Professions. . . . .	1
P T 4020 --Introduction to Physical Therapy. . . . .	3
P T 4120 --Human Growth and Development. . . . .	4
P T 4220 -- Basic Therapeutic Procedures. . . . .	2
P T 4320 -- Basic Evaluation Procedures . . . . .	3
P T 4400 --Clinical Medicine I . . . . .	2
P T 4430 -- Clinical Medicine II . . . . .	2
P T 4500 --Kinesiology I . . . . .	3
P T 4650 -- Kinesiology II . . . . .	2
P T 5100 -- Therapeutic Exercise . . . . .	2
P T 5460 --Integrated Physiology. . . . .	2
P T 5800--Clinical Education I. . . . .	2

**Health and Liability Insurance:** Clinical Education is provided throughout the professional program along with didactic courses. The final sixteen weeks of the program is spent in one or more 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 bloodborn pathogens, and the risk of possible mishaps in patient care. Therefore, all students are required to maintain health insur-

ance coverage and liability insurance, both of which must be in effect prior to and during all periods in which the student is involved in clinical education. The student is responsible for the cost of these insurances and all other costs (such as travel, meals, living expenses) associated with the clinical education portion of the program.

**Academic Regulations:** The Department of Physical Therapy has strict regulations regarding academic performance and progress. Copies of the most recently revised policies, which reflect the undergraduate and graduate components of the program, are available from the Department Office.

## 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 Aids, 2 East, Helen Newberry Joy Student Services Center, Detroit, Michigan 48202. In addition, the Physical Therapy Emergency Student Loan fund has been established to assist physical therapy students in good standing in this discipline. Information regarding this and other financial aids for physical therapy students may be obtained from the Department Office.

## UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### ANATOMY (ANA)

#### 3030 Anatomy. Cr. 3

Open only to students in Allied Health Programs. Dissection and prosection; emphasis on neuromuscular system and functional correlation. Material fee as indicated in the Schedule of Classes. (S)

#### 3040 Human Neuroanatomy and Neurophysiology. Cr. 2

Prereq: IHS 3100, IHS 3200. Study of human central nervous system; emphasis on sensory systems and structures which contribute to normal movement; lecture and laboratory. (S)

#### 6050 Biology of the Eye. (PYC 6050) Cr. 3

Integrated introduction to biology of eye function, and to causes and clinical treatments of eye-related disorders and diseases. Material fee announced in Schedule of Classes. (Y)

### PHYSICAL THERAPY (P T)

#### 4020 Introduction to Physical Therapy. Cr. 3

Prereq: admission to professional curriculum. Historical and sociological perspectives on the profession. Introduction to basic patient care emergency procedures. Material fee as indicated in the Schedule of Classes. (S)

#### 4120 Human Growth and Development. Cr. 4

Prereq: P T 4020, consent of instructor. 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, adults with disabilities, and the aging population. Material fee as indicated in the Schedule of Classes. (F)

#### 4220 Basic Therapeutic Procedures. Cr. 2

Prereq: P T 4500, 4320, 4430, or consent of instructor. Principles and techniques of basic therapeutic procedures, including massage, superficial heat and cold, basic and postural exercises, transfers and gait patterns. Laboratory. Material fee as indicated in the Schedule of Classes. (W)

**4320 Basic Evaluation Procedures. Cr. 3**

Prereq: P T 4500, 4400, or consent of instructor; coreq: 4430. Basic principles and techniques of manual muscle testing, goniometry, and anthropometric measurements. Posture and gait evaluation. Laboratory. Material fee as indicated in the Schedule of Classes. (W)

**4400 Clinical Medicine I. Cr. 2**

Prereq: P T 4020 or consent of instructor; coreq: IHS 3100. Disease processes, medical and surgical interventions. Specific clinical relevance to physical therapist's role; exploration of roles of other health care professionals: physician, occupational therapist, speech pathologist, psychologist, nurse. (Y)

**4430 Clinical Medicine II. Cr. 2**

Prereq: IHS 3100, P T 4400; coreq: IHS 3200. Continuation of P T 4400. Disease processes, medical and surgical interventions. Specific clinical relevance to physical therapist's role as part of comprehensive health care team. (Y)

**4500 Kinesiology I. Cr. 3**

Prereq: P T 4020, ANA 3030, or consent of instructor. Students must register for both sections. Biomechanical and kinesiological principles of human movement as related to anatomical and neuroanatomical structure. Fundamentals of pathokinesiology. Study of external and internal forces as they affect stability, tissue damage, body movement abnormalities and gait. Laboratory. Material fee as indicated in the Schedule of Classes. (F)

**4650 Kinesiology II. Cr. 2**

Prereq: P T 4500. Continuation of P T 4500. Additional depth and breadth. Material fee as indicated in the Schedule of Classes. (W)

**4990 Directed Study. Cr. 1-4**

Prereq: consent of adviser; first year professional courses. Independent study: critical analysis or review of concerns in health care; or physical therapy role, approach, methodology, technique or scientific rationale for clinical procedures. Oral and written presentation required. (T)

**5100 Therapeutic Exercise. Cr. 2**

Prereq: P T 4430, 4650; coreq: 5460. Fundamental principles and techniques of therapeutic exercise; development of treatment protocols for specific patient problems including evaluation and progression treatment plans based on patient response. Material fee as indicated in the Schedule of Classes. (Y)

**5460 Integrated Physiology. Cr. 2**

Prereq: IHS 3200, ANA 3040, P T 4650, consent of instructor. Processes of selected physical functions that have special relevance to selected aspects of physical therapy; theoretical and practical aspects. Material fee as indicated in the Schedule of Classes. (S)

**5800 Clinical Education. Cr. 2**

Prereq: consent of instructor; coreq: P T 4220, 5460, 5100. Offered for S and U grades only. Orientation to clinical education and practice, observational skills; correlation of basic principles and skills of patient care and treatment. Part-time, supervised experience in clinical environment. Activity reports required. (S)



# COLLEGE OF SCIENCE

INTERIM DEAN: Robert L. Thomas

# Foreword

The College of Science, formed in 1992, consists of nine departments: Audiology and Speech-Language Pathology, Biological Sciences, Chemistry, Computer Science, Geology, Mathematics, Nutrition and Food Science, Physics and Astronomy, and Psychology. This union of quantitative disciplines is designed to address recognized national priorities for expansion of academic research, promotion of scientific literacy, and development of human resources to meet technological challenges.

In its broadest definition, a science education imparts the knowledge, understanding and skills needed to achieve professional goals and personal fulfillment in a changing technological world. University General Education courses offered by Departments in the College of Science provide education in the methods and processes of scientific inquiry, an understanding of the nature of science and its impact on society, and the fundamental knowledge needed to keep up with the scientific and technological issues of the times. By studying science, students come to appreciate the wonders of nature and satisfy a natural curiosity about their constantly evolving universe.

Undergraduate degree programs in the College of Science lead to careers in the biological, behavioral, mathematical and physical sciences and provide excellent preparation for a wide variety of graduate and professional programs including medicine, dentistry, other health professions, and some areas of law, business and engineering. In addition to acquiring a solid foundation in a scientific discipline, students learn to think objectively, analytically and critically. Laboratory experiences reinforce theoretical training by illustrating scientific concepts, demonstrating experimental approaches and teaching technical skills. Graduates thus develop the resourcefulness, judgment and problem-solving abilities to succeed in new technical fields or to excel in traditional careers.

The undergraduate programs of the College of Science are strengthened by research-oriented graduate programs which lead to the master's and doctor's degrees. Undergraduates in the upper division may take some advanced classes along with graduate students. They are encouraged to engage in research projects along with faculty, graduate students, and research personnel. Undergraduate research provides an opportunity for students to deepen their knowledge in a particular area, to learn about the latest research developments and to be challenged by the intellectually-stimulating environment of a research laboratory. It presents an opportunity to work closely with graduate students, postdoctoral fellows and faculty members and provides an introduction to research for the many science students who seek graduate or professional degrees.

The departments of the College of Science enjoy state-of-the-art equipment and modern research facilities. Support facilities include the Science Storeroom and glassblowing, electronics and machine shops. The Science and Engineering Library has an excellent collection of science books and journals as well as computer-based literature-search capabilities.

## DEGREE PROGRAMS

### *BACHELOR OF ARTS with majors in:*

Biological Sciences	Mathematics
Chemistry	Nutrition and Food Science
Computer Science	Physics
Geology	Psychology
Information Systems	Speech-Language Pathology
Linguistics	

### *BACHELOR OF ARTS HONORS with majors in*

Biological Sciences Honors	Nutrition and Food Science Honors
Chemistry Honors	Psychology Honors
Geology Honors	

### *BACHELOR OF SCIENCE with majors in:*

Geology  
Mathematics  
Nutrition and Food Science  
Psychology

### *BACHELOR OF SCIENCE HONORS with majors in:*

Geology Honors  
Mathematics Honors  
Nutrition and Food Science Honors  
Psychology Honors  
Speech-Language Pathology Honors

### *SPECIAL BACHELOR'S DEGREES in*

Biological Sciences (Bachelor of Science in Biological Sciences)  
Chemistry (Bachelor of Science in Chemistry)  
Computer Science (Bachelor of Science in Computer Science)  
Dietetics (Bachelor of Science in Dietetics)  
Physics (Bachelor of Science in Physics)

### *SPECIAL BACHELOR'S HONORS DEGREES*

Bachelor of Science in Biological Sciences Honors  
Bachelor of Science in Chemistry Honors  
Bachelor of Science in Computer Science Honors

### *\*MASTER OF ARTS with majors in*

Applied Mathematics	Multidisciplinary Science
Biological Sciences	Nutrition and Food Science
Chemistry	Physics
Computer Science	Psychology
Linguistics	Speech-Language Pathology
Mathematics	
Mathematical Statistics	

### *\*MASTER OF ARTS IN HUMAN DEVELOPMENT*

### *\*MASTER OF SCIENCE with majors in*

Audiology	Molecular
Biological Sciences	Biotechnology
Chemistry	Nutrition and Food Science
Computer Science	Physics
Geology	

### *DOCTOR OF PHILOSOPHY with majors in*

Biological Sciences	Physics
Chemistry	Psychology
Computer Science	Speech-Language Pathology
Mathematics	
Nutrition and Food Science	

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## COLLEGE DIRECTORY

### *Interim Dean:*

Robert L. Thomas . . . . . 2155 Old Main; 577-2515

### *Associate Dean:*

David L. Njus . . . . . 2155 Old Main; 577-2520

Alice M. Young . . . . . 2155 Old Main; 577-2516

### *Administrative Assistant Dean:*

Sheryl Lamarand . . . . . 2155 Old Main; 577-8014

### *Student Services Coordinator:*

Linda Ludke . . . . . 2155 Old Main; 577-2542

### *Manager — Student Services:*

Andrea Harp . . . . . 2155 Old Main; 577-0228

### *Student Service Areas*

Graduate Office . . . . . 2155 Old Main; 577-5188

Major/Curriculum Office.; 577-3117

#### College Grade

Change Coordinator . . . . . 2155 Old Main; 577-5188

Undergraduate Degree Certification . . . . . 2155 Old Main; 577-5188

#### Educational Adjustment

Committee . . . . . 2155 Old Main; 577-5188

### *Departmental Offices*

Audiology & Speech-Language Pathology 581 Manoogian; 577-3339

Biological Sciences . . . . . 1360 Biological Sciences; 577-2873

Chemistry . . . . . 123 Chemistry; 577-2595

Computer Science . . . . . 431 State Hall; 577-2477

Geology . . . . . 0224 Old Main; 577-2506

Honors Program . . . . . 2311 Faculty/Administration Bldg.; 577-3030

Linguistics . . . . . 51 W. Warren; 577-8642

Mathematics . . . . . 1150 Faculty/Administration Bldg.; 577-2479

Nutrition and Food Science . . . . . 3009 Science Hall; 577-2500

Physics and Astronomy . . . . . 135 Physics; 577-2721

Psychology . . . . . 71 W. Warren; 577-2800

*Website:* <http://www.science.wayne.edu/>

### *Mailing address for all offices:*

(Department Name), College of Science, Wayne State University,  
4841 Cass Avenue, Detroit, Michigan 48202

# BACHELOR'S DEGREE REQUIREMENTS

## Credits

Candidates for Bachelor of Arts, Bachelor of Science, or any Special Degree must complete at least 120 credits. At least fifteen credits must be earned in courses numbered 3000 or above. Certain curricula may require additional credits above this minimum. (See 'Restrictions on Credit', below.)

**Grade Point Average:** All students are required to maintain an overall grade point average of 'C' (2.0) for all degree work elected. See 'Grade Point Average,' page 45.

## General Education Requirements

University-wide general education requirements and College-wide group requirements are designed to enhance students' basic skills and to promote intellectual breadth. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth.

As of Fall, 1991, all entering undergraduate students must satisfy both University General Education Requirements and College Group Requirements. Students who first enrolled prior to Fall, 1991 should consult with their advisers regarding University General Education Requirements and College Group Requirements. While these two sets of requirements substantially overlap and complement each other, College Group Requirements, in several respects, supplement and modify the University program by requiring additional course work or restricting the use of certain specific courses.

## Competency Requirements

The College of Science requires the establishment of the same academic skills and competencies as are set forth in the University General Education Program, see page 29.

## Group Requirements

Group Requirements for students in the College of Science overlap considerably with those of the University General Education Program (see page 31). However, they are not identical, and students must make sure that their course elections satisfy both sets of requirements.

*In order to achieve breadth of educational experience, both the University and the College enforce the policy that no two courses offered in satisfaction of the Group Requirements may be chosen from within the same Subject Area Code.*

The following are statements of important differences between the University General Education Program and the College Group Requirements.

- 1) The College requires three courses in the natural sciences — one more than is required by the University.
- 2) The College requires two courses in the social sciences (SS) — one more than is required by the University.
- 3) The College requires an additional course in the humanities under the heading of Civilizations and Societies (see below).
- 4) The College requires three courses in a single foreign language. Foreign language competency is not a part of the University General Education Requirements.

In each category the Group Requirement must be satisfied by election from an approved list of courses. Courses not on the lists will not be accepted as fulfilling the requirement. The basic list for University General Education courses may be found on page 31. The following list of Group Requirements cite only exceptions to the University lists. For updates to these lists post the publication date of this bulletin, students should consult the University Advising Office.

**AMERICAN SOCIETY AND INSTITUTIONS (AI)** The College list is the same as the University list, except that the College list does not include AGS 3420 and GSS 1510. One course is required.

**FOREIGN CULTURE (FC)** Students will satisfy the University General Education Requirement in Foreign Culture by successfully completing a three course sequence (through 2010 or 2110) in a single foreign language.

**FOREIGN LANGUAGE** All students in the College of Science must successfully demonstrate language proficiency equivalent to the three-course basic sequence in a single foreign language. Proficiency is proven by completing courses numbered 1010 (or 1100 and 1110), 1020, and 2010 in one of the following subject area codes: ARB, ARM, CHI, FRE, GER, GRK, HEB, ITA, JPN, LAT, POL, RUS, SPA, SWA, and UKR; as well as GRK 1110, 1120, and 2110. Those students continuing in the study of a foreign language begun in high school or at another college will be placed at the appropriate level in the sequence, as determined by means of qualifying examinations or interviews administered by the various language departments of the University, and must complete the sequence to demonstrate proficiency. The College Foreign Language Group Requirement will be considered satisfied by those students whose test scores place them beyond the intermediate (third course) level.

*Bilingual Students:* The College Foreign Language Group Requirement will be considered satisfied for students who were born in and completed their secondary education in a country whose language is not English. However, no credit (through course work or by examination) will be granted for elementary or intermediate level courses in that language. Bilingual students who satisfy the Foreign Language Group Requirement in this manner will simultaneously fulfill the University General Education Requirement in Foreign Culture.

**HISTORICAL STUDIES (HS)** The College list is the same as the University list, except that the College list does not include GIS 3160. One course is required.

**LIFE SCIENCE (LS)** The College of Science requires one course from the following shortened list to satisfy its Group Requirement in Life Sciences: ANT 2110; BIO 1030, 1050, 1510; HON 4220; NFS 2030; PSY 1010, 1020.

**PHILOSOPHY AND LETTERS (PL)** The College list is the same as the University list, except that the College list does not include GUH 2710. One course is required.

**PHYSICAL SCIENCE (PS)** The College of Science requires one course from the following shortened list to satisfy its Group Requirement in Physical Science: CHM 1000, 1020, 1220, 1225, 1410; HON 4230; PHY 1020, 1040, 1070, 2130, 2170, 3100.

**THIRD COURSE IN NATURAL SCIENCE (LS, PS)** A third course in the Natural Science area is required. It can not be chosen from the same department as either of the other two courses with which the student fulfills the Physical Science or Life Science requirement. All courses on the University list for Life Science or Physical Science are acceptable except GST 2310 and 2420. Also, students may elect NFS 2210 as the third course in Natural Science (a course which is not on the University General Education list).

**SOCIAL SCIENCE (SS)** The College list is the same as the University list, except that the College list does not include AGS 3480 and GSS 2710. Two courses (taken from different departments) are required.

**VISUAL AND PERFORMING ARTS (VP)** The College list is the same as the University list, except that the College list does not include GUH 2730. One course is required.

#### **CIVILIZATIONS AND SOCIETIES:**

This College Group Requirement is not part of the University General Education Requirements. Students must complete one course from the following (cross listed versions of these course are indicated in parentheses): A S 2010; AFS 2010; ARM (or GER, POL, RUS, SLA, UKR) 3410, ARM (or POL, RUS, SLA, UKR) 3710; CBS 2100 (SPA 2400), 2110 (SPA 2500); CLA 2000; ENG 2600, 3600; FRE 2710, 2720; GER 2710, 2720; GRK 3710; ITA 2710, 2720; N E 2000, 2010; POL 2710; RUS 3510.

*Note:* The Junior Year in Germany experience also meets the College Civilizations and Societies requirement.

**THE UNIVERSITY AND ITS LIBRARIES (INFORMATION POWER)** as specified in the University General Education Program (see page 32).

**UNIVERSITY REQUIREMENT IN AMERICAN GOVERNMENT** for students enrolled prior to Fall Term 1987: See General University Information, page 33.

## Curriculum Requirements

A curriculum usually designates a general area of interest or eventual professional choice. By choosing the General Curriculum, students indicate only an intention to take a degree in one of the departments of the College or that their final academic goal has not as yet been determined. Since educational interests may change during a college career, curricula may be altered at any time by consulting an academic adviser.

Some curricula outline specific programs of study. Others are governed only by the *group requirements*, future major requirements and recommendations. Group, curricular, and major requirements may be modified from time to time during a student's course of study, and students should periodically consult with appropriate advisers. Descriptions of the various curricula will be found in the Undergraduate Curricula section below; see pages 405- 406.

## Science Requirement for B.S. Degrees

**Bachelor of Science degrees:** Students who are candidates for Bachelor of Science degrees must successfully complete sixty credits in the natural sciences, computer science, advanced logic, statistics, and mathematics. Credits completed to satisfy the College Group Requirements in Natural Science may be applied to the sixty credits.

**Combined Degrees:** Students who are candidates for Bachelor of Science degrees in Combined Degree programs must complete all required science credits, but conditions vary as follows: pre-dental and pre-medical students must complete a minimum of forty credits, and pre-law students a minimum of sixty credits, in the natural sciences and mathematics before entering their respective professional schools.

**Special Degrees:** Students who are candidates for the Special Degrees Bachelor of Science in Biological Sciences, Bachelor of Science in Chemistry, or Bachelor of Science in Physics must fulfill the sixty-credit requirement in the natural sciences, computer science, advanced logic, statistics, and mathematics. Candidates for other Special Bachelor of Science degrees must complete the College Group Requirement in Natural Science and any additional science and mathematics courses required by the curriculum which they are following.



## Major Requirements

A major is a program of concentrated study in a department or area within the College. Specific course requirements for majors are listed in this bulletin under each of the departments or areas of the College. Students may declare majors at any time but generally select areas of concentration during their sophomore year and formally declare majors by the beginning of their junior year. Students must complete all courses in their majors with an overall average of 'C' (2.0).

**Declaration of Major:** To declare a major, students should consult a departmental adviser well in advance of making a formal declaration, since the acceptance of a declared major is subject to the advice and consent of the department concerned. Declaration of Major forms are available in the University Advising Center, 2 East, Helen Newberry Joy Student Services Building. A 2.00 cumulative g.p.a. is required to declare a major. At the time of formal declaration, the student must present to the department a current transcript and a Degree Audit from University Advising, obtain the signature of the department chairperson or designated representative on the Declaration form and file it in the Student Services Office, 2155 Old Main. All courses elected or changed by the student after the declaration of a major should be approved by the department adviser.

The major must include at least twenty credits in one subject, exclusive of introductory courses and inclusive of some advanced work. No more than forty-six credits in the major subject (including introductory courses) may be counted toward a degree. For majors which require intensive study in a particular subject, however, more than forty-six credits are allowed.

Within the above limits, each major program has specific requirements which may be modified from time to time; it is, therefore, each student's responsibility to keep informed of the current requirements in his/her major department.

For interdepartmental or field majors, the rule regarding minimum credits required in one subject is waived.

The major completed is part of the degree designation on the diploma.

**Double Major:** Students wishing to declare double majors must obtain approval from the chairpersons or delegated representatives of each department or intended major program. For students to graduate with double majors, the major requirements in both areas of concentration must be fulfilled. Students must complete all courses in both majors with an over-all grade point average of 'C' (2.0). Both majors are designated on the diploma.

Students enrolled in colleges and schools other than the College of Science and who wish to graduate with a double major, one component of which is in a science curriculum, must satisfy all College Group Requirements, as well as the major requirements of the department involved. (See also 'Combined Degrees' and 'Concurrent Degrees,' below.)

## Minor Fields

The College of Science offers the option of a minor. Students may choose to fulfill a minor but are not required to do so. In general, minors require eighteen to twenty-one credits. Courses which bear limitations prohibiting their election for major credit may not be elected for minor credit.

Students enrolled in colleges and schools other than the College of Science and who wish to declare a minor in a science curriculum, may do so by satisfying the minor requirements of the curriculum involved. They need not satisfy the College Group Requirements.

Students are strongly encouraged to consult with departmental advisers for course selections. The notation of the minor will appear on the transcript but not on the diploma. To declare a minor, students should consult a departmental adviser to obtain an approval signature. Program approval forms are available from the University Advising Center, 2 E, Helen Newberry Joy Student Services Building.

## *Special Concentration Available within a Department*

**Biological Sciences:** Biophysics and Molecular Biology (Bachelor of Science in Biological Sciences Degree)

## Combined Degrees and Second Degrees

A Combined Degree (B.A. or B.S.) is granted by the College of Science in cooperation with approved schools of Dentistry, Medicine, and Law, which do not require a bachelor's degree for admission. Candidates for Combined Degrees must complete 90 credits in the College of Science, all University requirements, all College requirements, make reasonable progress (as determined by the major department) toward completing a major, and complete satisfactorily the first year's work in an approved professional school. Courses taken in the first year of professional school may be applied toward the required fifteen credits in advanced courses. Students who fail to pass any course ordinarily required during the first year of professional work forfeit the right to a Combined Degree. Such cases may be reopened only after the student completes the second year of professional work.

Students who have received a degree from Wayne State University or any other accredited institution may obtain a second bachelor's degree in another academic area by registering in the undergraduate College. Graduates of Wayne State University who have earned degrees from the College of Science may be ranked as undergraduates by declaring new majors and indicating a desire to earn a second undergraduate degree. Graduates of other Wayne State University schools or colleges must transfer to the College of Science. A student from another institution must be admitted to the College by the University Admissions Office.

In order to be granted second degrees, students must complete a minimum of thirty credits beyond the first degree in the College and satisfy all University, College and major requirements. *Generally, no second degree will be granted in the academic area in which the first degree was earned.*

## Concurrent Degrees and Double Majors

Students who have satisfied all requirements for two different major programs leading to degrees offered by the College and who have accumulated 150 or more degree credits may apply for both degrees simultaneously. However, students intending to earn concurrent degrees are required to obtain permission from the Office of the Dean prior to the accumulation of 120 degree credits. A more usual procedure for students satisfying the requirements of two different major programs is to declare a double major and graduate with one degree, in which case as few as 120 degree credits may be required. (See also 'Major Requirements,' and 'Combined Degrees,' above.)

## Restrictions on Credit

**Repeated Subjects:** Degree credit will not be granted for course work in which credit has already been granted. (Students who wish to repeat a course in which they did not receive credit originally must file a repeat form at the time of registration.) Since similar courses may have different names dependent upon the college and the semester in which a course is offered, students are advised to make certain that they do not offer repeated work as credit toward a degree.

**Maximum Credits in One Subject:** Students may not count toward a degree more than forty-six credits in any one subject except for special curricula which specify additional courses in the curriculum outline.

**Over-Age Credits:** Students attempting to complete majors after a protracted interruption in their education, or those attending the University on a part-time basis over an extended period of time, may find that some early course work is outdated. In such cases, a department may require refresher work or a demonstration that the student is prepared for advanced courses in the department.

**Restricted Courses:** Degree credit for restricted courses is given only within the approved limits specified below.

**Professional Courses:** Students may elect a maximum of sixteen credits as cognate work from elected courses offered for degree credit by the several professional schools and colleges within the University. Eight of these credits may be elected with the approval of an academic adviser prior to the declaration of a major, and eight additional credits may be chosen with the approval of the major department. Where academic advisers have approved fewer than eight credits, the major department may approve credit up to the sixteen maximum credits allowed. In curricula which specifically require professional courses in excess of the maximum, additional credits may be elected.

**Specialized Courses:** Unless a curriculum specifies otherwise, the maximum amount of degree credit which may be earned in certain specialized areas is limited as follows:

Areas	<i>maximum degree credit</i>
Dance (approved courses) . . . . .	16
Health . . . . .	8
Applied Music (including the limitation stated in the paragraph below) 16	
Physical Education (activity) . . . . .	4

A total of not more than four credits from the following list of courses may be counted toward a degree unless a curriculum specifically requires more extensive elections:

MUA 2800 . . . . .	University Bands
MUA 2810 . . . . .	University Symphony Orchestra
MUA 2820 . . . . .	Jazz Lab Band
MUA 2830 . . . . .	Men's Glee Club
MUA 2840 . . . . .	Choral Union
MUA 2850 . . . . .	Concert Chorale
MUA 2870 . . . . .	Women's Chorale
MUA 2880 . . . . .	Chamber Music and Special Ensembles
SPR 2670 . . . . .	Radio-Television-Film Laboratory
SPC 2240 . . . . .	Forensics Practicum

**Restrictions on Transfer Credit:** — *Two-Year Colleges:* No more than sixty-four semester credits from two-year colleges may be applied toward graduation.

—*Weekend College (College of Lifelong Learning):* No more than sixteen credits, which may include six credits of Independent Study, may be transferred from Weekend College. Courses transferred will not count towards fulfilling College group or major requirements.

**Restrictions on Professional Courses:** Students may elect a maximum of sixteen credits as cognate work from elected courses offered for degree credit by the several professional schools and colleges within the University. Eight of these credits may be elected with the approval of an academic adviser prior to the declaration of a major, and eight additional credits may be chosen with the approval of the major department. Where academic advisers have approved fewer than eight credits, the major department may approve degree credit up to the sixteen maximum credits allowed. In curricula which specifically require professional courses in excess of the maximum, additional credits may be elected.

## Residence

To qualify for a baccalaureate degree in the College of Science, a minimum of thirty credits must be earned in the College. The last thirty credits applicable to the degree, not including credit by special examination, must be completed in an undergraduate college or school of Wayne State University. Credit by special examination may not be counted as residence credit, but such credit, if earned during a semester in which the student is registered, will not be considered an interruption of residence.

In special circumstances, senior residence may be interrupted with the approval of the student's major department and the Educational Adjustment Committee; however, when the candidate has fewer than the minimum thirty credits of residence in the College of Science, no such exceptions are permitted.

For the Combined Degree, the residence requirement must be completed in the College of Science at Wayne State University prior to admission to the professional school

# ACADEMIC REGULATIONS

For complete information regarding academic rules and regulations of the University, students should consult the *General Information Section of this bulletin*, beginning on page 15. The following additions and amendments apply to the College of Science.

## Attendance

Regularity in attendance and performance is necessary for success in college work. Attendance requirements will be announced by instructors at the beginning of each course.

## Normal Program Load

The requirements for graduation are based upon an average program of fifteen credits per semester for eight semesters. A normal load should not exceed eighteen credits.

Because two hours of outside preparation are normally expected for each class hour, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy. A few hours of employment a week may be safely added by capable students.

## Extra Credits

Extra credits are credits taken in excess of the normal load of eighteen credits. Students with 3.0 (or above) grade point averages may take more than eighteen credits when their proposed programs carry the written approval of the adviser and the Dean.

## Retention of Records

Term papers and examinations shall either be returned to students or retained by the instructor for a minimum of six months. Thereafter they may be destroyed. Instructors shall retain grade books for at least five years following the end of a term, and instructors who leave the institution shall give grade books for courses conducted during the past five years to their department chairperson. Five years after the end of a course, grade books may be returned to the instructor or destroyed by the department.

## Study Abroad

For more than a quarter of a century, the University has provided its students with the opportunity to study abroad for a year in order to experience the cultural, academic, and social life of a foreign country. Students in good academic standing may, with the approval of their major departments, take their junior year's work abroad. See the section 'Study Abroad,' page 231.

Regarding other opportunities for study abroad, students should contact the University Advising Center, 577-2680.

## Honors Program

Students in the College who have a cumulative grade point average of 3.0 or above are eligible to elect Honors Program courses. For a description of the Honors Program, see page 430.

## 'A GRADE' —Accelerated Graduate Enrollment

Five departments of the College — Biological Sciences, Computer Science, Geology, Mathematics, and Nutrition and Food Science — permit academically superior majors to petition for admission into the College's 'A GRADE' program. 'A GRADE' procedures enable quali-

fied seniors to enroll simultaneously in the undergraduate and graduate programs of the College and apply a maximum of fifteen credits towards both a bachelor's and master's degree in the major field. Students electing 'A GRADE' programs may expect to complete the bachelor's and master's degrees in five years of full-time study.

An 'A GRADE' applicant may petition the Graduate Committee of the major department for acceptance into the program no earlier than the semester in which ninety credits are completed. Applicants must have an overall g.p.a. at the *Cum Laude* level (approximately 3.6) and not less than a 3.6 g.p.a. in the major courses already completed. If the student's petition is accepted, the student's faculty adviser shall develop a graduate Plan of Work, specifying the 'A GRADE' courses to be included in subsequent semesters.

For more details about the 'A GRADE' program, contact the chairperson of the major department, or the Graduate Office of the College of Science (577-5188).

## Phi Beta Kappa

Phi Beta Kappa, the Nation's oldest honor society, was founded at the College of William and Mary in Virginia on December 5, 1776. The one hundred and fifty-sixth chapter of the society, Gamma of Michigan, was installed at Wayne State University on January 16, 1953 under a charter granted to the College of Liberal Arts by the United Chapters of Phi Beta Kappa. Membership in the chapter is restricted to its charter members and to those members of the junior and senior classes of the College of Liberal Arts and the College of Science who have been elected to membership by the chapter and who have formally accepted election and participated in initiation ceremonies of this or some other cooperating chapter. In addition, all members of the University staff who have been elected to membership by other chapters of Phi Beta Kappa automatically become affiliated members of the local chapter for the duration of their stay at the University.

Election to membership is restricted to students with at least two academic years of residence in the College of Liberal Arts or the College of Science, and is based not only on high scholarship and integrity, but also on breadth and depth of program. Students who wish further information are urged to consult with the secretary of the chapter concerning requirements for membership.

## Graduation With Academic Distinction

Candidates eligible for the bachelor's degree may receive a special citation on their diplomas under the following circumstances: The designations of *Summa Cum Laude*, *Magna Cum Laude*, and *Cum Laude* will be conferred upon graduating students whose cumulative grade point averages at Wayne State University fall within approximately the upper five per cent, the next five per cent, and the next ten per cent of the senior class, respectively. The grade points used to identify the lower limits for each designation will be based upon the grade points attained by seniors at these percentile levels during the preceding academic year. Only students who have earned sixty or more credits at Wayne State University are eligible to graduate with one of the above distinction citations.

## Dean's List

The Dean's List of academically superior students is compiled each fall and winter term based on the following criteria: a 3.6 grade point average for students registered for full-time programs of twelve credits or more which contribute to the grade point base; a 4.0 grade point average for students registered for between six and eleven credits. Students who receive marks of 'I' or 'W' or 'X' and grades of 'N' or 'U' are not eligible. (For explanation of these marks and grades, see page 44.)

## Academic Probation

**Low Grade Point Average:** If a student's work averages below 2.0, the student will be placed on academic probation. The student will be required to obtain permission from the University Advising Center before registering. Such permission will be granted only after an interview during which the student and adviser identify previous causes of failure and formulate a plan for future academic success.

**Registration:** A student on academic probation must have a 'hold' released each term before he or she registers. To obtain this release, the student must see an academic adviser in the University Advising Center. *This hold will not be released after the last day of the final registration for the term for which the student plans to register.* The hold cannot be released at the advising station in the Student Center during final registration.

**Restriction:** While on academic probation, a student may not represent the College in student activities.

**Removal of Academic Probation:** Academic probation will be removed at the end of any term in which the student achieves an over-all average of 'C' (2.0) or better for all degree work taken at the University.

## Exclusion

**Low Grade Point Average:** Students on academic probation shall be given two subsequent terms for enrollment on probationary status. At the conclusion of the two terms, a student who has not achieved a cumulative g.p.a. of at least 2.0 shall be excluded from the University. A student excluded from the University may not apply for reinstatement for one calendar year. Such an exclusion will be reviewed by the Probation Committee and the Dean upon the request of the student.

**Reinstatement:** After one year of exclusion, the student may apply for reinstatement in the College. The decision to reinstate will be based upon evidence presented by the student that circumstances have changed during the year and that the probability of success has increased. The reinstatement application must be returned to the University Advising Center at least two weeks prior to the first day of any registration period.

**Cheating and Plagiarism:** The principle of honesty is recognized as fundamental to a scholarly community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. The instructor has the responsibility of notifying the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Acts of dishonesty may lead to suspension or exclusion. Information on procedures is available in the Office of the Dean.

## Academic Advising

**Freshmen and sophomores** are required to consult departmental advisers each time they register. A staff of academic advisers is available in the University Advising Center, 2 East, Helen Newberry Joy Student Services Center, to answer general academic questions. Students should confer with advisers on all questions concerning degree requirements, academic regulations, course elections, and programs of study. It is of primary importance that students talk with an adviser when they are having difficulties in their academic work. Students may choose either to see a specific adviser or any available adviser. Freshman and sophomore students in some of the special curricula are required to consult departmental advisers or advisers in other colleges. All science students are encouraged to consult the undergraduate adviser in their prospective major department.

**Juniors and seniors** are assigned to advisers in their major departments, and their course elections in the last two years are arranged in consultation with these departmental advisers.

## Financial Aid

See Office of Scholarships and Financial Aid (page 20), or the Student Services Coordinator in the Dean's Office for additional information and applications, as well as the individual departmental sections below for additional scholarships.

*Dr. C. Gary Artinian Endowed Pre-Medicine Scholarship Fund:* Award open to full-time students enrolled in pre-medicine or accepted for pre-medicine study who demonstrate financial need. Scholarship is for tuition only.

*Hilda Colebank Endowed Memorial Scholarship:* Award open to full-time students enrolled in pre-medicine in the College of Science who have a minimum g.p.a. of 3.0. Recipients are selected on the basis of scholastic achievement.

*Christina J. Neumann Endowed Memorial Scholarship for Women Studying Science:* Awarded to full-time female undergraduate or graduate students who have at least a 3.4 g.p.a. and who demonstrate financial need. Scholarship is for tuition only.

*N.V. Shah Memorial Annual Scholarship Fund:* Awarded to an undergraduate student with a minimum 3.0 g.p.a. and desirable leadership qualities. Preference given to students of Asian or Indian descent. Scholarship is for tuition only.

*Elliot Dov Strom Endowed Memorial Scholarship:* Awarded to a full-time student majoring in the sciences who demonstrates financial need.

*The Margaret Teal Award:* Awarded to full-time students in the College of Science who have a minimum g.p.a. of 3.0. Recipients are selected on the basis of scholastic achievement and financial need.

*Arthur J. Walker Memorial Minority Annual Scholarship Fund:* Award open to full-time or part-time minority undergraduate or graduate students who have at least a 2.5 g.p.a. and who demonstrate financial need.

# UNDERGRADUATE CURRICULA

Students who are uncertain of procedures in curricular planning should confer with an adviser. Each Department specifies the curriculum required of its majors, and students should consult the Departmental adviser as soon as possible. In all curricula, majors must be declared by the beginning of the junior year.

## General Curriculum

The following curriculum is suggested for students who are interested in a science major but have not yet selected a specific field. In the sciences, succeeding courses build upon the information and concepts developed in earlier courses. For that reason, it is important to take courses in the proper sequence and to select a major early. During the first two years, the objectives of the student should be (1) to complete fundamental science and mathematics courses, (2) to explore and identify a major, and (3) to satisfy the University General Education Requirements and the College Group Requirements. Students interested in majoring in most of the sciences (including mathematics and computer science) will need the calculus sequence (MAT 1800, 2010 and 2020). Students interested in majoring in audiology and speech-language pathology, nutrition and food science, or psychology may find statistics (STA 1020) to be more appropriate. Students should consult the curriculum descriptions of the individual departments and consult a departmental adviser as soon as they decide on a major.

### Suggested Course Elections

#### Freshman Year

<i>Fall Semester</i>	<i>Winter Semester</i>
English 1020 (BC)..... 4	(IC) English elective..... 3
Mathematics..... 4	Math. or Computer Sci..... 3-4
Science elective ..... 4	Science elective..... 4
Prospective major course.. 4-5	Prospective major course ..... 4-5
UGE 1000 (GE)..... 1	Total: 14-16
Total: 17-18	

#### Sophomore Year

General Ed. Requirement .... 3	General Ed. Requirement..... 3
Language I course ..... 4	Language II course..... 4
Science or Math. elective ..... 4	Science or Math. elective ..... 4
Prospective major course.. 4-5	Prospective major course ..... 4-5
Total: 15-16	Total: 15-16

### PRE-PROFESSIONAL CURRICULA

Admission to pre-professional curricula implies only that students have selected professional goals. It does not necessarily mean that students will be accepted by the corresponding professional school or college.

## Pre-Dentistry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the basic sciences listed below lead to the bachelor's degree and qualify students for consideration by most schools of dentistry.

#### credits

Biology or Zoology with laboratory . . . . .	12-16
Chemistry: Inorganic, including qualitative analysis, & lab . . . . .	9-11
Chemistry: Organic with laboratory . . . . .	8-10
English . . . . .	8-12
Physics with laboratory . . . . .	8-10

Recommended electives include psychology, sociology, biochemistry, embryology, and statistics. Because different schools of dentistry may require credits in some or all of these subjects, students are advised to become familiar with Admission Requirements of U.S. and Canadian Dental Schools, a brochure which may be ordered from the American Association of Dental Schools, 1625 Massachusetts Avenue N.W., Washington, D.C., 20036.

**Pre-Education** — See pages 101 and 229.

## Pre-Medicine and Pre-Osteopathic Medicine

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the basic sciences listed below lead to the bachelor's degree and qualify a student for consideration by most schools of medicine and osteopathic medicine.

#### credits

Biology or Zoology with laboratory. . . . .	12-16
Inorganic Chemistry (including qualitative analysis) & lab. . . . .	9-11
Organic Chemistry with laboratory. . . . .	8-10
Physics with laboratory . . . . .	8-10
English . . . . .	8-12

Recommended electives include psychology, sociology, biochemistry, embryology, and statistics. Because different schools of medicine may require credits in some or all of these subjects, students are advised to become familiar with *Medical School Admission Requirements*, a brochure which may be ordered from the Association of American Medical Colleges, 2450 N Street, N.W., Washington, D.C., 20037-1126. The admission requirements of specific schools of osteopathic medicine are available from the American Association of Colleges of Osteopathic Medicine, 6110 Executive Blvd., Suite 405, Rockville, Maryland 20852-3991.

Wayne State University's School of Medicine encourages students to fulfill degree requirements by selecting courses which will contribute significantly to a broad cultural background and by choosing a major in which one is interested. The Committee on Admissions is influenced by the scholarly approach to education, not by the area in which one concentrates.

**Pre-Clinical Laboratory Science** — See page 375.

— **Cytotechnology Concentration**— See page 377.

**Pre-Mortuary Science** — See page 384.

**Pre-Occupational Therapy**— See page 389.

## Pre-Optometry

Satisfactory completion of University General Education Requirements, College Group Requirements, a major field, and the courses listed below lead to the bachelor's degree and qualify a student for consideration by most schools of optometry. Although some schools will accept students who have completed only two years of undergraduate work, preference is given to those who have earned the bachelor's degree.

Biology, including microbiology, with laboratory. . . . .	12-16
Inorganic chemistry with laboratory . . . . .	8-10
Physics with laboratory . . . . .	8-10
Mathematics:	
Algebra and Trigonometry . . . . .	3-4
Calculus . . . . .	6-8
English . . . . .	6-8
Psychology . . . . .	3
Statistics . . . . .	3

Recommended electives include biochemistry and social sciences. Information about specific schools is available from the Association of Schools and Colleges of Optometry, 6220 Executive Blvd., Suite 690, Rockville, Maryland 20852.

**Pre-Pathologists' Assistant** — See page 385.

**Pre-Pharmacy** — See page 359.

**Pre-Physical Therapy** — See page 393.

**Pre-Radiation Therapy Technology** — See page 337.

## Pre-Veterinary Medicine

Satisfactory completion of University General Education requirements, College Group Requirements, a major field, and the courses listed below lead to the bachelor's degree and qualify a student for consideration by the College of Veterinary Medicine at Michigan State University.

### credits

BIO 1510 — (LS) Basic Life Mechanisms . . . . .	4
CHM 1220 — (PS) Chemical Structure, Bonding & Reactivity . . . . .	4
CHM 1230 — Chemical Principles in the Laboratory . . . . .	1
CHM 1240 — Principles of General/Organic Chemistry . . . . .	4
CHM 1250 — General/Organic Chemistry Lab . . . . .	1
CHM 2220 — Organic Chemistry . . . . .	3
CHM 2230 — Preparative Organic Chemistry Lab . . . . .	2
CHM 2280 — Chemical/Analytical Principles . . . . .	3
CHM 2290 — Chemical/Analytical Principles Laboratory . . . . .	2
CHM 5600 or CHM 6620	
— Survey of Biochemistry . . . . .	3
— Metabolism . . . . .	3
MAT 1800 — Elementary Functions . . . . .	4
PHY 2130/2131 or PHY 2170/2171	
— (PS) General Physics/General Physics Lab . . . . .	4
— (PS) General Physics/General Physics Lab . . . . .	5
PHY 2140/2141 or PHY 2180/2181	
— General Physics/General Physics Lab . . . . .	4
— General Physics/General Physics Lab . . . . .	5
English (ENG) . . . . .	6-8

Other requirements in social sciences and humanities may be satisfied by meeting the College Group Requirements. Recommended electives include: comparative vertebrate zoology, microbiology, statistics, and psychology.

## TEACHER PREPARATION CURRICULA

Science students preparing to teach in one of the fields listed below will register in the College of Science for their freshman and sophomore years and transfer to the College of Education at the beginning of their junior year. Application for entrance to the College of Education should be submitted after the completion of fifty-three credits with a minimum 2.5 cumulative grade point average, and achievement of a passing score on the University English Proficiency Examination. Students should also have satisfied the mathematics competency requirement and passed the State Basic Skills Test.

### Combined Curriculum for Secondary Teaching

*This curriculum leads to a bachelor's degree and a Michigan Secondary Provisional Certificate.*

The Combined Curriculum for Secondary Teaching is offered in Biological Sciences, Chemistry, Computer Science, Geology, Mathematics and Physics, in cooperation with the College of Education. It

prepares students for teaching major and minor subjects in the secondary school. In electing courses during the first two years, students should acquire a broad general education while simultaneously electing courses that are required by their future major department.

Students interested in this program should consult an academic adviser in the University Advising Center, who will supply a curriculum outline and provide guidance. Students are also encouraged to consult the departmental undergraduate adviser in the prospective science major as early as possible. They may also consult the Division of Academic Services, Room 469, College of Education, at any time during the first two years for consultation on professional programs they may be planning to pursue.

**Degree in the College of Science:** Students earn a bachelor's degree in the appropriate science or mathematics major and simultaneously prepare for secondary teaching certification. Students remain registered in the College of Science and elect departmental majors by the beginning of the junior year. Students then apply to the College of Education for official admission to the combined curriculum for secondary teaching and must be approved by the College of Education as candidates for teacher certification. During the junior and senior years, student program requests will be signed by both a College of Science major adviser and by the appropriate adviser in the College of Education.

**Degree in the College of Education:** Students earn a bachelor's degree in education with a major in science education or mathematics education and simultaneously prepare for secondary teaching certification. Students apply for admission to the College of Education after completing fifty-three credits in course work, transfer to that College at the beginning of the junior year, and follow the degree requirements of the College of Education.

### Curriculum in Special Education with a Concentration in Speech Impaired

The major in special education with a concentration in speech and language impaired is offered by the College of Education in conjunction with the Department of Audiology and Speech-Language Pathology. Students earn a B.S. degree with a major in special education — speech impaired. Upon completion of the master's degree in speech-language pathology, they also receive elementary (K-8) certification and a teaching endorsement in speech and language impaired (K-12). This prepares teachers to work with children who have speech and language disorders. Students register in the College of Science for the first two years, apply for admission to the College of Education after completing fifty-three credits in course work, and transfer to the College of Education at the beginning of the junior year. Those interested in this program should consult an academic adviser, who will supply a curriculum outline and provide guidance. They should also consult the undergraduate adviser in the Department of Audiology and Speech-Language Pathology, 581 Manoogian, as early as possible.

# AUDIOLOGY and SPEECH-LANGUAGE PATHOLOGY

Office: 581 Manoogian; 577-3339

Web: <http://www.science.wayne.edu/~aslp>

Chairperson: Alex Johnson

Graduate Officer: Jean Andruski

Undergraduate Officer: Karen S. O'Leary

Coordinator of Clinical Programs: Kristine V. Sbaschnig

## Professors

Alex Johnson, William Leith (Emeritus), John Panagos (Emeritus)

## Associate Professors

Dale O. Robinson, Thomas H. Simpson

## Assistant Professors

Jean Andruski, D'Jaris Coles, Margaret Greenwald

## Instructors

Karen S. O'Leary, Gilmour M. Peters, Kristine V. Sbaschnig

## Lecturer

Joan Cortright

## Adjunct Faculty

Colleen Allen, Kenneth R. Bouchard, Michael W. Church, Fay Duka, Frances E. Eldis, Ellen Fairbrother, Susan Fleming, Barbara Jacobson, Gary P. Jacobson, Bev Jaynes, Mark Simpson, John Tonkovich

## Degree Programs

*BACHELOR OF ARTS with a major in speech-language pathology*

*\*MASTER OF ARTS with a major in speech-language pathology*

*\*MASTER OF SCIENCE with a major in audiology*

*\*DOCTOR OF PHILOSOPHY with a major in speech-language pathology*

## Bachelor of Arts with a Major in Speech-Language Pathology

This department offers courses related to the study of communication and communication disorders and sciences. Specialized coursework prepares students to work with speech-language and hearing disabled children and adults in a variety of settings, including the public schools, hospitals, clinics, rehabilitation centers and private practice. College teaching and research are also career possibilities.

Undergraduate majors in this specialization should note that a master's degree in this area is required for clinical certification by the American Speech-Language-Hearing Association. Study in this field at the undergraduate level provides a scientific foundation for graduate study in both audiology and speech-language pathology as well as other science and health professions.

Students interested in pursuing doctoral study should contact the graduate officer.

**Admission Requirements** are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor's degree must complete 120 credits of course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively.

It is expected that a major will complete at least thirty but not more than forty-six credits in SLP course work. Any credits elected over the maximum forty-six must have prior approval of both adviser and chairperson if the additional credits are to count toward the degree (120 credits) for transfer students. At least twelve credits are required in residence within the major. A proper distribution of courses approved by the student's adviser is important. It is desirable that students intending to major in speech-language pathology begin their work in the Department in their sophomore year. Courses in the major should be selected in consultation with a departmental adviser. Although students do not officially declare a major prior to the junior year, advising is available to freshmen and sophomores. The Department allows one repeat of undergraduate courses with permission of the instructor and/or adviser.

**Major Requirements** for a Bachelor of Arts degree in this discipline consist of the following courses: SLP 5080, 5090, 5120, 5300, 5310, 5320, 5360, 6460, 6480; AUD 5400 and 5420. In addition, all majors must complete the following courses: STA 1020; GPH 1100 or ANT 2100; and PSY 1010; or equivalents; for clinical certification.

**Bachelor of Science Option:** Students majoring in this discipline also have the option of working toward the Bachelor of Science in Education degree (speech-language impaired) granted by the College of Education. It is recommended that such students earn the Michigan Teaching Certificate at the undergraduate level, although certification is not granted until completion of the Master's Degree, which is required before clinical certification is awarded. These students normally transfer into the College of Education at the beginning of the junior year.

An adviser should be consulted early in the student's program so that course work is taken in the proper sequence for both the B.S. degree in education and the Michigan Teaching Certificate, as well as the speech-language major program. For the Bachelor of Science degree the College of Education also requires a *planned minor* elected in consultation with an adviser in the College of Education. Inquiries should be directed to 581 Manoogian Hall (577-3339). For further details, consult the ASLP Undergraduate Student Handbook, available from the Department.

**Advising:** Initial questions about the major, including work required in the College of Education, should be directed to the Undergraduate Officer. For questions concerning clinical certification, contact the Coordinator of Clinical Programs.

**Financial Aid:** See Office of Scholarships and Financial Aid, page 20. The following award is available to students in this department:

*Clara B. Stoddard Endowment Scholarship Award:* Awarded to majors in the Department specializing in school speech-language pathology.

\* For degree requirements, see the Wayne State University Graduate Bulletin.

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### Audiology (AUD)

#### **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)

#### **5420 Introduction to Aural Rehabilitation. Cr. 3**

Prereq: AUD 5400. Principles and practices of aural rehabilitation including hearing aids. (S)

### Speech-Language Pathology (SLP)

#### **1010 Elementary Sign Language [ASL]. Cr. 4**

Appreciation and use of American Sign Language (ASL). Review of basic grammar coupled with classroom practice to learn to communicate in signs. Supervised observations of interactions with individuals who are deaf. (I)

#### **1020 Advanced Sign Language [ASL]. Cr. 4**

Prereq: SLP 1010. Advanced use of American Sign Language (ASL); grammar and classroom practice for sign communication and teaching. Supervised participation with individuals that are deaf. (Y)

#### **1800 Improving Intelligibility for Internationals. Cr. 2**

Offered for S and U grades only. Articulation, accent, and intonation patterns drilled on a group and individual basis for people learning English as a second language. Coursework in the English Language Institute should be completed or taken concurrently. (T)

#### **2010 Using Sign Language [ASL]. Cr. 4**

Prereq: SLP 1020. Practical uses of sign language with special emphasis on fieldwork projects in specific fields such as law, medicine, speech-language pathology, social work, special education. Supervised presentations to individuals who are deaf. (Y)

#### **2750 African American English. (LIN 2750) Cr. 3**

Structure, content, use, and history of African American English (also known as Ebonics) from its origins to the present. (W)

#### **3990 Directed Study. Cr. 1-3 (Max. 4)**

Prereq: consent of chairperson required if replacing regular course work. Undergraduate study in areas not covered in scheduled curriculum, including library and field work. (Y)

#### **4998 Honors Seminar. Cr. 3**

Prereq: admission to departmental honors program, senior standing, consent of undergraduate adviser. Bibliographic and research experiences; review of recent literature; research project. (T)

#### **5080 Phonetics. (LIN 5080) (SED 5320) Cr. 3**

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiology approaches. (F)

#### **5090 Anatomy and Physiology of the Speech Mechanism. (SED 5330) Cr. 3**

General science of normal speech; anatomy, physiology and mechanics of respiration, phonation, resonance, articulation. (W)

#### **5120 Speech Science. (SED 5120) Cr. 3**

Prereq: SLP 5300, 5080, 5090. Speech production, acoustics of sound, perception of the speech signal. (Y)

#### **5300 Introduction to Speech-Language Pathology. (SED 5300) Cr. 3-4**

Speech-language pathology in clinical and educational settings; classification of communication disorders and related management strategies. (F,S)

#### **5310 Clinical Methods in Communication Disorders. (SED 5310) Cr. 3**

Prereq: SLP 5080, 5090, 5300, 5320. Procedures and materials for clinical diagnosis of articulatory, language, rhythm, and voice deficits of organic and non-organic causation. (W)

#### **5320 Normal Language Acquisition and Usage. (LIN 5360) (SED 5360) Cr. 3**

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (F)

#### **5360 (WI) Clinical Practice in Speech-Language Pathology. (SED 5340) Cr. 3 (Max. 9)**

Prereq: SLP 6460, 6480, and 5310, each with grade of B or better. Supervised experience in application of methods of diagnosis and treatment of clinical cases. Material fee as indicated in the Schedule of Classes. (T)

#### **6330 (SED 7790) Language Bases of Learning Disabilities. Cr. 3**

Open only to learning disabilities/emotional impairment majors. 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)

#### **6360 Advanced Clinical Practice in Speech-Language Pathology. (SED 6360) Cr. 3 (Max. 6)**

Prereq: SLP 5360 or equiv. with grade of B or better. Open only to graduate students. 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. (SED 6460) Cr. 4**

Prereq: SLP 5080, 5090, 5300, 5320. Introduction to the clinical management of articulation and language disorders. (W)

#### **6480 Organic and Fluency Disorders. (SED 6480) Cr. 4**

Prereq: SLP 5080, 5090, 5300, 5320. Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (W)

#### **6620 Introduction to Voice Disorders and Cleft Palate. Cr. 3**

Prereq: SLP 5300. An introduction to basic concepts related to acquisition and manifestations of voice disorders in children and adults and to resonance disorders as a result of oral clefting, including remediation. (W)

#### **6640 Language Development and Disorders: Infants and Preschool Children. Cr. 3**

Prereq: SLP 5300 and 5320; graduate standing or consent of instructor. Coreq: SLP 6641. 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)



# BIOLOGICAL SCIENCES

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## Professors

Robert Arking, Walter Chavin (Emeritus), David R. Cook (Emeritus), Dominic L. DeGiusti (Emeritus), D. Carl Freeman, Stanley K. Gangwere (Emeritus), Miriam Greenberg, Garrett Heberlein, R. Anton Hough, James M. Jay (Emeritus), Lida H. Mattman (Emerita), Kazutoshi Mayeda (Emeritus), Hiroshi Mizukami, William S. Moore, Allen W. Nicholson, David L. Njus, Howard R. Petty, William Prychodko (Emeritus), Claude M. Rogers (Emeritus), Harold W. Rossmoore (Emeritus), Albert Siegel (Emeritus), P. Dennis Smith, John D. Taylor, William L. Thompson (Emeritus)

## Associate Professors

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## Assistant Professors

Jerry Caldwell, Marcus Friedrich, Aleksandar Popadic, Mark VanBerkum

## Degree Programs

*BACHELOR OF SCIENCE in Biological Sciences*

*BACHELOR OF ARTS with a major in Biological Sciences*

*\*MASTER OF SCIENCE with a major in Biological Sciences*

*\*MASTER OF ARTS with a major in Biological Sciences*

*\*MASTER OF SCIENCE in Molecular Biotechnology*

*\*DOCTOR OF PHILOSOPHY with a major in Biological Sciences and specializations in cell, developmental, and neurobiology; evolutionary and organismal biology; molecular biology and biotechnology*

## Bachelor of Arts With a Major in Biological Sciences

The Bachelor of Arts degree is for students who desire a broad liberal arts education with specialization in biology. It is not recommended for students anticipating admission into graduate or medical school.

Students contemplating a major program in biological sciences should consult with the departmental undergraduate adviser no later than the beginning of the sophomore year.

**Admission requirements** for the College are satisfied by the requirements for general undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete at least 120 credits in course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively. Students must receive a grade of 'C-minus' or better in all biology courses. A grade point average of 2.0 ('C') in both biology and general required courses is required for graduation.

**Biology Core Requirements:** A minimum of thirty-two credits beyond BIO 1500 and 1510 are required of the major, including BIO 2200, 2600, 3070, 3100, 3120, 3400, and 5997 with 5993. Students must declare their major after completing BIO 2200, and before electing higher-level courses. Courses through the 6000 level may be elected in the final year, providing the proper prerequisites have been taken. At least twelve of the thirty-two credits must be taken in residence.

**Cognate Requirements:** Candidates for the bachelor of arts degree in biological sciences are required to take CHM 1220, 1230, 1240, 1250, and STA 1020 or MAT 2210, and MAT 1800.

## Suggested Program

NOTE: In addition to the courses outlined below, students must elect sufficient additional credits to achieve the minimum 120 credits required for graduation.

		<b>First Year</b>	
		<i>Fall Semester</i>	<i>Winter Semester</i>
BIO 1500 <sup>1</sup> .....	4(L)	BIO 1510 (LS) .....	4(L)
CHM 1220 (PS) .....	4	CHM 1240 .....	4
CHM 1230 .....	1	CHM 1250 .....	1
ENG 1020 (BC) .....	4	MAT 1800 .....	4
SPB 1010 (UC) .....	2	Total: 13	
UGE 1000 (GE) .....	1		
	Total: 16		
		<b>Second Year</b>	
BIO 2200 (LS) .....	4(L)	BIO 2600 .....	3
STA 1020 .....	3	Visual & Perf. Arts (VP) .....	3-4
PHI 1050 (CT) (or exam) ...	0-3	(AI) course .....	3-4
(CL) course (or exam) .....	3	Social Sci. (SS) .....	3-4
ENG 3010, 3030 or 3050(IC) 3		Total: 12-15	
	Total: 13-16		
		<b>Third Year</b>	
BIO 3070 .....	4(L)	BIO 3100 .....	3
BIO 3120 .....	4(L)	BIO 3400 .....	3
Language I course .....	4	(PL) course .....	3-4
Total: 12 .....		Language II course .....	4
		Total: 13-14	
		<b>Fourth Year</b>	
BIO elective I <sup>2</sup> .....	3	BIO 5993(WI)/5997 .....	2
BIO elective II .....	3	Civzns. & Societies course <sup>3</sup> .....	3
Language III course .....	4	BIO elective III .....	4
(SS) course .....	3	(HS) course .....	3
	Total: 13	Total: 12	

1. Students should declare their major during the first year.

2. May be taken in summer following completion of core requirements; especially recommended for students interested in undergraduate research in BIO 3990, enabling election of an additional BIO course in the fourth year.

3. NOTE: Must be a course approved by the College of Science as satisfying the College Civilizations and Societies course requirement; see list above, page 400.

\* For requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Science in Biological Sciences

The Bachelor of Science degree is for those students who wish to follow a career in the sciences and/or those planning to enter post-graduate professional schools. Students contemplating a major program in biological sciences should consult with the departmental undergraduate adviser no later than the beginning of the sophomore year. Students must declare their major after completing BIO 2200, and before electing higher-level courses. The major program incorporates all of the regular College Group Requirements.

**Admission Requirements:** See above, under Bachelor of Arts degree.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete at least 120 credits in course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399 -404, respectively. Students must receive a grade of 'C-minus' or better in all biology courses. A grade point average of 2.0 ('C') in both biology and general required courses is required for graduation.

**Major Requirements:** A minimum of thirty-two credits beyond BIO 1500 and 1510 are required of the major, including BIO 2200, 2600, 3070, 3100, 3120, 3400, and 5997 with 5993. Courses through the 6000 level may be elected during the final year, providing the proper prerequisites have been taken. At least twelve of the thirty-two credits must be taken in residence.

**Cognate Requirements for the B.S. Degree:** B.S. majors in biological sciences must include CHM 1220, 1230, 1240, 1250, 2220, 2230, 2280, 2290, PHY 2130 and 2140 or PHY 2170 and 2180, and MAT 2010, 2020, and 2210 or STA 1020 in their curricula. Majors should take the placement examination of the Department of Mathematics as soon as possible upon entry into the freshman year.

### Suggested Program

<b>First Year</b>	
<i>Fall Semester</i>	<i>Winter Semester</i>
BIO 1500 ..... 4(L)	BIO 1510 (LS).....4(L)
CHM 1220 (PS)..... 4	CHM 1240 ..... 4
CHM 1230 ..... 1	CHM 1250 ..... 1
ENG 1020 (BC)..... 4	MAT 1800 <sup>1</sup> .....4
SPB 1010 (OC) ..... 3	ENG 3010, 3030, or 3050(IC)...3
UGE 1000 (GE)..... 1	Total: 16
Total: 17	
<b>Second Year</b>	
BIO 2200 (LS) <sup>2</sup> .....4(L)	BIO 2600 ..... 3
CHM 2220 ..... 3	CHM 2280 ..... 3
CHM 2230 ..... 2	CHM 2290 ..... 2
MAT 2010 ..... 4	(VP) course.....3-4
PHI 1050 (CT) (or exam) <sup>3</sup> ..... 3	STA 1020 or MAT 2210 .....3-4
(CL) or other Gen.Ed..... 3	(AI) course.....3-4
Total: 19	Total: 17-20

1. Students who place out of MAT 1800 should take MAT 2010 in the second semester of their first year, and MAT 2020 in the first semester of their second year.  
 2. Students must declare their major after taking BIO 2200, in order to elect higher-level courses.  
 3. Successful completion of the CT Competency Examination allows students to elect another General Education course in either semester.

### Third Year

BIO 3070..... 4(L)	BIO 3100 ..... 3
BIO 3120..... 4(L)	BIO 3400 ..... 3
PHY 2130/2131 ..... 4	PHY 2140/2141 ..... 4
or 2170/2171 (PS)..... 5	or 2180/2181 ..... 5
MAT 2020 ..... 4	Language I ..... 4
Total: 16-17	Total: 14-15

### Fourth Year

BIO elective I <sup>2</sup> ..... 3	BIO 5993(WI)/5997 ..... 0
BIO elective II ..... 3	BIO 5997 ..... 2
(HS) course..... 3	(SS) course ..... 3
Language II..... 4	BIO elective III ..... 3-4
(SS) course..... 3	Language III ..... 4
(PL) course ..... 3	
Total: 19 ....	Total: 12-13

## —With Specialization in Biophysics

The Bachelor of Science in Biological Sciences with a specialization in biophysics is offered as an alternative Bachelor of Science degree. As with the Bachelor of Science in biological sciences, the biophysics specialization fulfills professional school requirements; the cognates differ from the regular Bachelor of Science.

Students contemplating a specialization in biophysics should consult with the departmental undergraduate adviser at the beginning of the freshman year or when transferring into the department. The major program incorporates all the regular College Group Requirements, including a foreign language. Students are urged to include the departmental core subjects (see above) in the course of study.

**Admission Requirements:** See above, under Bachelor of Arts degree.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete at least 120 credits in course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399 -404, respectively.

**Major Requirements:** Biological Sciences 1500, 1510, 6020, 6160, and an additional eleven credits in biology electives are required. In the senior year, students should enroll in at least one credit in Biological Sciences 5996.

**Cognate Requirements** consist of the following:

1. Mathematics 2010, 2020, 2030, and 2350.
2. Physics 2170/2171 and 2180/2181 and an additional three credits in physics beyond 2180/2181.
3. Chemistry 1220, 1230, 1240, 1250, 2220, 2230, 2280, 2290, 5420 and 5440.
4. Either Computer Science 1050 or 1120.
5. The Writing Intensive (WI) requirement may be satisfied by electing BIO 5993 with BIO 6020.

### Suggested Program

The purpose of the undergraduate biophysics and molecular biology specialty is to encourage students to obtain a broader background in physico-chemical sciences which will prepare them for advanced studies in biophysics and molecular biology as well as other biological sciences. Students are strongly urged to complete the departmental core requirements (see above).

### First Year

Fall Semester	Winter Semester
BIO 1500 ..... 4	BIO 1510 (LS)..... 4
CHM 1220 (PS)..... 4	CHM 1240 ..... 4
CHM 1230 ..... 1	CHM 1250 ..... 1
Language ..... 4	Language..... 4
ENG 1020 (BC)..... 4	ENG elective..... 3
Total: 17	Total: 16

### Second Year

BIO elective ..... 4	MAT 2020 ..... 4
MAT 2010 ..... 4	CHM 2280 ..... 3
CHM 2220 ..... 3	CHM 2290 ..... 2
CHM 2230 ..... 2	Group Requirement ..... 3
Language ..... 4	Group Requirement ..... 4
Total: 17	Total: 16

### Third Year

MAT 2030 ..... 4	MAT 2350 ..... 3
PHY 2170/2171 (PS)..... 5	PHY 2180/2181 ..... 5
BIO 6020 ..... 2 or 4	BIO elective ..... 2
CSC elective ..... 3-4	BIO 6160 ..... 3
Total: 14-17	Group Requirement ..... 3
	Total: 16

### Fourth Year

CHM 5420 ..... 3	CHM 5440 ..... 4
PHY elective ..... 3	BIO 5996 ..... 2
BIO elective ..... 3	Group Requirement ..... 4
BIO 5996 ..... 1	Group Requirement ..... 4
Group Requirement..... 4	Total: 14
Total: 14	

## Bachelor's Degree with Honors in Biological Sciences

The Department participates in the Honors Program and works with individual students to develop a curriculum satisfying the University's goals and requirements as well as fulfilling the expectations of the Department. Students interested in an Honors Degree should contact the departmental advising office and/or the Chairperson of the Undergraduate Curriculum Committee.

### 'AGRADE' Program

The 'AGRADE' Program is designed for outstanding seniors who wish to complete bachelor's and master's degrees in five years of full-time study. This program is described in more detail in the General Information section of this Bulletin. For further details and eligibility requirements regarding the 'AGRADE' Program and Biological Sciences, contact the Department Advising Office, 1109 Biological Sciences Building.

### Minor in Biological Sciences

Completion of the minor in biological sciences requires twenty-two or twenty-three biology course credits including the following: BIO 1500, 1510, 3070, 3120 and one from each of the following two pairs: BIO 2200 or 2600, and BIO 3100 or 3400.

**Combined Degree with Dentistry and Medicine:** Students majoring in biological sciences who are candidates for a combined degree must complete the same requirements listed above for biological sciences majors except that a minimum of sixteen credits are required in biological sciences beyond Biological Sciences 1500 and 1510.

**Over-Age Credits:** A student attempting to complete a biological sciences major after a prolonged interruption of his/her education may find that some of the previous course work in biological sciences is

out of date. In such cases, the record will be reviewed and the department may require the student to fulfill biological sciences course requirements existing at the time of his/her return.

**Transfer Students** should consult with the departmental undergraduate adviser during the semester prior to their transfer.

Transfer students contemplating a combined degree with dentistry or medicine must complete the same requirements listed above for biological science majors except that a minimum of twelve credits are required *in residence* in biological sciences beyond BIO 1500 and 1510.

Determination of course equivalency will be made by the departmental undergraduate adviser in conjunction with the Transfer Credit Evaluation Unit of Undergraduate Admissions (3 East, Helen Newberry Joy Student Services Center). The Department reserves the right for the final determination of course equivalency.

**Advanced Placement** in Biological Sciences may be obtained by earning the following scores in the AP Qualifying Examination:

*Score of 5:* Credit is awarded for BIO 1500 and 1510 (eight credits). Students are eligible to enroll in subsequent courses providing the prerequisites for them have been met.

*Score of 3 or 4:* Credit is awarded for BIO 1510 (four credits). Students with a score of 3 or 4 are eligible to register in BIO 1500.

## UNDERGRADUATE COURSES (BIO)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

*FEES: Most laboratory courses have a non-returnable materials fee and are so indicated in the Schedule of Classes. Breakage fees are not withheld, but students are financially responsible for the repair or replacement of University materials damaged or destroyed in classroom procedures.*

### **1030 (LS) Biology Today. Cr. 3-4 (LCT: 3; OR LCT: 3;DSC: 1)**

Not for biology major credit. Offered for four credits to Honors students only. Challenges to modern society from population growth, new diseases, environmental degradation, urban pollution; medical advances and ethical dilemmas in decoding human genome; impact of biological findings on political and personal decisions; issues considered in context of principles and strategies of modern biological research. (F,W)

### **1050 (LS) An Introduction to Life.**

**Cr. 3-4 (LCT: 3; OR LCT: 3;LAB: 3)**

Meets General Education Laboratory Requirement when elected for 4 credits. For the non-science major and certain pre-professional programs. A factual and conceptual treatment of modern biology at the cell, organismal, and population levels of organization. Material fee as indicated in the Schedule of Classes. (T)

### **1500 Basic Life Diversity. Cr. 4 (LAB: 3;LCT: 3)**

Prereq: high school biology, or BIO 1050. Required of all biological sciences majors. No credit after former BIO 1520. Physiology, ecology, evolution, and systematics, their principles, strategies and outcomes in both structure and function. Material fee as indicated in the Schedule of Classes. (T)

### **1510 (LS) Basic Life Mechanisms. Cr. 3-4 (LAB: 3;LCT: 3)**

Prereq: high school biology or BIO 1050. Only Engineering students may elect for three credits. BIO 1500 and BIO 1510 required of all biology majors. Factual and conceptual treatment of cell molecules, cell structure, metabolism, genetics, and development. For the science major and certain pre-professional programs. Meets General

Education laboratory requirement. Material fee as indicated in the Schedule of Classes. (T)

**2200 (LS) Introductory Microbiology. Cr. 4 (LAB: 4;LCT: 3)**

Prereq: BIO 1500 and 1510; CHE 2800 for chemical engineering students. Bacteria and their basic biology; the relationship of microorganisms to man and other living forms, including their ecological importance and their role in the causation of disease; laboratory exercises paralleling the above principles. Material fee as indicated in the Schedule of Classes. (T)

**2600 Introduction to Cell Biology. Cr. 3**

Prereq: BIO 1500 and 1510. An advanced introduction to the structural and functional biology of the eucaryotic cell. Molecular, biochemical, and functional material learned in other courses reviewed and synthesized as it related to the cell. (W)

**2870 Anatomy and Physiology. Cr. 5 (LAB: 4;LCT: 3)**

Prereq: BIO 1510. Systems, functions, organization of the mammal; emphasis on humans. Detailed study of structure and function of the major systems of the body: skeletal, nervous, muscular, endocrine, circulatory, respiratory, digestive, excretory, and reproductive. Material fee as indicated in the Schedule of Classes. (T)

**2990 MARC Seminar. Cr. 1**

Prereq: consent of instructor. Open only to MARC trainees. Students in Minority Access to Research Careers program meet weekly to present assigned seminars on scientific topics of current interest; assigned readings from journals in the field; written synopsis of the assigned reading and oral presentation required. (F,W)

**3070 Genetics. Cr. 4**

Prereq: BIO 2200. Transmission, nature and action of genetic material in organisms. Laboratory experiments to demonstrate principles of genetics. Material fee as indicated in the Schedule of Classes. (T)

**3100 Cellular Biochemistry. Cr. 3 (LCT: 3)**

Prereq: BIO 2200 or 2600 CHM 1220/1230 and CHM 1240/1250. Biosynthesis and metabolism of proteins, carbohydrates, lipids, steroids, amino acids and nucleic acids. The basic principles of enzyme kinetics in living systems. (T)

**3120 Introduction to Ecology and Evolution. Cr. 4 (LAB: 3;LCT: 3)**

Prereq: BIO 3070; and MAT 2210 or STA 1020. Analysis of the factors affecting the distribution and abundance of plants and animals. Material fee as indicated in the Schedule of Classes. (T)

**3400 Principles of Physiology. Cr. 3 (LCT: 3)**

Prereq: BIO 3100. For any class designated as Web, contact online: (<http://www.classschedule.wayne.edu>). Introduction to physiology at the molecular and cellular levels: bioenergetics, metabolism and regulation, membrane permeability and excitability, motility and contractile elements, photosynthesis. (T)

**3410 Principles of Physiology: Laboratory. Cr. 3 (LAB: 3;LCT: 1;DSC: 1)**

Prereq: BIO 3400. Laboratory exercises demonstrate physiological phenomena at the molecular, cellular and organ levels: nerve and muscle function, osmotic and ionic regulation, respiration and photosynthesis. Material fee as indicated in the Schedule of Classes. (W)

**3990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: written consent of instructor and Departmental undergraduate officer; minimum 3.0 g.p.a. Only four credits may apply toward biology elective. Primarily for biology majors who wish to continue in a field beyond that covered in regular courses; to be taken under direction of Biological Sciences faculty. (T)

**4600 Invertebrate Zoology. Cr. 4**

Prereq: completion of biology core curriculum courses or consent of instructor. Evolutionary history and phylogeny of invertebrata (exclusive of Protista). Laboratory emphasis on systematics and type gen-

era with additional demonstrations of phyletic diversity in form and function. (Y)

**4710 Comparative Vertebrate Morphology and Evolution. Cr. 5 (LAB: 6;LCT: 3)**

Prereq: completion of biology core curriculum or consent of instructor. Vertebrate features of systems in the body used as fundamentals to understanding biological evolution. Philosophies of evolutionary biology, paleontology, and techniques of cladism and phylogenetic reconstruction. Material fee as indicated in the Schedule of Classes. (T)

**4990 Introduction to Research. Cr. 2**

Prereq: consent of instructor. Open only to MARC trainees. Minority Access to Research Careers (MARC) trainees meet daily for four weeks during summer semester for lecture And laboratory. Molecular genetics and physiology; associated laboratory exercises. (S)

**5040 Biometry. Cr. 4 (LCT: 3;LAB: 3)**

Prereq: BIO 3070 or 3120; MAT 1800. Quantitative methods in biology. Statistical approach to data analysis and the design of experiments. Laboratory section permits actual analysis of selected statistical problems. (B)

**5060 Special Topics. Cr. 1-6 (Max. 6)**

Prereq: BIO 1500 or consent of instructor. Formalized treatment of the current state of knowledge in a significant area of biology. Topics to be announced in Schedule of Classes. (Y)

**5180 Field Investigations in Biological Sciences. Cr. 2-12 (Max. 20) (FLD: 6)**

Prereq: 12 credits in biology, consent of instructor. Field studies of one to fifteen weeks, emphasizing biological principles and techniques demonstrated in the field. (S)

**5330 Recombinant DNA I. Cr. 3**

Prereq: written consent of instructor. Review of origins of molecular biotechnology and its characteristic technologies; survey of applications of biotechnology to problems in industries. (F)

**5480 Plant Pathology. (BIO 7480) Cr. 3**

Prereq: BIO 1500 or 1520, and 2200. Principles of plant infection, structure and life cycle of plant pathogens, defense mechanisms, spread and control of plant disease. (B)

**5550 Systematic Botany. Cr. 3 (LAB: 3;LCT: 2)**

Prereq: BIO 1500 or 1520. Principles and methods of taxonomy and identification of native vascular plants. Material fee as indicated in the Schedule of Classes. (I)

**5610 Vertebrate Embryology. Cr. 4 (LAB: 4;LCT: 3)**

Prereq: BIO 2870 or 3400. Gametogenesis and fertilization; descriptive and analytical embryology of the sea urchin and amphibians; reproductive physiology and descriptive embryology of birds and mammals including humans. Laboratory studies of gametogenesis and development of sea urchin. Material fee as indicated in the Schedule of Classes. (Y)

**5620 Developmental Biology. Cr. 3 (LCT: 3)**

Prereq: BIO 3070. 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. (B)

**5630 Histology. Cr. 4 (LAB: 4;LCT: 3)**

Prereq: BIO 2870 or 3400. Characteristics and identification of normal mammalian tissues. Micro-anatomy of the mammal. Functional interpretation of microstructure and fine structure. Material fee as indicated in the Schedule of Classes. (F)

**5640 Cancer Biology I. Cr. 3 (LCT: 3)**

Prereq: BIO 2200 or 3400; PHY 2140; CHM 2260 or consent of instructor. Introduction to integrated analysis of cancer and cell biology, pathology, etiology and therapy. (F)

**5680 (PSL 5680) Basic Endocrinology. Cr. 3**

Prereq: PSL 3220 or BIO 3400 or equiv., or coreq: PSL 7010. 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)

**5690 Animal Behavior. Cr. 3 (LCT: 3)**

Prereq: 16 credits in biology. Function, biological significance, causation, and evolution of species-typical behaviors which are part of the animal's behavioral repertoire under natural conditions. (I)

**5700 Natural History of Vertebrates. Cr. 3 (LAB: 3;LCT: 2)**

Prereq: 16 credits in biology. Life histories, survival and evolutionary strategies, laboratory and field identification, including study techniques of vertebrates; Michigan wildlife. Field trips. Material fee as indicated in the Schedule of Classes. (I)

**5720 Ornithology. Cr. 3 (LAB: 3;LCT: 2)**

Prereq: BIO 1500 or 1520. Morphology, systematics, ecology, evolution, physiology and behavior of birds. Field trips. Material fee as indicated in the Schedule of Classes. (I)

**5730 Mammalogy. Cr. 4 (LCT: 2;LAB: 6)**

Prereq: 16 credits in biology. Systematics, geographical distribution, ecology, adaptive radiation, patterns of growth and reproduction, physiology. Field trips. Material fee as indicated in the Schedule of Classes. (B)

**5740 Entomology. Cr. 4 (LAB: 6;LCT: 2)**

Prereq: BIO 1500 or 1520. The systematics, classification, and functional morphology of insects; methods of collection and study of insect specimens. Material fee as indicated in the Schedule of Classes. (I)

**5750 Biology of Aging. (BIO 7750) Cr. 3 (LCT: 3)**

Prereq: BIO 3070 or consent of instructor. Aging and senescence viewed as fundamental biological processes common to most organisms. Empirically-based discussion of investigative methods and accepted facts regarding aging, coupled with critical discussion of behavioral and biological interventions believed to retard or reverse the aging process; critical analysis of theoretical interpretations of this data. (B)

**5993 (WI) Writing Intensive Course in Biological Sciences. Cr. 0**

Prereq: senior standing; satisfactory completion of English Proficiency Examination; consent of department; coreq: BIO 5997 or 6997. 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 Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Students required to write three short papers (3-5 pp.) and one long paper (15-20 pp., not including bibliography) in addition to other writing requirements in each course. (T)

**5996 Senior Research. Cr. 1-2 (Max. 3)**

Prereq: written consent of instructor and biology adviser; minimum 3.0 g.p.a. Original research. To be taken under direction of Biological Sciences faculty. (T)

**5997 Senior Seminar. Cr. 2 (SMR: 1)**

Prereq: senior standing in biological sciences; completion of biology core courses; consent of instructor. Must be taken in semester student is graduating. Aspects of current biological research. (F,W)

**6000 Molecular Cell Biology I. Cr. 3 (LCT: 3)**

Prereq: BIO 2600; PHY 2140; CHM 2260. Analysis of cell structure at the molecular and cellular levels and the physiological consequences of these structures: isolation, physico-chemical properties, and biological attributes of cells, organelles, and biopolymers including nucleic acids, proteins, and lipids. (F)

**6010 Molecular Cell Biology II. Cr. 3 (LCT: 3)**

Prereq: BIO 6000. 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. 2-4 (LCT: 2; or LAB: 6;LCT: 2)**

Prereq: one year of chemistry and biology. Theory and application of instruments and procedures used in biological materials analysis. Topics include: error analysis, basic electronics, solutions and buffers spectroscopy, separation techniques, elemental analyses, laboratory application of computers. Material fee as indicated in the Schedule of Classes. (F)

**6030 Physiological Genetics of Modern Disease. (BIO 7030) Cr. 3 (LCT: 3)**

Prereq: BIO 3070. Physical and chemical properties of the genetic material; the fundamental mechanisms concerned with its replication, function, mutation, recombination and regulation; molecular basis of evolution. A critical presentation of interdisciplinary subjects of biology, biochemistry and biophysics in relation to recent advances in genetic engineering. (Y)

**6060 Molecular Evolution. Cr. 3 (LCT: 3)**

Prereq: BIO 3070 and 3090 or 3120. 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 (LCT: 3)**

Prereq: BIO 3070. Mechanisms of human inheritance in individuals, families and populations. Sampling methods and data procurement. Statistical analysis of gene frequencies; cytogenetics and biochemical determinations of phenotypes. (B)

**6080 Microbial and Cellular Genetics. (BIO 7080) Cr. 4 (LCT: 4)**

Prereq: BIO 3070 or equiv. Principles and current progress in genetics at the molecular and cellular levels. Emphasis on those features of microorganisms and cultured animal and human cells appropriate for the study of the fundamental mechanisms concerning recombination, replication, metabolic functioning. (Y)

**6090 Evolutionary Genetics. Cr. 3 (LAB: 3;LCT: 2)**

Prereq: BIO 3070 and 3090 or 3120. Theoretical bases for microevolutionary change in natural populations of organisms; basic to study of evolutionary genetics and evolutionary ecology. (B)

**6120 Molecular Cell Biology Laboratory II. Cr. 3 (LCT: 1;LAB: 6)**

Prereq: BIO 6010 or written consent of instructor. Laboratory exercises illustrate methods and concepts of molecular biology and recombinant DNA analysis. Material fee as indicated in the Schedule of Classes. (Y)

**6160 Molecular and Cellular Biophysics. Cr. 3 (LCT: 3)**

Prereq: one year of biology, chemistry and physics. Analysis of the biologically important aspects of thermodynamics, chemical bonding, macromolecular structure, biomembranes and transport processes. (W)

**6180 Membrane Biology. Cr. 3 (LCT: 3)**

Prereq: one year of biology and chemistry; BIO 2200 or 3400; 6000 or 6160 recommended. Comprehensive analysis of cellular and model membranes integrating molecular structure and physiological properties. Structural, dynamic, and physiological properties exam-

ined, including molecular and macromolecular assemblies, physical and chemical analysis of molecular motion, functional aspects including trans-membrane signalling. (Y)

**6210 Ecology/Evolution. Cr. 4**

Open only to middle- or high school teachers. Prereq: teaching certificate; mathematics through algebra. Ecological principles such as energy and nutrient flow demographics and populations; population genetics; genetics and phylogeny. (W)

**6220 Biology of the Cell. Cr. 4**

Open only to middle- or high school teachers. Prereq: teaching certificate. Prokaryotic and eukaryotic cell structure and function; basic biology and recent advances. (W)

**6230 Genetics. Cr. 4**

Open only to middle- or high school teachers. Prereq: teaching certificate; mathematics through algebra. Introductory prokaryotic and eukaryotic gene structures and functions of mechanisms of inheritance. (S)

**6250 Biology Instruction for Teachers.  
Cr. 2 (Max. 10) (LCT: 2)**

Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Discussion of basic biological principles in light of recent advances. (Y)

**6260 Laboratory Biology for Teachers. Cr. 1 (Max. 5) (LAB: 1)**

Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Laboratory component of BIO 6250; basic laboratory techniques in light of recent advances in the biological sciences. (Y)

**6330 Recombinant DNA II. Cr. 3**

Prereq: BIO 5330 or written consent of instructor. 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)

**6450 Aquatic Botany. Cr. 4 (LCT: 3;LAB: 3)**

Prereq: BIO 3120. Systematics, physiology and ecology of algae and higher aquatic plants. Material fee as indicated in the Schedule of Classes. (I)

**6620 Advanced Evolution. Cr. 3**

Prereq: BIO 3120 or 3090 or equiv. Continuation of BIO 31200; 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. (Y)

**6640 Advanced Ecology. Cr. 3 (LCT: 3)**

Prereq: BIO 3120. Discussion and analysis of recent topics in ecological theory. (I)

**6670 Comparative Marine Animal Physiology and  
Biochemistry. (BIO 7670) Cr. 5 (LCT: 2;LAB: 9)**

Prereq: written consent of instructor obtained in semester prior to registration; introductory biology and organic chemistry recommended. Intensified two-week program at a marine biological station. In-depth study of comparative physiology and biochemistry of marine animals. Daily field collecting, laboratory sessions and evening lectures. Individualized research projects; presentation at concluding symposium. (Y)

**6690 Neurobiology I. Cr. 3 (LCT: 3)**

Prereq: BIO 3400 and 3100. 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. (F)

**6800 (HWM 6800) Principles of Ecosystem Management.  
Cr. 2**

Prereq: BIO 2200. Fundamentals and concepts of ecosystem management: ecological, legal, economic, sociological, and institutional factors, management tools, and practical considerations. (Y)

**6840 (PHC 6340) Chemical Basis of Pharmacology.  
(CHM 6340) Cr. 3 (LCT: 3)**

Prereq: CHM 2260 and BIO 1510 or equiv. Not applicable for biological sciences major credit. Mechanisms of action and metabolism of commonly-used drugs and toxic substances from the cellular level to whole biological systems. (Y)

**6990 Honors Directed Study in Biology. Cr. 1-2**

Prereq: written consent of instructor and department honors adviser in semester preceding election of course. Open only to junior or senior biology majors. To be taken under direction of Biological Sciences faculty. (T)

**6994 Technical Communication in Molecular Biotechnology.  
Cr. 1-6**

Prereq: admission to molecular biotechnology program or consent of instructor. Methods of written and oral communication in the biotechnology field. (W)

**6997 Senior Seminar: Honors Program. Cr. 2 (SMR: 2)**

Prereq: completion of core courses and a minimum of two credits in BIO 6990. Open only to Honors students in biology. (F,W)

**6999 Terminal Essay: Honors Program. Cr. 2**

Prereq: consent of department and Honors adviser; senior standing and BIO 6990. Preparation of a terminal essay, satisfactory completion of which assures Honors graduation, providing performance in preceding Honors courses has been at Honors level; to be taken under direction of Biological Sciences faculty. (T)

# CHEMISTRY

Office: 221 Chemistry Building; 577-2559

Web: <http://www.chem.wayne.edu>

Chairperson: Carl R. Johnson

Associate Chairpersons: David M. Coleman, Louis J. Romano

Academic Services Officer: Sharon Kelley

## Professors

Ashok S. Bhagwat, Alan Brenner, Darrell D. Ebbing (Emeritus), John F. Endicott, Karl H. Gayer (Emeritus), Richard B. Hahn (Emeritus), William L. Hase, Carl R. Johnson, Tokuji Kimura (Emeritus), Stanley Kirschner (Emeritus), Norman A. LeBel (Emeritus), Robert Levis, Richard L. Lintvedt, W. Martin McClain, Shahriar Mobashery, Martin E. Newcomb, Jr., John P. Oliver, John D. Petersen, Colin F. Poole, Morton Raban, Gene P. Reck (Emeritus), James H. Rigby, Louis J. Romano, David B. Rorabacher, A. Paul Schaap, George H. Schenk (Emeritus), H. Bernhard Schlegel, Calvin L. Stevens (Emeritus), Charles H. Winter

## Associate Professors

Christine S. Chow, David M. Coleman, Gang-yu Liu, John Montgomery, John SantaLucia, Ronald R. Schroeder, P. George Wang

## Assistant Professors

Theodore Goodson III, Maarten H.D. Postema, Mary T. Rodgers, Mark R. Spaller

## Senior Lecturers

Michael Maguire, Regina Zibuck

## Adjunct Professors

Roscoe Carter III, Kenneth V. Honn, Erhard W. Rothe

## Adjunct Associate Professors

Philip R. Cunningham, Evelyn M. Goldfield, Stephen A. Munk

## Degree Programs

*BACHELOR OF ARTS with a major in Chemistry*

*BACHELOR OF SCIENCE in Chemistry*

*BACHELOR OF SCIENCE in Chemistry with concentration in Biochemistry*

*\*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*

The courses offered by this department are designed to serve the needs of three distinct groups of students: (a) those majoring in chemistry with the intention of entering the chemical profession, (b) those majoring in chemistry with the intention of entering other professional fields, and (c) those majoring in other subjects who desire to elect chemistry courses as part of their programs. Students intending to major in chemistry should refer to the bachelor's degree programs below.

Students with no prior experience in chemistry may elect Chemistry 1000 (for non-science majors); Chemistry 1020 (for non-science majors and certain pre-professional students); or Chemistry 1040, which is intended for students who need higher-level chemistry work but who fail to qualify for Chemistry 1220 or 1225 or whose math/science skills are weak. Students who have had a year or more of high school chemistry or the equivalent may register for Chemistry 1220 (or 1225) or 1410 (for science and preprofessional majors) provided that they meet the other eligibility requirements outlined below. Election of any one of these courses will satisfy the University General Education Requirement for a physical science.

**Terminal Chemistry Courses:** Chemistry 1000 is a terminal survey course designed primarily to acquaint non-science students with the principles of chemistry in a format requiring minimal mathematical skills. When elected for four credits, this course includes a laboratory which satisfies the University General Education Requirement for a laboratory course.

Chemistry 1020 and 1030 represent a terminal sequence designed to introduce the basic principles of chemistry and survey the various fields of chemistry for non-science majors and certain pre-professional students such as pre-nursing, occupational health, engineering technicians and others.

**Foundational Chemistry:** Chemistry 1040 is designed as the beginning chemistry course for science majors, pre-professional students, and other students who have had little prior experience in chemistry and/or mathematics. Chemistry 1220 (or 1225) and 1230 are complementary and corequisite courses which should be taken during the same term. Chemistry 1220 is a classroom-focused course which includes only lecture and related quiz/discussion sessions. Chemistry 1230 is a laboratory-focused course which includes laboratory and related lecture sessions. This also describes the succeeding corequisite sets Chemistry 1240 and 1250, Chemistry 2220 and 2230 (or 2235), and Chemistry 2280 and 2290.

**General Chemistry:** Chemistry 1220/1230 are designed as the beginning courses for science majors and pre-professional students who have a good background in high school chemistry. (Chemistry 1225/1230 is the sequence for students in the College of Engineering.) Eligibility for Chemistry 1220/1230 must be established by passing a qualifying examination, covering basic high school material, which is administered by Testing and Evaluation, 698 Student Center Building. The qualifying examination is administered several times prior to and during registration.

Chemistry 1410 is the highest level beginning course in chemistry and usually is elected by chemistry majors or by students who have a strong background in high school chemistry and plan to take at least one year of college chemistry. To qualify for Chemistry 1410, a student must receive a superior score on the Chemistry 1220 Placement Examination, or receive a score of 3 or better on the National Advanced Placement Exam in Chemistry (see below), or show other evidence of superior academic potential (receipt of Wayne State Scholarship, admission to the Honors Program, etc.). The two-course sequence Chemistry 1410 and 1420 is equivalent to Chemistry 1220/1230, Chemistry 1240/1250, and Chemistry 2220/2230.

The sequence of Chemistry 1220/1230 and 1240/1250, or 1410 and 1420, are prerequisite to all higher numbered courses in chemistry.

**Credit for Advanced Placement:** Advanced placement college credit in chemistry shall be awarded for scores earned in the chemistry qualifying examination as follows:

**Score of 4 or 5:** Credit awarded for Chemistry 1220/1230 and 2280 (eight credits); student is eligible to enroll in Chemistry 1240 or 1420.

**Score of 3:** Credit awarded for Chemistry 1220/1230 (five credits); student is eligible to enroll in either Chemistry 1240 or 1410.

\* For requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Arts with a Major in Chemistry

This curriculum allows students to major with a maximum of forty-six credits in chemistry while providing flexibility for exposure in other cognate fields. This degree is appropriate for students in science-oriented pre-professional programs such as medicine and dentistry, as well as for students entering secondary science teaching. For individuals interested in entering a graduate program in chemistry or pursuing a position in the chemical industry upon graduation, it is recommended that the additional requirements for professional certification by the American Chemical Society (outlined below) be completed.

Those interested in Phi Beta Kappa should consult with the secretary of the Wayne State University Chapter in order to determine the maximum amount of credits allowed in the major, as well as other general requirements.

**Admission requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; page 15. Students planning to major in chemistry should consult with an adviser in the Chemistry Department not later than the beginning of their sophomore year.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Arts degree must complete 120 credits in course work. This must include satisfying the University General Education Requirements (see page 29) and the College Group Requirements (see page 399), as well as the major requirements cited below. All course work must be completed in accordance with the academic procedures of the University and the College; see pages 15-46 and 399-404, respectively.

**Major Requirements:** Those who wish to follow the general curriculum in the College of Science for the B.A. degree with a major in chemistry must complete the following courses:

1. Chemistry 1220/1230, 1240/1250, 2220/2230, 2280/2290, 3020, 5400 (or 5420 or 5440), 5550, 5600, and at least one of the following: 5160, 5440, 5510, 6040, 6240, 6440, 6620 or 6640. A minimum of fifteen credits in chemistry must be earned at Wayne State University. Qualified students may substitute 1410 and 1420 for 1220/1230, 1240/1250, 2220/2230.
2. Physics 2170/2171 and 2180/2181.
3. Mathematics 2010, 2020 and 2030.
4. Language requirement: three semesters of any language (German, French, or Russian preferred).

**ACS Certification:** B.A. candidates may receive certification by the American Chemical Society upon graduation by completing Mathematics 2150 and 2250 or 2350, as well as the following chemistry courses in addition to those required for the B.A. degree: Chemistry 5420 and 5440 (rather than 5400), 5160, and two additional advanced laboratory courses (5510, 5570, 5999).

To receive certification, students must submit an application along with a transcript to the Chemistry Department Curriculum Committee prior to the end of the final term.

### *Recommended Program*

*Note:* Further changes in the chemistry curriculum are anticipated and may affect the courses included in the degree programs outlined in this Bulletin. Interested students should consult a chemistry undergraduate adviser for current requirements.

### First Year

<i>Fall Semester</i>	<i>Winter Semester</i>
UGE 1000 (GE) ..... 1	CHM 1240/1250 (or 1420) ..... 5
CHM 1220/1230 (or 1310) .... 5	English (2000 level)..... 3
English 1020 (BC)..... 4	Mathematics 2020..... 4
Mathematics 2010 ..... 4	Group Requirement..... 4
Group Requirement ..... 3	Total: 16
Total: 17	

### Second Year

CHM 2220/2230..... 5	CHM 2280/2290 ..... 5
Physics 2170/2171 ..... 5	Physics 2180/2181..... 5
Mathematics 2030 ..... 4	Group Requirement..... 3
Group Requirement ..... 3	Elective..... 3
Total: 17	Total: 16

### Third Year

CHM 5600..... 3	CHM 3020..... 3
Language I..... 4	CHM 5400 (or 5420 or 5440) 3-4
Group Requirements ..... 7	Group Requirement..... 4
Total: 14	Language II ..... 4
	Total: 14-15

### Fourth Year

CHM Elective (or 5550) ..... 2-4	CHM 5550 (WI) (or CHM elect.). 2-4
Language III..... 4	Electives..... 9
Electives ..... 8	Total: 11-13
Total: 14-16	

## — With Honors in Chemistry

1. All B.A. requirements in chemistry must be fulfilled including a full year of physical chemistry (CHM 5420 and 5440) plus one additional elective (CHM 5160, 5510, 6620, or 6640).
2. Minimum g.p.a.: 3.3 overall; 3.3 in chemistry courses.
3. Minimum of four credits in independent research (Chemistry 2999 or 5999). Research should commence in the junior year (or earlier).
4. Completion of one semester of an Honors Program 4200-level seminar (consult the Schedule of Classes under 'Honors Program'). This course may be used in partial fulfillment of college Group Requirements and can be elected in either the junior or senior year.
5. At least fifteen credits in honors-designated course work, including at least four credits in Chemistry 2999 and 5998; the recommended chemistry honors courses; the Honors Program HON 4200-level seminar; and honors credits in other departments or from the Honors Program.
6. Submission of a B.A. thesis or of a manuscript suitable for publication in a refereed chemical journal (covering the undergraduate research project) to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis (or manuscript).
7. An oral examination covering the B.A. Honors Research Project, by the Honors Subcommittee in Chemistry.
8. Chemistry 1410 and 1420 are strongly recommended for students intending to earn an Honors degree in Chemistry.

## Bachelor of Science in Chemistry

This degree offers a strong background for students interested in a career in chemistry or in a professional field with a strong reliance on chemistry. It is particularly recommended for students planning to do graduate work in chemistry and chemically-related fields. The degree is offered with two options: 1) Bachelor of Science in Chemistry, and 2) Bachelor of Science in Chemistry with a concentration in biochemistry. The first option is designed primarily for those planning to enter the chemical profession and other professional fields. The second



option is designed primarily for students planning careers in biochemical and biomedical areas. Students may take a maximum of forty-six credits in chemistry. (Note: Those interested in Phi Beta Kappa should consult with the secretary of the Wayne State University Chapter in order to determine the maximum number of chemistry credits allowed.)

**Admission requirements** are satisfied by the general requirements for undergraduate admission to the University; see page 15. Students planning to major in chemistry should consult with an adviser in the Chemistry Department not later than the beginning of their sophomore year.

**DEGREE REQUIREMENTS:** Candidates for the Bachelor of Science in Chemistry degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29) and the College Group Requirements (see page 399), as well as the major requirements cited below. All course work must be completed in accordance with the academic procedures of the University and the College; see pages 15-46 and 399-404, respectively.

**Major Requirements for Option One:** Those who wish to follow the curriculum in the College for the B.S. in Chemistry degree must complete the following courses:

1. Chemistry 1220/1230, 1240/1250, 2220/2230, 2280/2290, 3020, 5020, 5160, 5420, 5440, 5510, 5550, 5600, 5570 and any one of the following: 6040, 6240, 6440, 6620 or 6640. By the first semester of the senior year, the student must enroll for at least two credits in Senior Research in Chemistry (CHM 5999 or 5998). The student must work under the direction of a faculty member of the Department of Chemistry. It is advised that the student consult with the faculty during the term prior to beginning work, in order to choose the area and staff member under whose direction this research will be carried out. At the conclusion of the project, the student must present a written report for approval by the Chairperson of the Department.
2. Physics 2170/2171 and 2180/2181.
3. Mathematics 2010, 2020, 2030, and 2150 (or 2250 or 2350).
4. Language requirement: three semesters of any language (German, French, or Russian are preferred).

At least fifteen credits in chemistry plus Senior Research (Chemistry 5999) must be earned at Wayne State University. Superior students may substitute 1410 and 1420 for 1220/1230, 1240/1250, and 2220/2230. Reducing the number of required hours in chemistry will permit such students to elect chemical research (Chemistry 2999) as early as the summer following the freshman year.

#### Recommended Program

*Note:* Further changes in the chemistry curriculum are anticipated and may affect the courses included in the degree programs outlined in this Bulletin. Interested students should consult a chemistry undergraduate adviser for current requirements.

#### First Year

Fall Semester	Winter Semester
UGE 1000 (GE)..... 1	CHM 1240/1250 (or 1420)..... 5
CHM 1220/1230 (or 1410) 5-6	English (2000 level)..... 3
English 1020 (BC)..... 4	Mathematics 2020 ..... 4
Mathematics 2010..... 4	Group Requirement..... 3
Group Requirement..... 3	Total: 15
Total: 17-18	

#### Second Year

CHM 2220/2230..... 5	CHM 2280/2290 ..... 5
CHM 3020..... 3	CHM 5600 ..... 3
Mathematics 2030 ..... 4	Physics 2180/2181..... 5
Physics 2170/2171 ..... 5	Group Requirement..... 3
Total: 17	Total: 16

#### Third Year

CHM 5420..... 3	CHM 5440 ..... 4
CHM 5510..... 2	CHM 5550 ..... 2
MAT 2150 (or 2250 or 2350) 3-4	Language II ..... 4
Language I..... 4	Group Requirement..... 4
Group Requirement ..... 3	Total: 14
Total: 15-16	

#### Fourth Year

CHM 5020..... 3	Advanced CHM Course <sup>1</sup> ..... 3
CHM 5999 (or 5998)..... 2-4	CHM 5570..... 2
Language III..... 4	Group Requirements..... 9
CHM 5160..... 3	Total: 14
Total: 12-14	

**Substitutions in B.S. in Chemistry Curriculum (Option One only):** In recognition of the diverse backgrounds required for various careers in chemistry, students may petition the Chemistry Curriculum Committee for approval to substitute advanced courses numbered 5000 or above from another discipline (such as physics, mathematics, biology, engineering) for the following B.S. requirements: (1) Mathematics 2150 (or 2250 or 2350); (2) Chemistry 5510 and 5570; (3) Chemistry elective. Such petitions for substitutions must be submitted in writing accompanied by a detailed statement of justification and a current transcript, and must be approved prior to registration in the alternative courses. Decisions regarding approval of such requests will be based on their legitimacy in terms of the student's professional goals. It is suggested that students consult the Chairperson of the Chemistry Curriculum Committee before filing such a petition.

**Major Requirements for Option Two (Biochemistry):** Those who wish to follow the curriculum for the B.S. in Chemistry with a concentration in biochemistry must complete the following courses (NO substitutions are allowed in the Option Two program: B.S. in Chemistry with a concentration in biochemistry):

1. Chemistry 1220/1230, 1240/1250, 2220/2230, 2280/2290, 3020, 5160, 5400, 5550, 5570, 6600, 6610, 6620 or 6640. In addition, students must enroll in *one* of the following: Chemistry 5510, Mathematics 2150, 2250, or 2350. By the first semester of the senior year, the student must enroll for at least two credits in Senior Research in Chemistry (CHM 5999 or 5998). The student must work under the direction of a faculty member of the Department of Chemistry. It is advised that the student consult with the faculty during the term prior to beginning work, in order to choose the area and staff member under whose direction this research will be carried out. At the conclusion of the project, the student must present a written report for approval by the Chairperson of the Department.
2. Physics 2170/2171 and 2180/2181.
3. Biology 1510, 2200, and 3070 or 6000.
4. Mathematics 2010, 2020, and 2030.
5. Language requirement: three semesters of any language (German, French, or Russian are preferred).

At least fifteen credits in chemistry plus Senior Research (Chemistry 5999) must be earned at Wayne State University. Superior students may substitute 1410 and 1420 for 1220/1230, 1240/1250, and 2220/

1. May be taken in the fall semester.

2230. Reducing the number of required hours in chemistry will permit such students to elect chemical research (Chemistry 2999) as early as the summer following the freshman year.

### Recommended Program

Note: Further changes in the chemistry curriculum are anticipated and may affect the courses included in the degree programs outlined in this Bulletin. Interested students should consult a chemistry undergraduate adviser for current requirements.

First Year	
Fall Semester	Winter Semester
UGE 1000 (GE)..... 1	CHM 1240/1250 (or 1420)..... 5
CHM 1220/1230 (or 1410) 5-6	English (2000 level)..... 3
English 1020 or 1050 (BC)... 4	Mathematics 2020 ..... 4
Mathematics 2010..... 4	Biology 1510..... 4
Group Requirement..... 3	Total: 16
Total: 17-18	

Second Year	
CHM 2220/2230 ..... 5	CHM 2280/2290 ..... 5
Group Requirement..... 3	CHM 3020 ..... 3
Mathematics 2030 ..... 4	PHY 2180/2181 ..... 5
Physics 2170/2171 ..... 5	Biology 2200..... 4
Total: 17	Total: 17

Third Year	
CHM 6600 ..... 3	CHM 5400 ..... 4
Biology 5070 or 6000 ..... 3-4	CHM 5550 ..... 2
Group Requirements ..... 6	CHM or MAT option ..... 2-4
Language I ..... 4	Language II..... 4
Total: 16-17	Group Requirement ..... 3
	Total: 15-17

Fourth Year	
CHM 5160 ..... 3	CHM 6640 ..... 3
CHM 5999 (or 5998) ..... 2	CHM 6610 ..... 3
Language III ..... 4	CHM 5998 or 5999 (optional) .(2)
Group Requirements ..... 6	Group Requirements ..... 3
Total: 15	CHM 5570 ..... 3
	Total: 12-14

### — With Honors in Chemistry

1. All regular requirements for the Bachelor of Science in Chemistry degree must be fulfilled (no substitutions).
2. Minimum g.p.a.: 3.3 overall; 3.3 in chemistry courses.
3. Minimum of four credits must be earned in independent research (Chemistry 2999, 5998); this should commence in the junior year (or earlier).
4. Completion of one semester of an Honors Program HON 4200-level seminar (consult the Schedule of Classes under 'Honors Program'). This course may be used to partially fulfill college Group Requirements and can be elected in either the junior or senior year.
5. Submission of a B.S. thesis (covering the undergraduate independent research project), or of a manuscript suitable for publication in a refereed chemical journal, to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis (or manuscript).
6. An oral examination covering the B.S. Honors Research Project, by the Honors Subcommittee in Chemistry.
7. Chemistry 1410 and 1420 are strongly recommended for students intending to obtain an honors degree.

### Minor in Chemistry

Students majoring in other fields who desire to obtain a minor in chemistry must complete the following courses: Chemistry 1220/

1230, 1240/1250, 2220/2230, 2280/2290, and at least nine additional credits earned at Wayne State University in Chemistry courses numbered 3000 or above, excluding seminar and research courses (CHM 2999, 4850, 5999, etc.). Typically, the latter nine credits could be satisfied by electing some combination of: Chemistry 3020, 5020, 5160, 5400, 5420, 5440, 5600, 6440, or 6620. Superior students may substitute Chemistry 1410 and 1420 for Chemistry 1220/1230, 1240/1250, and 2220/2230.

### Financial Aid

Also see Office of Scholarships and Financial Aid, page 20.

**James C. French Endowed Undergraduate Chemistry Scholarship:** Award open to any undergraduate chemistry major enrolled for at least eight credits. Selection is based primarily on scholastic achievement and secondarily on basis of financial need. Award is to be used for educational expenses, including tuition, books, fees. Application deadline is April 3; contact the Chemistry Department, 221 Chemistry Building.

**Jane and Frank Warchol Foundation Scholarship:** Award open to full-time or part-time undergraduate or graduate students majoring in chemistry. Selection is based on scholastic achievement as well as on the basis of financial need. Applicants of Polish descent and applicants expressing strong entrepreneurial goals will be favored in the award process. Application deadline is April 3; contact the Chemistry Department, 221 Chemistry Building.

**George H. Wheatley Scholarship:** Award open to full-time undergraduate or graduate students majoring in chemistry with a minimum 3.0 g.p.a. Application deadline is April 3; contact the Chemistry Department, 221 Chemistry Building.

### UNDERGRADUATE COURSES (CHM)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

NOTE: A minimum grade of 'C' is required in every prerequisite course.

FEES: Most laboratory courses have a non-refundable materials fee and are so indicated in the Schedule of Classes. The unused portion of breakage fees is refundable; students are financially responsible only for the repair or replacement of University materials lost, damaged, or destroyed in classroom procedures.

#### 1000 (PS) Chemistry and Your World. Cr. 3-4 (LCT: 3;LAB: 3)

Meets General Education Laboratory Requirement when elected for 4 credits. Facts and theories from analytical, inorganic, organic, and physical chemistry, and from biochemistry; their consequences in life processes and the environment. Material fee as indicated in the Schedule of Classes. Breakage fee as indicated in the Schedule of Classes. (F,W)

#### 1020 (PS) General Chemistry I. Cr. 4 (LCT: 3;QUZ: 1;LAB: 3)

Prereq: intermediate high school algebra recommended. Meets General Education Laboratory Requirement. High school chemistry not required. First course in the terminal sequence consisting of CHM 1020 and CHM 1030. Matter and energy in chemistry, chemical symbols and equations, structure and properties of atoms, introduction to chemical bonding; periodicity in chemistry, solids, liquids, gases, solutions, acids and bases, and equilibrium. Material fee as indicated in the Schedule of Classes. Breakage fee as indicated in the Schedule of Classes. (F,W)

**1030 General Chemistry II. Cr. 4 (LCT: 3;QUZ: 1;LAB: 3)**

Prereq: CHM 1020. Organic and biological chemistry; brief introduction to organic chemistry, emphasizing classes of compounds important in biochemical processes; survey of biochemistry with applications to nutrition, physiology, and clinical chemistry; protein structure; intermediary metabolism; molecular biology; and metabolic regulation. Material fee as indicated in the Schedule of Classes. Breakage fee as indicated in the Schedule of Classes. (F,W)

**1040 Chemistry Skills and Reasoning. Cr. 2**

Prereq: placement by examination. No credit after any other chemistry course. Reasoning and mathematical skills needed for development of a scientific approach in chemistry. (T)

**1220 (PS) Chemical Structure, Bonding and Reactivity. Cr. 4**

Prereq: passing score on chemistry placement exam; placement beyond MAT 0995; coreq: CHM 1230. Satisfies General Education laboratory requirement only when taken concurrently with CHM 1230. Introduction to the principles of chemistry for students with high school background in chemistry. (T)

**1225 (PS) Chemical Structure, Bonding and Reactivity. Cr. 3**

Prereq: passing score on chemistry placement exam; placement beyond MAT 0995; coreq: CHM 1230. Open only to students in College of Engineering. Satisfies General Education laboratory requirement only when taken concurrently with CHM 1230. Introduction to principles of chemistry for students with high school background in chemistry. (T)

**1230 Chemical Principles in the Laboratory. Cr. 1**

Prereq: passing score on chemistry placement exam; placement beyond MAT 0995. Satisfies General Education laboratory requirement only when taken concurrently with CHM 1220 or CHM 1225. Laboratory course to introduce the scientific method, properties of materials, the role of energy, structure and spectroscopy. Material fee as indicated in the Schedule of Classes. (T)

**1240 Principles of General/Organic Chemistry. Cr. 4**

Prereq: CHM 1220 and 1230 or equiv.; coreq: CHM 1250. Introductory organic chemistry combined with the general principles of chemistry. Carbon compounds and chemical bonding, acid-based chemistry, stereochemistry and introductory organic reactions. (T)

**1250 General/Organic Chemistry Laboratory. Cr. 1**

Prereq: CHM 1230 or equiv.; coreq: CHM 1240. Integrated general/organic chemistry laboratory focusing on spectroscopy, acid-based chemistry, molecular modeling and organic reactions as well as some attention to chromatography. Material fee as indicated in the Schedule of Classes. (T)

**1410 (PS) Chemical Principles I: General/Organic Chemistry. Cr. 6**

Prereq: two years of high school chemistry; or advanced placement in chemistry with a score of 3, 4, or 5; or Presidential Scholar status; or outstanding performance on Chemistry Placement Exam; or consent of instructor. Meets General Education laboratory requirement. Accelerated approach to blended general/organic chemistry. Material fee as indicated in the Schedule of Classes. (F)

**1420 Chemical Principles II: Organic Chemistry. Cr. 6**

Prereq: CHM 1410 or equiv. Accelerated approach to organic/bio-organic chemistry. Material fee as indicated in the Schedule of Classes. (W)

**2220 Organic Chemistry. Cr. 3**

Prereq: CHM 1240 and 1250 or equiv.; coreq: CHM 2230. Organic reactions of functional groups such as aldehydes, ketones and related carbonyl compounds. Extensive discussion of the interface of organic/biochemistry and bioinorganic chemistry. (T)

**2230 Preparative Organic Chemistry Laboratory. Cr. 2**

Prereq: CHM 1250 or equiv.; coreq: CHM 2220. Synthesis of organic and bio-organic compounds. Material fee as indicated in the Schedule of Classes. (T)

**2235 Preparative Organic Chemistry Laboratory. Cr. 1**

Open only to Pharmacy students. No credit after CHM 2230. Prereq: CHM 1240, CHM 1250. Laboratory focusing on synthesis of organic and bioorganic compound. Material fee as indicated in the Schedule of Classes. (T)

**2280 Chemical/Analytical Principles. Cr. 3**

Prereq: CHM 1240 and 1250, or 1410, or equiv.; coreq: CHM 2290. Concepts and calculations regarding kinetics, equilibrium, thermodynamics for a variety of reaction types. Qualitative and quantitative examples and applications. (T)

**2290 Chemical/Analytical Principles Laboratory. Cr. 2**

Prereq: CHM 1240 and 1250 or equiv.; coreq: CHM 2280. Study and use of acid-base redox, solubility precipitation, and complex forming reactions and equilibria in qualitative and quantitative chemistry. Material fee as indicated in the Schedule of Classes. (T)

**2999 Honors Research Problems in Chemistry. Cr. 2-4**

Prereq: CHM 1080 or 1320 or equiv., and consent of chairperson. Research projects under the direction of a senior faculty member. (T)

**3020 Intermediate Inorganic Chemistry I. Cr. 3 (LCT: 3)**

Prereq: CHM 2240 or equiv. Emphasizes chemistry of the main group elements and includes basic coordination chemistry of the transition metals. (W,S)

**3120 Analytical Chemistry. Cr. 4 (LCT: 3;LAB: 4)**

Prereq: CHM 1080 or equiv. No credit after CHM 1320. Theoretical and practical aspects of elementary quantitative determinations involving chemical methods and elementary instrumentation. Equilibrium calculations and statistics. Material fee as indicated in the Schedule of Classes. Breakage fee as indicated in the Schedule of Classes. (F,S)

**4850 Frontiers in Chemistry. (CHM 8850) Cr. 1 (Max. 2)**

Prereq: junior or senior Chemistry major. Offered for S and U grades only. Fields of fundamental chemistry now under investigation, presented by invited specialists actively engaged in research. (F,W)

**5020 Intermediate Inorganic Chemistry II. Cr. 3**

Prereq: CHM 3020 and 5420 or 5400 or 5440 or equiv. Transition metal chemistry. Coordination compounds and organometallics. Bonding theories and reactivity. Synthesis, purification, and characterization of inorganic compounds with an emphasis on transition metal compounds. (F)

**5160 Instrumental Analytical Chemistry. Cr. 3**

Prereq: CHM 5400 or 5420 or 5440 or equiv.; PHY 2180 or equiv. Required of B.S. and ACS-approved B.A. majors. Application of modern instrumental methods to quantitative analysis. Methods that relate instrumental response to chemical concentrations or content. Calibration, data handling, and data evaluation. Emission, flame, infrared, Raman, fluorescence, and magnetic resonance spectroscopy. Mass spectrometry. Electrochemical methods. Chromatography. (W)

**5400 Biological Physical Chemistry. Cr. 4**

Prereq: CHM 2280 or equiv., MAT 2020 or equiv.; prereq. or coreq: MAT 2030, PHY 2170 or equiv. Presentation of physical chemistry topics: thermodynamics, solution equilibria, chemical kinetics, quantum chemistry, spectroscopy, statistical mechanics, transport processes, and structure with biological applications. (W)

**5420 Physical Chemistry I. Cr. 3**

Prereq: CHM 2280, MAT 2020, or equiv.; prereq. or coreq: MAT 2030, PHY 2170 or equiv. Only two credits applicable toward degree

after CHM 5400. Chemical thermodynamics, phase equilibrium, solutions, surface chemistry, electrochemistry. (F,W)

**5440 Physical Chemistry II. Cr. 4**

Prereq: CHM 2280, MAT 2020 or equiv.; prereq. or coreq: MAT 2030, PHY 2170 or equiv. Only three credits applicable to degree after CHM 5400. Kinetic theory, empirical and theoretical kinetics, quantum theory, atomic and molecular structure, molecular spectroscopy, statistical mechanics. (F,W)

**5510 Chemical Synthesis Laboratory. Cr. 2**

Prereq: CHM 1420, or 2220 and 2230 or equiv. Advanced techniques for the synthesis, purification and characterization of organic compounds. Material fee as indicated in the Schedule of Classes. Breakage fee as indicated in the Schedule of Classes. (F)

**5550 (WI) Physical Chemistry Laboratory. Cr. 2**

Prereq. or coreq: CHM 5400 or 5420 or 5440 or equiv., and PHY 2180 or equiv. Principles of measurement. Fundamental investigations of thermodynamics. Fundamental spectroscopic and kinetic measurements. Material fee as indicated in the Schedule of Classes. (F,W)

**5570 Instrumental Analytical Chemistry Laboratory. Cr. 3 LCT:1;LAB:8**

Prereq. or coreq: CHM 5160 or equiv. Lecture and laboratory experiments covering electronics, measurement, and instrumentation. Principles and analytical applications of electrochemistry, chromatography, and spectroscopy including UV-visible, IR, magnetic resonance, and mass spectroscopy. Material fee as indicated in the Schedule of Classes. (W)

**5600 Survey of Biochemistry. Cr. 3**

Prereq: CHM 1420 or 2220 or equiv. Protein structure and its relationship to function. Principles of enzyme catalysis. Allosteric regulation of protein function and enzyme catalysis. Pathways of carbohydrate, fat, and protein metabolism in eukaryotic organisms. Introduction to mechanisms of energy coupling and photosynthesis. Information transfer in living systems. Molecular biology. (W)

**5740 Topics in Chemistry for High School Chemistry Teachers. Cr. 1-6 (Max. 20)**

Topics include: principles of chemistry; descriptive chemistry; inorganic, organic, analytical, physical chemistry; biochemistry. Topics to be announced in Schedule of Classes. (I)

**5760 Concepts in Advanced Chemistry. Cr. 3**

Open only to middle- or high school teachers. Prereq: college chemistry and biology. Concepts such as environmental and green chemistry, stereochemistry and enzyme synthesis, polymer synthesis and uses, light and matter, instrumental analysis and separation science and material science. (F,S)

**5780 Atoms, Molecules and Models. Cr. 3**

Open only to middle- or high school teachers. Prereq: college chemistry and biology. Energetics, atomic theory, molecular theory, computer modeling, structure of small and large molecules. (W,S)

**5998 Honors Thesis Research in Chemistry. Cr. 2-4 (Max. 8)**

Prereq: consent of chairperson. Open only to students in College Honors Program with junior standing in chemistry program; elect no later than first senior semester. Original investigation under direction of senior staff member. Submission of B.S. thesis or manuscript in publication format. Presentation of public lecture on B.S. research. (Y)

**5999 Senior Research in Chemistry. Cr. 2-4 (Max. 8)**

Prereq: consent of chairperson. Open only to students with junior standing in chemistry program; must be elected no later than first senior semester. Original investigation under the direction of a senior staff member. Submission of B.S. thesis or manuscript in publication format. (T)

**6040 Chemical Applications of Group Theory. (CHM 7040) Cr. 3**

Prereq: CHM 5020 and 5440 or equiv. Symmetry in chemical systems, development and use of character tables. Application of group theory to structure, bonding, spectroscopy and reactions. (F)

**6240 Organic Spectroscopy. (CHM 7240) Cr. 3**

Prereq: CHM 1420 or 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)

**6340 (PHC 6340) Chemical Basis of Pharmacology. (BIO 6840) Cr. 3**

Prereq: CHM 1420 or 2220 and BIO 1510 or equiv. Mechanisms of action and metabolism of commonly-used drugs and toxic substances from the cellular level to whole biological systems. (Y)

**6440 Computational Chemistry. (CHM 7440) Cr. 3**

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)

**6600 Structure and Function of Biomolecules. (CHM 7600) Cr. 3**

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)

**6610 Biological Chemistry Laboratory. Cr. 3**

Prereq: CHM 6600 or equiv. Open only to chemistry majors. Basic experiments in isolation, purification, and analysis of biomolecules. Techniques currently used in molecular biology and recombinant DNA procedures stressed. (Y)

**6620 Metabolism: Pathways and Regulation. (CHM 7620) Cr. 3**

Prereq: CHM 6600 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. Cannot be used to satisfy the graduate proficiency requirement in biochemistry. (F)

**6640 Molecular Biology. (CHM 7640) Cr. 3**

Prereq: CHM 6600 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)

**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)

**6750 Glassblowing. Cr. 1**

Prereq: graduate standing or consent of instructor. Offered for S and U grades only. Introduction to the fundamentals of glassblowing as applied to the repair and fabrication of scientific equipment in the research laboratory. Material fee as indicated in the Schedule of Classes. (I)

**6990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: undergrad., consent of adviser; grad., consent of adviser and graduate officer. (T)

# COMPUTER SCIENCE

Office: 431 State Hall; 577-2477  
 Chairperson: William Grosky  
 Administrative Assistant: Judith Lechvar  
 Web: <http://www.cs.wayne.edu>

## Professors

Michael Conrad, Narendra Goel, William Grosky, Vaclav Rajlich, Robert G. Reynolds

## Associate Professors

Farshad Fotouhi, Nai-Kuan Tsao, Seymour J. Wolfson

## Assistant Professors

Sorin Draghici, Guy G. Edjlali, Loren Schweibert, Shishir Shah, Frank Stomp

## Lecturer

Richard Weinand

## Degree Programs

*BACHELOR OF ARTS with a Major in Computer Science*

*BACHELOR OF ARTS with a Major in Information Systems*

*BACHELOR OF SCIENCE in Computer Science*

*POST BACHELOR CERTIFICATE in Computer Science*

*\*MASTER OF ARTS with a Major in Computer Science*

*\*MASTER OF SCIENCE with a Major in Computer Science*

*\*DOCTOR OF PHILOSOPHY with a Major in Computer Science*

The Department of Computer Science teaches the principles of design, use and development of computing and information systems. Underlying concepts are stressed which give students the flexibility to manage the ever-increasing complexity of this rapidly-changing field. The objective of the Department is to provide a learning environment which fosters the development of computer scientists possessing strong fundamental concepts and good mathematical backgrounds. To facilitate this instruction, the Department has at its command an array of hardware and software resources; see 'Facilities,' page 424.

## BACHELOR'S DEGREE PROGRAMS

**Admission requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 15. Students planning to major in computer science should consult with a departmental adviser as soon as possible and no later than the beginning of their sophomore year. In general, the requirements in effect when a student declares a major in computer science will be those that the student must complete. Students should check often with the department for the latest information concerning the program and requirements. Sample recommended programs of study for each of the degree programs are provided below.

Admission following an interruption in enrollment: A student attempting to complete a computer science major after a prolonged interruption of his/her education may find that some of his/her course work in computer science is out of date. In this case, the record will be reviewed and the department may require the student to fulfill additional computer science course requirements existing at the time of his/her return, and/or to retake some courses previously taken.

\* For requirements, see the Wayne State University Graduate Bulletin.

**Transfer students** should consult with the undergraduate departmental adviser during the semester prior to their transfer. Determination of course equivalency will be made by the Transfer Credit Evaluation Unit in conjunction with the undergraduate faculty adviser. The department reserves the right of final determination of course equivalency.

Major course sequence outlines are available in the department for guidance in meeting degree requirements.

**Introductory Course Work:** The Department of Computer Science offers a number of courses introducing students to basic computer and computing concepts. Some of these courses also serve as pre-requisites for more advanced study in computer science. Most of the introductory courses require mathematics preparation equivalent to MAT 0995 or MAT 1800. (See course descriptions regarding the required prerequisites, page 438.) CSC 1000 is for non-majors who desire to learn BASIC and it fulfills the General Education Computer Literacy requirement. Students who intend to major or minor in computer science will not normally take this course. Only courses at the 3000 level or above may be used to complete the CSC elective requirement.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete at least 120 credits in course work, including satisfaction of the University General Education Requirements (see page 29) and the College Group Requirements (see page 399). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see page 15-46 and 399-404, respectively.

## Bachelor of Science in Computer Science

The Bachelor of Science curriculum provides a strong academic foundation in computer science. The program is designed for students whose primary interest is in the study of computers and computer systems, and is the recommended preparation for those interested in pursuing graduate studies in computer science.

**Admission Requirements:** See above.

**DEGREE REQUIREMENTS:** See above.

### COURSE REQUIREMENTS:

1. Mathematics 2010, 2020, 2210, and 2250.
2. Computer Science course work as follows:
  - (a) Computer Science 1100, 1500, 2110, 2200, 3200, 4100, 4110, 4420, 4500, and 4996.
  - (b) Four additional Computer Science courses numbered 3000 or above, of at least three credits each, excluding CSC 4990 and 4995.
  - (c) A minimum of twenty-seven credits in computer science must be earned at Wayne State University.
  - (d) A minimum grade of 'C' is required in CSC 1100, 1500, and 2110.

Students declaring their major must consult an adviser for a written assessment of current requirements.

### Recommended Program

<b>First Year</b>	
<i>Fall Semester</i>	<i>Winter Semester</i>
CSC 1100 (CL) .....	CSC 1500 (CL).....
4	3
UGE 1000 (GE) .....	CSC 2110 (CL).....
1	4
ENG 1020 (BC).....	MAT 2020.....
4	4
MAT 2010 .....	ENG 2000-3000 level <sup>1</sup> .....
4	3
(OC) course <sup>1</sup> .....	
3	Total: 14
Total: 16	

### Second Year

CSC 2200 (CL).....	4	CSC 3200.....	3
MAT 2210.....	4	MAT 2250.....	4
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
(CT) course <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Total:	14	Group Requirement <sup>1</sup> .....	3
		Total:	16

### Third Year

CSC 4110.....	3	CSC 4500.....	3
CSC 4100.....	4	CSC 4420.....	3
Group Requirement <sup>1</sup> .....	3	CSC (3000-level or above).....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Total:	16	Total:	15

### Fourth Year

CSC (3000-level or above)...	3	CSC 4996 (WI).....	2
CSC (3000-level or above)...	3	CSC (3000-level or above).....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Elective.....	3
Total:	15	Total:	14

Minimum number of credits required for the degree: ..... 120

## — With Honors in Computer Science

Students in the Honors Program are challenged by independent research work and by the close association and informal discussions with faculty and advanced graduate students. The Honors Program is open to students seeking the Bachelor of Science in Computer Science degree. A cumulative grade point average of at least 3.3 is required for consideration for admission to and continuance in the program. Students are admitted on the recommendation of the Honors Program Adviser. Interested students should contact the Honors Program Adviser and complete the Honors Plan of Work form when declaring computer science a major or at the beginning of the senior year. If a student has declared a major in computer science prior to entering the Honors Program, a new Declaration of Major must be completed, for the Bachelor of Science with Honors.

**Admission Requirements:** See page 421.

**DEGREE REQUIREMENTS:** See page 421.

#### COURSE REQUIREMENTS:

1. See step 1 of 'Bachelor of Science in Computer Science,' above.
2. See step 2 of 'Bachelor of Science in Computer Science,' above.
3. One semester of an Honors Program 4000 level seminar.
4. Computer Science 4999, Honors Thesis; three or six credits.

The Honors Thesis is a paper presenting the results of the student's independent research. The length of the thesis may vary according to the nature of the topic and method of approach. Registration for Honors Thesis must be made a minimum of two semesters prior to the student's expected graduation date. A minimum of two semesters should be allowed for completion of all of the thesis requirements. It is expected that the Honors Thesis will conform to the University master's thesis format (copies available from the Graduate School).

The student will be assigned a faculty adviser to guide and direct the research, based upon the student's area of interest. A grade is awarded for CSC 4999 after approval by two faculty advisers.

5. An overall Wayne State University cumulative grade point average of at least 3.3.

6. A minimum total of twelve credits in honors-designated course work, including Computer Science 4999, and the Honors Seminar listed above. For information about additional honors-designated course work available each semester, see the University Schedule of Classes under 'Honors Program,' or contact the Director of the Honors Program (577-3030).

## Bachelor of Arts with a Major in Computer Science

The Bachelor of Arts curriculum is designed to provide a strong academic foundation for those preparing a career in computer applications. Students planning to earn a graduate degree in computer science are strongly advised to seek the Bachelor of Science degree in computer science.

**Admission Requirements:** See page 421.

**DEGREE REQUIREMENTS:** See page 421.

#### COURSE REQUIREMENTS:

1. Mathematics 2010, 2020, and 2210.

2. Computer Science course work as follows:

(a) Computer Science 1100, 1500, 2110, 2200, 3200, 4100, 4110, 4420, and 4996.

(b) Three additional Computer Science courses of at least three credits each, numbered 3000 or above, excluding CSC 4990 and 4995.

(c) A minimum of twenty-three credits in computer science must be earned at Wayne State University.

(d) A minimum grade of 'C' is required in CSC 1100, 1500 and 2110.

Students declaring their major should consult an adviser for a written assessment of current requirements.

#### Recommended Program

##### First Year

Fall Semester	Winter Semester		
CSC 1100 (CL).....	3	CSC 1500 (CL).....	3
UGE 1000 (GE).....	1	CSC 2110 (CL).....	4
ENG 1020 (BC).....	4	ENG 2000-3000 level <sup>1</sup> .....	3
MAT 2010.....	4	MAT 2020.....	4
(OC) course <sup>1</sup> .....	3	(CT) course <sup>1</sup> .....	3
Total:	15	Total:	17

##### Second Year

CSC 2200.....	4	CSC 3200.....	3
MAT 2210.....	4	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Total:	14	Group Requirement <sup>1</sup> .....	3
		Total:	15

##### Third Year

CSC 4100.....	4	CSC 4110.....	3
Group Requirement <sup>1</sup> .....	3	CSC 4420.....	3
Group Requirement <sup>1</sup> .....	3	CSC (3000-level or above).....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement*.....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Total:	16	Total:	15

1. Some General Education competency and group requirement courses may be four credits.

#### Fourth Year

CSC (3000-level or above)...	3	CSC 4996 (WI) .....	2
Group Requirement <sup>1</sup> .....	3	CSC (3000-level or above) .....	3
Elective .....	3	Group Requirement <sup>1</sup> .....	3
Elective .....	4	Group Requirement <sup>1</sup> .....	3
	Total: 13	Elective .....	3
			Total: 14

Minimum number of credits required for the degree ..... 20

### Bachelor of Arts with a Major in Information Systems

This degree differs from the Bachelor of Arts with a Major in Computer Science in that it prescribes carefully integrated study encompassing computer science and a specific area of application selected by the student. The curriculum is designed to provide students not only with a good background in computer science but also with the essential concepts of systems analysis and design required for particular applications. A corequisite part of the program involves a fundamental orientation in the discipline in which the computer science skills are to be applied.

The cognate specialization is to be selected from other fields (for example, business, library science, the social or natural sciences, medicine) either within the College of Science or from other University divisions. Coursework in the specific application area will be developed in consultation with the appropriate department and must be approved by the Computer Science Undergraduate Committee to assure a coherent plan of study properly integrating computer science and the intended field of endeavor.

**Admissions Requirements:** See page 421.

**DEGREE REQUIREMENTS:** See page 421.

#### COURSE REQUIREMENTS:

1. Mathematics 2010, 2020, and 2210.
2. Computer Science 1100, 1500, 2110, 2200, 3200, 4100, 4110, 4420, 4710, and 4996.
3. A minimum of eighteen credits of course work approved by the Computer Science Undergraduate Committee in a specific application area. It is expected that much of this course work will be related to the intended application of computer technology to the applied area. The applied area need not be limited to subjects taught in the College.
4. A minimum of twenty credits in computer science must be earned at Wayne State University.
5. A minimum grade of 'C' is required in CSC 1100, 1500 and 2110.

Students declaring their major should consult an adviser for a written assessment of current requirements.

#### Recommended Program

##### First Year

Fall Semester	Winter Semester		
CSC 1100 (CL) .....	4	CSC 1500 .....	3
UGE 1000 (GE) .....	1	ENG 2000-3000 level <sup>1</sup> .....	3
ENG 1020 (BC) .....	4	MAT 2020 .....	4
MAT 2010 .....	4	(CT) course <sup>1</sup> .....	3
(OC) course <sup>1</sup> .....	3		Total: 13
	Total: 16		

#### Second Year

CSC 2110 (CL) .....	4	CSC 2200 .....	4
MAT 2210 .....	4	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
	Total: 17		Total: 16

#### Third Year

CSC 3200 .....	3	CSC 4110 .....	3
CSC 4100 .....	4	CSC 4420 .....	3
Group Requirement <sup>1</sup> .....	3	Cognate elective .....	3
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
	Total: 13	Group Requirement <sup>1</sup> .....	3
			Total: 15

#### Fourth Year

CSC 4710 .....	3	CSC 4996 (WI) .....	2
Cognate elective .....	3	Cognate elective .....	3
Cognate elective .....	3	Cognate elective .....	3
Cognate elective .....	3	Group Requirement <sup>1</sup> .....	4
Group Requirement <sup>1</sup> .....	3	Group Requirement <sup>1</sup> .....	3
	Total: 15		Total: 15

Minimum number of credits required for the degree: ..... 120

### Work-Study Cooperative Program

Students who wish to enrich their education with practical computer science experience may enroll in the Cooperative Program. In this program, full-time study terms are alternated with full-time work assignments in cooperating industries. The Co-op experience provides two benefits: industrial work experience which can be included in a resume, and the possibility of being offered a full-time position with the co-op employer, upon graduation. Usually students enter the program in either their junior or senior year and most of the work assignments are in the metropolitan Detroit area. A student may enroll for no more than one course with the approval of the College Co-op Coordinator during those terms in which he/she is on a work assignment. Each term a student is on a work assignment he/she must enroll the following term in Computer Science 4995, Professional Practice in Computer Science. A report covering each work assignment is required of the student and performance on the job is rated by the industrial supervisor. Salaries and other benefits are paid for the time spent on each work assignment. The student must be a computer science major. For details and enrollment procedures, contact the College Co-op Coordinator at the University Placement Services.

### Minor in Computer Science

The Minor Program provides a background in computer science for students who are majoring in other fields of study in the College.

#### COURSE REQUIREMENTS:

1. Mathematics 2010, 2020, and 2210.
2. Computer Science course work as follows:
  - (a) Computer Science 1100, 1500, 2110, and 2200.
  - (b) One additional Computer Science course numbered 3000 or above, excluding CSC 4990 and 4995, to complete the required eighteen CSC credits.
  - (c) A minimum of twelve credits in computer science must be earned at Wayne State University.
  - (d) A minimum grade of 'C' is required in CSC 1100, 1500 and 2110.

Students declaring their minor should consult an adviser for a written assessment of current requirements.

1. Some General Education competency and group requirements may be four credits.

Students may wish to modify the Minor Program to fit their special needs. For any changes or adjustments to the above course requirements, students should contact one of the departmental undergraduate advisers for approval.

## 'AGRADE' — Accelerated Graduate Enrollment

This program enables qualified seniors to enroll simultaneously in the undergraduate and graduate programs and apply a maximum of fifteen credits towards both the bachelor's and master's degrees. Students electing the 'AGRADE' Program may expect to complete the bachelor's and master's degrees in five years of full-time study.

**Admission Requirements:** An 'AGRADE' applicant may petition the Graduate Committee of the Computer Science Department for acceptance into the program no earlier than the first semester in which ninety credits are completed. Following Departmental Graduate Committee approval, students must seek the approval of the Graduate Officer of the College. Applicants must have an overall grade point average (g.p.a.) at the *Cum Laude* level (approximately 3.4) and not less than a 3.6 g.p.a. in the major courses already completed. If the student's petition is accepted, the student's faculty adviser shall develop a graduate Plan of Work, specifying 'AGRADE' courses to be included in subsequent semesters.

## Post Bachelor Certificate in Computer Science

The Certificate Program in Computer Science is designed for students who have obtained an undergraduate or graduate degree in another discipline from an accredited university, and who now desire undergraduate-level competence in computer science skills. Students whose background includes the courses which satisfy College Group Requirements (see page 399) will generally apply for a second bachelor's degree rather than the Certificate in Computer Science.

The Post Bachelor Certificate Program provides a certificate which verifies the completion of the technical courses required for the Bachelor of Arts with a Major in Computer Science.

**Admission:** Students who have received their undergraduate degree from Wayne State University should apply directly to the University Advising Center. Two copies of the student's transcript must be submitted to the university adviser.

Students who have received their undergraduate degrees from another institution must complete the Application for Undergraduate Admission form and request that official transcripts from the college or university granting the degree be sent directly to the Office of Admissions.

**CERTIFICATE REQUIREMENTS:** Candidates for this certificate must achieve a level of competence in mathematics and computer science equivalent to completion of fifty-one credits in university course work as set forth in the following program. Prior preparation at the undergraduate level as evidenced in transcript notation or by demonstrable proficiency may be used to satisfy any of these requirements, except that twenty-three credits in computer science, either as transfer credit to this program or as Post Bachelor Certificate credit, must be earned at Wayne State University. The content requirements for this program are as follows:

1. A bachelor's degree or its equivalent in some discipline other than computer science with a grade point average of at least 2.0 from an accredited institution.
2. Mathematics 2010, 2020, and 2210.
3. Computer Science course work as follows:

(a) Computer Science 1100, 1500, 2110, 2200, 3200, 4100, 4110, 4420, and 4996.

(b) Three additional Computer Science courses of at least three credits each, numbered 3000 or above, excluding CSC 4990 and 4995.

(c) A minimum of twenty-three credits in computer science course work must be completed at Wayne State University with a g.p.a. of at least 2.5.

Students should consult an adviser for a written assessment of current certificate requirements. Although not required for a certificate, please note that CSC 4500 is required for admission to the graduate program.

## Research and Instructional Laboratories

The Department of Computer Science operates three instructional and seven research laboratories comprising approximately 150 workstations.

**Research Laboratories:** The research labs maintained by the Department consist of the following:

- Artificial Intelligence Laboratory
- Biocomputing Laboratory
- Computer Graphics and Animation Laboratory
- High Assurance Software Systems Laboratory
- High-Speed Networking Laboratory
- Multimedia Information Systems Laboratory
- Parallel and Distributed Computing Laboratory
- Software Engineering Laboratory
- Undergraduate Advance Projects Laboratory
- Verification Laboratory
- Vision and Neural Networks Laboratory

**Instructional Laboratories:** There are three labs devoted to instruction. Two are equipped with 20 SunRay thin clients and the third with 40 SunRays. The SunRays give users simultaneous access to the Solaris and Windows 2000 environments. The first two labs are dedicated to instructor-led classes; the other is available for use by students for self-guided instructional use.

## Financial Aid

Also see Office of Scholarships and Financial Aid, page 20.

**Stephen P. Hepler Award:** Award of \$1000 open to any computer science major with at least sophomore standing. Application deadline is March 17.

**John P. Stieber Endowed Scholarship Fund:** Award open to any part-time or full-time undergraduate upper-division student majoring in computer science, who is a U.S. citizen and has a minimum 3.0 g.p.a.; awarded on the basis of scholastic achievement and leadership.

**MichCon—Leon Atchison Scholarship:** Award open to any minority student majoring in accounting, chemical engineering, mechanical engineering, or computer science from the MichCon service area; student must have a minimum 2.5 g.p.a., be a U.S. citizen, and demonstrate financial need. Application deadline is April 30; contact the Office of Scholarships and Financial Aid.

**Weingarten Scholarship Award:** Award of \$500, open to any part-time or full-time undergraduate majoring in computer science with sophomore standing, a minimum 3.0 g.p.a., who is a U.S. citizen and has demonstrated qualities of leadership and outstanding scholastic achievement. Application deadline is March 17; contact the Department for further information.

## UNDERGRADUATE COURSES (CSC)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by indi-



vidual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

**0995 Coop Work Experience. Cr. 0**

Offered for S and U grades only. Open only to computer science students. No degree credit. May not be used to satisfy undergraduate computer science elective requirements. Review of computer science practical experiences resulting from participation in coop/internship program. (T)

**1000 (CL) Introduction to Computer Science. Cr. 3**

Prereq: placement out of MAT 0995. No credit after any other programming course. Not for computer science majors. Brief introduction to problem solving: analysis, design, implementation and testing using a general purpose structured programming language. Introduction to use of text editors, word processors, spreadsheets, databases, and telecommunications. (T)

**1050 (CL) Introduction to C and Unix. Cr. 2**

Prereq: MAT 1800. No credit for computer science students after CSC 1100. Introduction to Unix, vi editor, and C Programming Language. Unix development tools and fundamentals of C language discussed. (T)

**1100 (CL) Problem Solving and Programming. Cr. 4**

Prereq: placement out of MAT 1800. Problem solving with algorithms, and their realization as computer programs using a structured, general purpose programming language; data types, operators, expressions, assignment, input and output, selection and repetition control structures; modularity and procedural abstraction using functions with parameters; structured data types array and string. (T)

**1140 (CL) Introduction to COBOL. Cr. 3**

Prereq: CSC 1000. Problems in business applications: editing, transaction analysis, file update, report generation, tape and disk files, COBOL specification and implementation of sequential, indexed, direct and relative file organizations and their related access methods. (T)

**1500 (CL) Fundamental Structures in Computer Science. Cr. 3**

Prereq: CSC 1100 and MAT 2010. Introduction to fundamental control and data structures in computer science. Algorithms and complexity, recursive algorithms, program correctness using the predicate calculus, reasoning about algorithms using mathematical induction, probability theory and computing with random variables, generation of permutations and combinations, divide and conquer algorithms, recurrence relations, set properties and their computation, computing with relations, graph properties and their computation, tree properties and their computation, boolean algebra with applications to circuit design. (T)

**2000 Introduction to C++ Programming Language. Cr. 3**

Prereq: placement out of MAT 1800 and CSC 1000. Elements of C++; classes and objects; arrays, pointers and references; operators and friends; inheritance; derived classes; polymorphism: virtual functions. (I)

**2110 (CL) Introduction to Data Structures and Abstraction. Cr. 4**

Prereq: CSC 1100 and MAT 2010. Introduction to data abstraction; design of abstract data types stack, queue and list using array and dynamic linked list representations; recursive functions; searching and sorting algorithms. (T)

**2200 Data Structures and Algorithm Analysis. Cr. 4**

Prereq: CSC 1500, 2110, MAT 2210. Introduction to analysis of algorithms. Data structures for trees, sets, graphs; external sorting algorithms; hashing; files; advanced tree structures. (T)

**3100 Computer Organization. Cr. 3**

Prereq: CSC 1500, 2110 or 5050. Data representation; assembly language programming: addressing, subroutine and parameters, input/output programming, interrupts and direct memory access; linkers and loaders. (T)

**3200 Programming Languages. Cr. 3**

Prereq: CSC 2200. History and overview of programming languages, virtual machines, representation of data types; sequence control; data control, sharing and type checking; run-time storage management; language translation systems; programming language semantics; programming paradigms. (Y)

**3400 Human-Computer Communication. Cr. 3**

Prereq: CSC 2200. Devices, user interfaces, menu systems, command languages, features of common interface toolkits, window programming, hypertext systems, fundamentals of computer graphics. Material fee as indicated in the Schedule of Classes. (Y)

**3750 Introduction to the Internet. Cr. 3**

Prereq: CSC 1000 or equiv. Understanding the Internet using several access methods; required software and tools. Topics include: e-mail, FTP, Telnet, Gopher, Archie, Newsgroups, WWW, HTML, how to create an active web site. Laboratory exercises required. (Y)

**4100 Computer Architecture. Cr. 4**

Prereq: CSC 2110 or 5050. Offered for undergraduate major credit only. Data representation; digital logic circuits; instruction formats and addressing modes; register transfer and microoperations; microprogrammed control; RISC architecture; memory organization; pipelined and vector processing; multiprocessors. (T)

**4110 Introduction to Software Engineering. Cr. 3**

Prereq: CSC 2200. Software life cycle; software requirement analysis; software system design; software implementation and testing; software maintenance; team programming; ethics and programmers. Material fee as indicated in the Schedule of Classes. (F,W)

**4420 Computer Operating Systems. Cr. 3**

Prereq: CSC 4100. Offered for undergraduate major credit only. Operating system services; file systems; CPU scheduling; memory management; virtual memory; disk scheduling; deadlocks; concurrent processes. (T)

**4500 Introduction to Theoretical Computer Science. Cr. 3**

Prereq: CSC 2200 or 5050. Finite automata and regular expressions; context-free grammars; pushdown automata; Turing machines; hierarchy of formal languages and automata; computability and decidability. (T)

**4710 Information Systems Design. Cr. 3**

Prereq: CSC 2200, 4110. Structure of information systems; system analysis; database life cycle; conceptual modeling and implementation; relational model; network model; hierarchical model; design and implementation of an information system utilizing a commercial database. (Y)

**4990 Directed Study. Cr. 1-4 (Max. 8)**

Prereq: written consent of instructor. Not for graduate credit. Individual study as agreed on by student and supervising faculty. Primarily for material not covered in regular courses. (T)

**4992 Special Topics in Computer Science. Cr. 1-3 (Max. 12)**

Prereq: CSC 2110 or consent of instructor. Maximum of six credits may be applied to satisfying the computer science elective, in any computer science degree program. Topics to be announced in Schedule of Classes. (T)

**4995 Professional Practice in Computer Science. Cr. 1 (Max. 4)**

Prereq: junior or senior standing. Offered for S and U grades only. Open only to computer science co-op students. Must be taken after each full-time co-op work assignment. May not be used to satisfy

undergraduate computer science elective requirements. Review of computer science practical experiences resulting from participation in the cooperative work-study program. (T)

**4996 (WI) Frontiers of Computing. Cr. 2**

Prereq: senior standing. Selected topics from: artificial intelligence; software engineering; databases; distributed and parallel computing; computer vision and robotics; natural computing; computer graphics. (Y)

**4999 Honors Thesis. Cr. 3-6 (3 req.)**

Prereq: senior standing, written consent of instructor. Offered for 6 credits with consent of thesis adviser and undergraduate committee. Independent study under supervision. (T)

**5000 (SCP 7100) Scientific and Systems Programming. (ECE 7225) Cr. 3**

Prereq: working knowledge of Fortran or C or C++. Introduction to basic programming tools required for scientific computing, including advanced programming concepts, code optimizations, mathematical prototyping language, and basic system administration. (F)

**5050 Algorithms and Data Structures. Cr. 4**

Prereq: graduate standing. Not for major credit. 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)

**5260 Computer Networks and Distributed Systems. Cr. 3**

Prereq: CSC 4420. Introduction to the topic; data communications protocols; local area networks; distributed applications. (Y)

**5350 (ECE 5610) Introduction to Parallel and Distributed Systems. (SCP 7300) Cr. 4**

Prereq: ECE 4680. Fundamentals of parallel and distributed systems. Programming experience in both computing environments. (F,W)

**5710 Design of Intelligent Information Systems. Cr. 3**

Prereq: CSC 4710, 5800. Object-oriented data modeling; intelligent office information systems; decision support systems; deductive databases; hypertext; specific applications in interfacing commercial databases and expert systems. (Y)

**5750 Principles of Web Technology. Cr. 3**

Prereq: 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 Expert Systems: Tools and Languages. Cr. 3**

Prereq: CSC 2200 or 5050. Survey of languages and tools for the development of expert systems applications. Introduction to functional, logical, and object-oriented programming and to various commercially available expert system environments; specific applications in areas of computer science, medicine, and engineering. (I)

**5830 Computational Modeling of Complex Systems. Cr. 3**

Prereq: knowledge of a programming language; MAT 2010. Introduction to computer methods useful for modeling complex systems which are refractory to traditional methods of analysis. Emphasis on problem formulation and concrete examples, especially examples drawn from biology. (I)

**5860 Introduction to Pattern Recognition and Image Processing. Cr. 3**

Prereq: senior standing. Model of a pattern recognition system; representation techniques for classifiers; parametric and nonparametric classification methods; clustering; fundamentals of image formation and acquisition; image enhancement methods; feature extraction for two-dimensional visual pattern recognition; document image processing and recognition. (Y)

**5870 Computer Graphics I. Cr. 3**

Prereq: CSC 2200 or 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. (I)

**5880 Principles of Natural Computing. Cr. 3**

Prereq: senior or graduate standing. Introduction to basic principles of information processing in biological systems; similarities and differences between biological systems and computing machines; implication of biological information processing principles and mechanisms for artificial intelligence. (B)

**5991 Special Topics in Computer Science. Cr. 1-4 (Max. 8)**

Prereq: senior or graduate standing. Topics to be announced in Schedule of Classes. (I)

**6110 Software Engineering. Cr. 3**

Prereq: CSC 2200 or 5050. 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 or 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. (Y)

**6170 Structure of Compilers I. Cr. 3**

Prereq: CSC 4500 and 3200. Lexical analysis; syntactic analysis; error detection; translation into intermediate code; storage allocation; optimization techniques. (I)

**6220 Parallel Computing I. Cr. 3**

Prereq: CSC 2200, 4100. Parallel computing concepts, examples of parallel computers, parallelism in algorithms/data/programs, experiences with state of the art parallel computers. (Y)

**6260 Distributed Systems I. Cr. 3**

Prereq: CSC 4420. Introduction to distributed systems; distributed systems architecture, models and design goals; interprocess communication and synchronization; concurrent programming with threads; client-server programming (with Berkeley sockets); distributed applications development using remote procedure calls; distributed file systems; naming; causal and totally ordered reliable communication; replication. (Y)

**6280 Advanced Operating Systems. (ECE 5640) Cr. 4**

Prereq: CSC 4420. Distributed operating system design issues including communication, synchronization, processes, file systems, and memory management; study and discussion of systems such as UNIX, MACH, AMOEBA, and CHORUS. (I)

**6500 Theory of Languages and Automata. Cr. 3**

Prereq: graduate standing. Finite-state, context-free, context-sensitive, recursive, and r.e. languages; Chomsky hierarchy; grammars and automata; decidability and computability; Rice's theorem; basic complexity theory. (Y)

**6550 Introduction to Formal Software Verification. Cr. 3**

Prereq: CSC 4500 or 5050 or consent of instructor. Propositional logic, predicate logic, proof systems, proofs, soundness, completeness. Verification of sequential programs, Floyd's verification method, Hoare logic. Unity. Program specification. Deterministic programs, nondeterministic programs. Compositional vs. non-compositional program verification techniques. (Y)

**6580 Design and Analysis of Algorithms. Cr. 3**

Prereq: CSC 2200. 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. (Y)

**6620 Matrix Computation I. (ECE 5020) Cr. 4**

Prereq: CSC 2110, 2060, or equiv.; and MAT 2250 for computer science students, CHE 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. (B)

**6710 Database Management Systems I. Cr. 3**

Prereq: CSC 2200 or 5050. 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 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)

**6830 Computational Modeling Laboratory. Cr. 3**

CSC 5830 or consent of instructor. Practical experience in the implementation and documentation of computer models. (I)

**6860 Digital Image Processing and Analysis. Cr. 3**

Prereq: graduate standing. 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. (I)

**6880 Theory of Adaptable Systems. Cr. 3**

Prereq: senior or graduate standing. Formalism of adaptability theory; organization of biological and technical information processing systems in the light of adaptability theory; applications to biological computing and evolutionary programming (I)

**6991 Topics in Computer Science. Cr. 1-4 (Max. 8)**

Prereq: senior or graduate standing. Current topics to be announced in Schedule of Classes. (I)

# GEOLOGY

Office: 0224 Old Main; 577-2506

Interim Chairperson: Jeffrey L. Howard

*Professor*

Robert B. Furlong (Emeritus)

*Associate Professors*

Mark Baskaran, Jeffrey L. Howard

*Senior Lecturer*

David J. Doherty

## Degree Programs

*BACHELOR OF ARTS with a major in geology*

*BACHELOR OF SCIENCE with a major in geology*

*\*MASTER OF SCIENCE with a major in geology*

Geology consists of studies of the materials of the earth and the processes to which they have been subjected, landscape features and their origins, and the history of the earth as recorded by rocks and fossils.

The courses in geology are planned to serve the needs of four groups of students: (1) those who desire a general knowledge of geology as part of a liberal education; (2) those who need geological information as a cognate subject in other professions; (3) those who wish to major in geology as part of a broad liberal education; and (4) those who plan to become professional geologists. Introductory courses are primarily general, but they also provide a foundation in geology for the student who desires to continue an intensive program of study. Students with an interest in environmental problems will find a number of relevant courses among those offered by the Department of Geology. In addition, a variety of courses in various phases of geology is available to the general student. Intermediate and advanced courses are designed to develop the principles of geology beyond the elementary level and to give a firm technical foundation for advanced study.

**Bachelor's Degrees:** The Department of Geology offers undergraduate programs leading to a degree of Bachelor of Arts in Geology and Bachelor of Science in Geology. The Bachelor of Arts degree differs from the Bachelor of Science degree principally in the number and level of non-geology courses which the student is required to take. The Bachelor of Science degree is suited to the student who intends to become a professional geologist and is required for those students intending to do graduate work in geology.

## Bachelor of Science With a Major in Geology

**Admission requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major and cognate credits listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399 -404, respectively.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

**Major Requirements:** Students must complete at least thirty-four credits in geology exclusive of the introductory courses (1000-level) and must include the following:

1. Twenty of the thirty-four credits from advanced courses (numbered 3000 and above).
2. Geology 2130, 3160, 3300, 3400, and 5993.
3. Six credits in field mapping and field techniques, to be fulfilled by completing six credits in a summer field course. If the Geology Department at Wayne State University does not offer a summer field course in any given year, students should complete the field course requirement by attending an approved field course at another university. In certain unusual circumstances the required six credits in field mapping and field techniques may be earned through an extended field-oriented research project when this project involves extensive field mapping and is under the direct supervision of a faculty member or other qualified field geologist throughout the duration of the field work.

**Cognate Requirements:** The program must include a year of mathematics (MAT 1800 and 2010 or equivalent), a year of physics (PHY 2130 and 2140, or 2170 and 2180, or equivalent), and a semester of chemistry (CHM 1220 and 1230 or equivalent). A semester of biology (BIO 1500 or equivalent) is strongly recommended.

Although there are no required cognate courses beyond those listed above, geology majors should consult their adviser regarding cognate courses which might be of value to their particular program. Depending on interest and future goals, additional courses in mathematics, physics, and chemistry, as well as courses in biology, computer science, civil engineering, and geography might be of particular value.

## Bachelor of Arts With a Major in Geology

**Admission requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major and cognate requirements listed below. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively.

**Major Requirements:** Students must complete twenty-six credits in geology beyond Geology 1020. These must include Geology 2130, 3160, 3300, 3400, 5993, and at least two credits in a geology field course.

**Cognate Requirements:** At least one college course in each of two of the following fields is required: biology, chemistry, or physics. Mathematics 1800 and satisfaction of the Foreign Language Group Requirement are also required.

Geology majors should consult their adviser regarding additional recommended cognate courses. Depending on interest and future goals, supplementary courses in mathematics, physics and chemistry, as well as courses in biology, computer science, engineering, and geography might be of particular value.

## Honors in Geology

The Honors Program in Geology is open to students of superior academic ability who are majoring in geology. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/she must accumulate at least fifteen credits in honors-designated course work and must demonstrate the ability to do independent study and an original

Honors Thesis during the senior year. For information about the requirements of the department's honors curriculum, contact the Chairperson of the Department, or the Director of the Honors Program (577-3030).

## Minor in Geology

The Department offers a minor in geology for undergraduate students. The minor consists of twenty credits in geology (usually consisting of four courses). Although desirable courses for a student's minor program should be determined in consultation with Geology Department staff members, the following restrictions and recommendations should be noted: The minor must include Geology 1010 and 1020. Geology 1000 and 1050 may only be applied for credit to a minor with the permission of the student's adviser in consultation with the Chairperson of the Department. At least four credits in the minor must be completed in courses at the 3000-level or higher. All minor programs must be approved by the Department Chairperson.

Anyone wishing to complete a minor in geology should contact one of the Department faculty members, or the Chairperson, as soon as possible, so that an appropriate program can be formulated.

## Assistantships and Awards

**Student Assistantships:** A limited number of undergraduate student assistantships are available for academically superior students after they have completed sufficient coursework to qualify (usually senior standing).

**Awards:** The Geology Undergraduate Student Merit Award is presented to those undergraduate students who have excelled academically and who have made significant non-academic contributions to the Geology Department and/or the University. The award consists of a bronze plaque, a Brunton compass, and the recipient's name permanently inscribed and displayed on a special display board in the office of the Department of Geology.

## UNDERGRADUATE COURSES (GEL)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### 1000 Geology and the Environment. Cr. 4

Primarily for non-science majors. Geological aspects of man's use of his environment including geological hazards; water; waste disposal; occurrence, use and depletion of natural resources. (T)

### 1010 (PS) Geology: The Science of the Earth. Cr. 4

Meets General Education Laboratory Requirement. Introduction to continental drift and plate tectonic theory, geophysics and structure of earth's crust and interior; rocks and minerals; igneous and volcanic geology; work of running water, glaciers and ground water; geologic time; oceanography. One day field trip. Lecture and required laboratory. Material fee as indicated in the Schedule of Classes. (T)

### 1020 Interpreting the Earth. Cr. 4

Prereq: GEL 1010 with grade of C or better recommended. Sedimentary rocks, sedimentary structures and fossils as tools for interpreting the history of the earth. Paleogeology of the geologic past and the structure of the earth are emphasized. (T)

### 1050 Oceanography. Cr. 4

Introductory course in oceanography; includes origin of the ocean basins; ocean currents, waves and tides; life in the oceans and marine ecology; food, mineral and energy resources of the sea. (Y)

**1370 Meteorology: The Study of Weather. Cr. 3**

Weather theory including cloud types, cloud formation; types and formation of winds; rain, snow, other precipitation. Storm theory: formation of and dangers in thunderstorms, hurricanes and tornadoes. Atmospheric phenomena: aurora, rainbows, the micage, twinkling of stars, twilight crepuscular rays; weather forecasting, instruments, maps. (I)

**2130 Mineralogy. Cr. 4**

Prereq: one course in high school or college chemistry recommended. External morphology and internal arrangement of minerals. Identification of minerals by sight and simple physical and chemical properties. Properties and occurrences of major mineral groups. Material fee as indicated in the Schedule of Classes. (F)

**3160 Petrology. Cr. 4**

Prereq: GEL 1020, 2130, consent of instructor. Origin, occurrence, alterations, classification, methods for determination of important rocks based on megascopic and microscopic characteristics. Material fee as indicated in the Schedule of Classes. (W)

**3300 Structural Geology. Cr. 4**

Prereq: GEL 1020 and high school trigonometry or equiv. recommended. Description and interpretation of features which result from the origin or deformation of rock masses. Material fee as indicated in the Schedule of Classes. (F)

**3400 Principles of Sedimentology and Stratigraphy. Cr. 4**

Prereq: GEL 1020 and 2130. Processes which produce sediments, environments of deposition, changes after deposition. Relationship between tectonics and sedimentation. Origin of sedimentary strata. Facies and correlations. Material fee as indicated in the Schedule of Classes. (W)

**3600 Special Topics in Geology. Cr. 3**

Prereq: GEL 1010. Subjects of general interest to geology majors. Topics may include: soil and groundwater pollution; petroleum geology; engineering geology; geochronology; gems and minerals. (W,S)

**3990 Directed Study. Cr. 1-6 (Max. 10)**

Prereq: consent of instructor, adviser, and chairperson. (T)

**4860 Research. Cr. 3-4 (Max. 8)**

Prereq: consent of instructor, adviser, and chairperson. Primarily for honors students. Independent laboratory and field work. (T)

**5000 Geological Site Assessment. (HWM 5000) Cr. 4**

Prereq: GEL 1010; 1000 recommended. Classification of landforms and analysis of surficial geologic processes. Geophysical methods for subsurface analysis of soil and groundwater pollution. Application of remote sensing techniques in resource management. (Y)

**5030 Earth Science for Educators. Cr. 4**

Offered for undergraduate credit only. Review of all major earth science concepts including: physical geology, oceanography, meteorology and astronomy. Material fee as indicated in the Schedule of Classes. (Y)

**5080 Environmental Isotope Geochemistry. (HWM 5080) Cr. 3**

Prereq: CHM 1070 and CHM 1080 or equiv.; PHY 2130 and PHY 2140, or PHY2170 and PHY 2180, or equivs. Introduction to fundamentals of radiochemistry measurement techniques; survey of various applications of radionuclides in environmental science; brief discussion of the use of stable isotopes (O, C and H). (Y)

**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. (W)

**5150 Soils and Soil Pollution. Cr. 4**

Prereq: GEL 1010, CHM 1220 and 1230, CHM 2280 and 2290, or consent of instructor. Physical, chemical and mineralogical properties and classification of soils. Behavior of pollutants in soils and methods for reclamation. (Y)

**5200 Oceanography for Educators. Cr. 4**

Open only to middle- or high school teachers. Origin of the ocean basins; ocean currents, waves and tides; life in the oceans and marine ecology; marine resources and pollution. (S)

**5400 Physical Geology for Educators. Cr. 4**

Prereq: open only to middle-school and high school teachers. Origin and classification of minerals and rocks; theory of plate tectonics; landforms and surficial processes; earth interior; mountain building and structures. Material fee as indicated in the Schedule of Classes. (S)

**5450 Hydrogeology. Cr. 4**

Prereq: GEL 1010; or consent of instructor. Characteristics and behavior of groundwater in earth materials. Groundwater geology of southeastern Michigan. Water well technology and methods for exploration. (Y)

**5993 (WI) Writing Intensive Course in Geology. Cr. 0**

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: GEL 3160 or 3300 or 3400 or 3450. Offered for S and U grades only. No degree credit. Required for all majors. Disciplinary writing assignments under the direction of faculty member. Must be selected in conjunction with course designated as 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)

**6400 Geochronology. Cr. 4**

Prereq: introductory courses in physics, chemistry, and geology. Introduction to various physical and chemical age dating methods used in geology. (F)

**6500 Economic Geology. Cr. 4**

Prereq: GEL 2130, 3160, 3300, 3400. Geology of metallic and non-metallic mineral deposits, including important hydrocarbon deposits and their different tectonic settings. (Y)

# HONORS PROGRAM

Office: 2311 Faculty/Administration Building; 577-3030

Director: Stanley Shapiro; 3139 Faculty/Administration Building;  
577-6146

Adviser: Karen M. Gurney, 2136 Helen Newberry Joy Student  
Services Center; 577-2680

The Honors Program is designed for highly motivated students with superior abilities. Undergraduates in any college or department may, if eligible, take honors courses. Typically, honors classes are small and are taught by members of the regular faculty.

**Eligibility:** To enroll in honors courses, students must have at least a 3.3 cumulative grade point average at Wayne State University. Entering freshmen should have a high school grade point average of at least 3.5, and students transferring from a community college a 3.3 g.p.a. (Freshmen may substitute acceptable ACT or SAT scores for the g.p.a.) Continuing students with a 3.3 g.p.a. or better for twenty-four successive credits are also eligible to enter the Honors Program. No application procedure is necessary to take honors courses. Students may take as few or as many honors courses as they wish; all courses are so noted on the transcript. Qualified students may elect: Honors Program courses, honors sections of departmental courses, departmental courses open only to honors students, honors thesis or essay or project courses, honors-option courses, courses with an honors component, and honors directed studies. Students normally will earn many of their honors-designated credits in courses that also fulfill University General Education Requirements (see page 29).

**Honors Degrees:** Students seeking a degree with Departmental Honors must contact their major department or the Honors Program Office for specific requirements (see the appropriate departmental section of this Bulletin). However, all departmental honors programs require (1) at least twelve credits in honors-designated course work, including (2) a senior essay or thesis or project done in the student's major department, and (3) at least one 4200-level seminar offered through the Honors Program (HON 4200-4280). A g.p.a. of 3.3 (higher in some departments) is required for graduation as well. Any honors-designated course work may be included in the twelve honors credits.

Students pursuing a degree with University Honors will follow a course of study consisting of (1) at least twenty-four credits in honors-designated course work, including (2) a senior thesis or essay or project, and (3) one 4200-level seminar offered by the Honors Program (HON 4200-4280). A g.p.a. of 3.3 or higher is required for graduation. Any honors designated course work may be included in the twenty-four honors credits.

A student who satisfactorily completes a Departmental Honors curriculum or University Honors will receive the appropriate Honors designation on both the diploma and the academic transcript. Approval of the Honors Program is necessary for graduation with Departmental or University Honors.

**Additional Benefits of the Honors Program:** Other features of the Honors Program include special faculty advising, guest lectures, participation in regional and national meetings of the National Collegiate Honors Council, an Honors Student Lounge (2311 Faculty/Administration Building), an Honors Group Study Room in the Undergraduate Library, and the opportunity to participate in honors student groups such as the newsletter staff and the social activities committee. Honors majors may also receive research awards to support their senior theses or projects.

## Honors Sections and Departmental Courses

The following departmental courses either have honors sections or are open only to honors students. These courses (when scheduled) will be listed under the Honors Program in the University Schedule of Classes. A complete list of all departmental honors thesis or essay

courses are listed under the respective departmental headings in this Bulletin and the Schedule of Classes. Full descriptions of courses in the following partial list may be found in the appropriate Departmental sections of this Bulletin.

ANT 2100	(SS) Introduction to Anthropology
ANT 3110	Detroit Area Minorities: Arabs, Hispanics, and African Americans
ANT 4999	Honors Research and Thesis
A H 1120	(VP) Renaissance through Modern Art Survey
BIO 1030	(LS) Biology Today
BIO 1050	(LS) An Introduction to Life
BIO 1500	Basic Life Diversity
BIO 1510	(LS) Basic Life Mechanisms
BIO 6990	Honors Directed Study in Biology
BIO 6997	Senior Seminar: Honors Program
BIO 6999	Terminal Essay: Honors Program
CHM 1410	(PS) Principles I: General and Organic
CHM 1420	Principles II: Organic
CHM 5998	Honors Thesis Research in Chemistry
CLA 1010	(PL) Classical Civilization
CLA 2000	Greek Mythology
CLA 2100	Classical Origins of Western Thought
CRJ 4998	Honors Thesis in Criminal Justice
CSC 4999	Honors Thesis
ECO 2010	(SS) Principles of Microeconomics
ECO 2020	(SS) Principles of Macroeconomics
ECO 4997	Senior Honors Seminar
ENG 1050	(BC) Freshman Honors: English I
ENG 2050	(IC) Freshman Honors: English II
ENG 4990	Directed Study: Honors Program
ENG 4991	Honors Seminar
ENG 4992	Honors Project
FRE 2700	(PL) Anguish & Commitment: European Existentialist Literature
GER 2700	(PL) Anguish & Commitment: European Existentialist Literature
GPH 4990	Directed Study: Honors Program
HIS 1200	(HS) Medieval World
HIS 1300	(HS) Europe and the World: 1500-1945
HIS 1400	(HS) The World Since 1945
HIS 3250	The Family in History
HIS 5995	Honors Seminar
HUM 2200	(PL) Sophomore Honors Colloquium in Humanities
HUM 3030	Music-Theatre-Cinema
ITA 2700	(PL) Anguish & Commitment: European Existentialist Literature
MAT 2010	Calculus I
MAT 2020	Calculus II
MAT 2030	Calculus III
NFS 2210	Human Nutrition
NFS 5990	Honors Directed Study
PHI 1020	(PL) Honors Introduction to Philosophical Systems
PHI 1040	(PL) Honors Introduction to Philosophical Problems
PHI 1860	Honors Introductory Symbolic Logic
PHI 2320	(PL) Introduction to Ethics
PHI 3550	(PL) Metaphysics
PHI 3600	Space, Time and the Philosophy of Physics
PHI 4870	Honors Directed Reading
PHI 4890	Honors Proseminar
PHY 1040	(PS) Einstein, Relativity and Quanta
P S 1010	(AI) American Government
P S 4995	Senior Honors Paper
PSY 1010	(LS) Introductory Psychology
PSY 2600	Psychology of Social Behavior
PSY 4991	Honors Directed Study
PSY 4998	Senior Thesis Seminar
RUS 2700	(PL) Anguish & Commitment: European Existentialist Literature
SOC 2000	(SS) Understanding Human Society

SOC 5870 . . . . . Violence in the Family  
 SPA 2700 . . . . . (PL) Anguish & Commitment: European Existential  
 Literature  
 SPB 1010 . . . . . (OC) Oral Communication: Basic Speech  
 SPB 4996 . . . . . Honors Seminar in Speech Communication  
 UGE 1000 . . . . . (GE) Information Power

## Honors-Option Coursework

The Honors Option allows a student in any course above the 1000 introductory level taught by a regular faculty member to elect honors type work, provided the instructor agrees to furnish commensurate extra instruction. If a grade of 'B' or above is earned in the course and in the additional work, the student will receive honors credit for the course on the transcript. Application forms for the Honors Option are available in the Honors Program Office. The application form must be signed by the instructor and departmental honors adviser and should be returned to the Honors Program Office by the end of the third week of classes. The completed form must then be returned to the Honors Program Office at the end of the semester.

## COURSES OF INSTRUCTION (HON)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **2100 (CLA 2100) (PL) Classical Origins of Western Thought. Cr. 3**

Prereq. for HON students: minimum 3.3 cumulative g.p.a. (3.5 g.p.a. for entering freshmen). Classical foundations of contemporary Western Thought. Topics include: relations between the sexes, democracy, slavery, war, social criticism, rationality, relations between parents and children, literature and the performing arts. (I)

### **4200 (PL) Seminar in Philosophy and Letters. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of meanings given to human experience through study of philosophy or letters. Honors variant of an approved PL course in General Education Program. (I)

### **4210 (SS) Seminar in Social Sciences. Cr. 3**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of major institutions in society and their roles in those institutions. Honors variant of an approved SS course in General Education Program. (I)

### **4220 (LS) Seminar in Life Science. Cr. 3**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of aspects, methods, and important issues in various areas of the life sciences. Honors variant of an approved LS course in General Education Program. (I)

### **4230 (PS) Seminar in Physical Science. Cr. 3**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of modern theory and data, implications and possibilities in the physical sciences. Honors variant of an approved PS course in the General Education Program. (I)

### **4240 (VP) Seminar in Visual and Performing Arts. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Analysis of ways the visual or performing arts may be appreciated, evaluated, and criticized. Honors variant of an approved VP course in the General Education Program. (Y)

### **4250 (HS) Seminar in Historical Studies. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Studies of periods of history in which there has been major transition or change. Honors variant of an approved HS course in General Education Program. (I)

### **4260 (FC) Seminar in Foreign Culture. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Humanistic or social science investigation of peoples and institutions in other cultures. Honors variant of an approved FC course in General Education Program. (I)

### **4270 (AI) Seminar in American Society and Institutions. Cr. 3 (Max. 9)**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. Study of American society, its institutions and social change. Honors variant of an approved AI course in General Education Program. (I)

### **4280 General Honors Seminar. Cr. 3**

Prereq: junior or senior standing; minimum 3.3 cumulative g.p.a. In-depth exploration of important concepts and approaches in liberal studies. Topics to be announced in Schedule of Classes. (I)

### **4990 Directed Study. Cr. 2-4 (Max. 16)**

Prereq: 3.3 g.p.a. and written consent of director. (T)

### **4998 University Honors Thesis. Cr. 3-6**

Prereq: junior or senior standing and consent of University Honors Program Director. Open only to University honors students. For students not concurrently in departmental/college Honors program. (T)

# LINGUISTICS

Office: Room 4025, 51 West Warren; 577-8642  
e-mail: linguistics@wayne.edu  
Web: http://linguistics.wayne.edu

Director: Ellen Barton

## Participating Faculty

Jean Andruski, *Assistant Professor, Audiology and  
Speech-Language Pathology*

Anthony Aristar, *Associate Professor, English*

Catherine Barrette, *Assistant Professor,  
Romance Languages and Literatures*

Ellen Barton, *Professor, English*

Eugenia Casielles-Suarez, *Assistant Professor,  
Romance Languages and Literatures*

D'Jaris Coles, *Assistant Professor, Audiology and  
Speech-Language Pathology*

Walter Edwards, *Professor, English*

Joel Itzkowitz, *Associate Professor, Greek and Latin*

Alexis Manaster-Ramer, *Professor, Computer Science*

T. Michael McKinsey, *Professor, Philosophy*

Bruce Morgan, *Assistant Professor, English*

Ljiljana Progovac, *Associate Professor, English*

Martha Ratliff, *Associate Professor, English*

Aleya Rouchdy, *Professor, Near Eastern and Asian Studies*

Patricia Siple, *Associate Professor, Psychology*

Rebecca Treiman, *Professor, Psychology*

Frances Trix, *Associate Professor, Anthropology*

Lee Wurm, *Assistant Professor, Psychology*

## Degree Programs

*BACHELOR OF ARTS with a major in linguistics*

*\*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. Three core courses are offered on a regular basis: introduction to linguistic theory, phonology, and syntax. The program offers concentrations in the following areas: (a) linguistics and a language, (b) syntax and semantics, (c) language variation and change, (d) language acquisition and processing, (e) sociolinguistics and discourse/pragmatics, and (f) individualized program.

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.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Arts With a Major in Linguistics

**Admission Requirements** for this program are satisfied by the requirements for general undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 29), the College Group Requirements (see page 399), and the following major requirements. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively.

The bachelor of arts program consists of a basic core of general linguistics courses which all majors must complete. In addition to the core courses, the student is to pursue one of the following concentrations: (a) linguistics and a language, (b) syntax and semantics, (c) language variation and change, (d) language acquisition and processing, (e) sociolinguistics and discourse/pragmatics, and (f) individualized program.

Programs are to be planned in consultation with the linguistics program adviser. A student must complete a minimum of twenty-eight credits in core and concentration courses to satisfy the major requirements.

### CORE COURSES:

credits

LIN 5700 — Introduction to Linguistic Theory . . . . .	3
LIN 5290 — Phonology . . . . .	3
LIN 5300 — Syntax . . . . .	3

### CONCENTRATIONS:

#### (a) Linguistics and a Language

The student must complete at least nine credits in advanced language skills or in the linguistics of the chosen language. The nine credits in advanced language skills should be planned in consultation with the adviser.

#### (b) Syntax and Semantics

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 1850 or LIN 1860	
— Introductory Symbolic Logic . . . . .	3
— Honors Symbolic Logic . . . . .	3
LIN 5720 — Topics in Language: Semantics . . . . .	3
LIN 5720 — Topics in Language: Morphology . . . . .	3
LIN 5720 — Topics in Language: Typology . . . . .	3
LIN 5730 — Traditional Grammar . . . . .	3
LIN 6710 — Psycholinguistics . . . . .	3

*Students may select from the following electives:*

LIN 2730 — Languages of the World . . . . .	3
LIN 2750 — African American English . . . . .	3
LIN 3080 — Cognitive Psychology . . . . .	3
LIN 5050 — Advanced Symbolic Logic . . . . .	4
LIN 5200 — Modal Logic . . . . .	4
LIN 5230 — Structure of Arabic . . . . .	3
LIN 5570 — Philosophy of Language . . . . .	4

#### (c) Language Variation and Change

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 2730 — Languages of the World . . . . .	3
LIN 2750 — African American English . . . . .	3
LIN 5720 — Topics in Language: Historical Linguistics . . . . .	3
LIN 5720 — Topics in Language: History of English . . . . .	3
LIN 5720 — Topics in Language: Typology . . . . .	3
LIN 5720 — Topics in Language: Language Variation . . . . .	3



LIN 5760 — American Dialects . . . . .	3
LIN 5770 — Sociolinguistics . . . . .	3

Students may select from the following electives:

LIN 5310 — Language and Culture . . . . .	3
LIN 5320 — Language and Societies . . . . .	3
LIN 5720 — Topics in Language: Morphology . . . . .	3
LIN 5720 — Topics in Language: Field Methods . . . . .	3

**(d) Language Acquisition and Processing**

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 3080 — Cognitive Psychology . . . . .	3
LIN 5080 — Phonetics . . . . .	3
LIN 5360 — Normal Language Acquisition and Usage . . . . .	3
LIN 5750 — Theories of Second Language Acquisition . . . . .	3
LIN 6710 — Psycholinguistics . . . . .	3

Students may select from the following electives:

LIN 2750 — African American English . . . . .	3
PSY 3010 — Statistical Methods in Psychology . . . . .	4
PSY 3090 — Cognitive Psychology Laboratory . . . . .	2
PSY 3120 — Brain and Behavior . . . . .	3
SLP 5300 — Intro. to Speech-Language Pathology . . . . .	3-4
LIN 5310 — Language and Culture . . . . .	3
ARB 5100 — Teaching Arabic as a Foreign/Second Language . . . . .	3
LIN 5760 — American Dialects . . . . .	3

**(e) Sociolinguistics and Discourse/Pragmatics**

Students must elect at least nine credits from the following, in consultation with the adviser:

LIN 2750 — African American English . . . . .	3
LIN 5310 — Language and Culture . . . . .	3
LIN 5320 — Language and Societies . . . . .	3
LIN 5720 — Topics in Language: Pragmatics . . . . .	3
LIN 5720 — Topics in Language: Language Variation . . . . .	3
LIN 5720 — Topics in Language: Language and Gender . . . . .	3
LIN 5760 — American Dialects . . . . .	3
LIN 5770 — Sociolinguistics . . . . .	3

Students may select from the following electives:

LIN 2730 — Languages of the World . . . . .	3
PSY 3010 — Statistical Methods in Psychology . . . . .	4
LIN 5210 — Arabic Sociolinguistics . . . . .	3
ANT 5210 — Anthropological Methods . . . . .	3
LIN 5720 — Topics in Language: Historical Linguistics . . . . .	3
LIN 5730 — Traditional Grammar . . . . .	3

**(f) Individualized Program**

A student may design a concentration to meet an individualized program. The special concentration must be approved by the adviser before the student has completed a maximum of nine credits in the major.

**Minor in Linguistics**

A minor consists of the three core courses (LIN 5700, 5290, 5300) plus nine additional credits in the Linguistics program. Programs should be planned in consultation with an adviser.

**UNDERGRADUATE COURSES (LIN)**

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

**1700 (ENG 1700) English Grammar. Cr. 3**

Intensive course in the rules of English grammar, especially those rules needed for written work in college. Explication of the linguistic principles inherent in the rules of usage. (I)

**1850 (PHI 1850) Introductory Symbolic Logic. Cr. 3**

The logic of propositions; the general logic of predicates and relations. (Y)

**1860 (PHI 1860) Honors Symbolic Logic. Cr. 3**

Open only to Honors students. See LIN 1850. (Y)

**2720 (ENG 2720) (PL) Basic Concepts in Linguistics. Cr. 3**

Prereq: ENG 1020 or equiv. Analysis of the structure and use of language, focusing on English, from the standpoint of current linguistic practice. Topics include: phonetics and sound structure, word structure, syntax, semantics, language origin and history, dialects, language learning, animal communication, and language in social interaction. (T)

**2730 (ENG 2730) Languages of the World. Cr. 3**

Prereq: ENG 1020. Survey of structure of major language families of the world, western and non-western; interrelationships of language and culture; universals and variations of universals in language and culture. (Y)

**2750 (SLP 2750) African American English. Cr. 3**

Structure, content, use, and history of African American English (also known as Ebonics) from its origins to the present. (W)

**3080 (PSY 3080) Cognitive Psychology: Fundamental Processes. Cr. 3**

Prereq: PSY 1010 or equiv. Fundamental theories, concepts, and empirical findings in study of human cognition. Topics include: thinking, problem solving, language comprehension and production, memory and attention. (Y)

**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. (SED 5320) Cr. 3**

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiology approaches. (F)

**5200 (PHI 5200) Modal Logic. Cr. 4**

Prereq: PHI 1850 or PHI 1860 or consent of instructor. The logic of necessity, possibility, and other modal notions as they occur in epistemic and deontic contexts. (B)

**5210 (ARB 5210) Arabic Sociolinguistics. (N E 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. (N E 5230) Cr. 3**

No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

**5290 (ENG 5710) Phonology. Cr. 3**

Prereq: 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 morphology will be presented. (B)

**5300 (ENG 5740) Syntax. Cr. 3**

Prereq: 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. (B)

**5310 (ANT 5310) Language and Culture. Cr. 3**

Prereq: ANT 2100 or ANT 5200 or SOC 2010 or consent of instructor. Interconnections of language and culture in distant and local communities, in contexts where languages are declining or developing anew, and in life cycle and ordinary contexts of daily life. Students explore their own language and cultural backgrounds and those to which they are drawn. (F)

**5320 (ANT 5320) Language and Societies. Cr. 3**

Contemporary linguistic anthropologists see language as a form of social action. How this understanding of language in society has evolved: classic works in linguistic anthropology and contemporary studies. Research in language in society. (W)

**5360 (SLP 5320) Normal Language Acquisition and Usage. (SED 5360) Cr. 3**

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (Y)

**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 or consent of instructor. 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, semantics, sociolinguistics, and pragmatics. Introduction to selected disciplinary and interdisciplinary topics: typology and universals, communication systems, psycholinguistics, sociolinguistics, historical linguistics, anthropological linguistics. (T)

**5720 (ENG 5720) Topics in Language. Cr. 3 (Max. 12)**

Topics such as morphology, semantics, pragmatics, historical linguistics, history of English, pidgins and creoles, language variation, to be announced in Schedule of Classes. (T)

**5730 (ENG 5730) Traditional Grammar. Cr. 3**

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (T)

**5750 (ENG 5750) Theories of Second Language Acquisition. (CLA 5750) (FRE 5750) (GER 5750) (ITA 5750) (SPA 5750) (N E 5750) Cr. 3**

Investigation of theories in second language acquisition. Review of research in development of second language competence: acquisition of phonology, lexicon, semantics, syntax, discourse, and pragmatics. (Y)

**5760 (ENG 5760) American Dialects. Cr. 3**

Survey of chief social and geographic dialects of American English and introduction to theories 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)

**5993 (WI) Writing Intensive Course in Linguistics. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: LIN 5210, 5290, 5300, 5720, 5750, 5760, or 5770.. 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. Intensive training in literature search, linguistic analysis, and the preparation of scholarly written work. (T)

**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)

# MATHEMATICS

Office: 1150 Faculty/Administration Building; 577-2479

Chairperson: Lowell J. Hansen

Associate Chairperson: Daniel Frohardt

Academic Services Officer: Mary Klamo

Web: <http://www.math.wayne.edu>

## Professors

Gregory F. Bachelis, Robert D. Berman, Lawrence J. Brenton, Leon Brown, Robert R. Bruner, Pao-Liu Chow, William S. Cohn, Daniel S. Drucker, Bertram J. Eisenstadt (Emeritus), Daniel E. Frohardt, David H. Gluck, David Handel, Lowell J. Hansen, Chornng-Shi Houh, John M. Irwin (Emeritus), Steven M. Kahn, Rafail Z. Khasminskii, Alexander Korostelev, Tachen Liang, Leonid Makar-Limanov, Charles A. McGibbon, Jose L. Menaldi, Boris Mordukhovich, D. Clarence Morrow (Emeritus), Togo Nishiura (Emeritus), Frank Okoh, Jingyal Pak (Emeritus), Choon-Jai Rhee, Claude L. Schochet, Bertram M. Schreiber, Tze-Chien Sun, Martin T. Wechsler (Emeritus), Gang George Yin

## Associate Professors

John C. Breckenridge, David W. Jonah, John Klein, Guozhen Lu, Kay Magaard, Peter Malcolmson, Stephen A. Williams, Zhimin Zhang

## Assistant Professors

Sarah Ferguson, Kevin Knudson, Brian Taylor, Daoqui Yang

## Lecturers

Leonard Boehm, Patricia Bonesteel, Christopher Nazelli, Donald Sherry

## Adjunct Associate Professor

Lance K. Heilbrun

## Degree Programs

*BACHELOR OF ARTS with a major in mathematics*

*BACHELOR OF SCIENCE with a major in mathematics*

*\*MASTER OF ARTS with a major in mathematics*

*\*MASTER OF ARTS with a major in mathematical statistics*

*\*MASTER OF ARTS in Applied Mathematics*

*\*MASTER OF ARTS in Teaching College 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, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research 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. Consult the department website for latest information: <http://www.math.wayne.edu>

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Mathematics Placement Examination

All students, including transfer and guest students, who plan to take MAT 0995, 1050, 1110 (MAE 5050), 1500, 1800, or 2010 as their first mathematics course at Wayne State, must take the Mathematics Placement Examination. Results of the examination are used in conjunction with other measures, such as ACT scores, to determine into which course the student is placed. Students intending to take MAT 0993 need not take the examination.

All students take the same examination, although there is one part that is required only of those students seeking placement into MAT 2010. Passing at the first level allows entry into MAT 0995 or 1050. Passing at the second level allows entry into MAT 1110 (MAE 5050), 1500, or 1800. Passing at the third level allows entry into MAT 2010.

**Mathematics 0995 and 1050:** Students qualify by having achieved one of the following within the previous two semesters: a) satisfactory score on the Mathematics Placement Examination, or b) a grade of 'S' in MAT 0993. For placement at this level, students should have a command of arithmetic and beginning algebra corresponding approximately to one year of high school algebra.

**Mathematics 1110 (MAE 5050) and 1500:** Students qualify by having achieved one of the following within the previous two semesters: a) satisfactory score on the Mathematics Placement Examination, or b) a grade of at least 'C-minus' in MAT 1050, or c) a grade of 'S' in MAT 0995. For placement at this level, students should have a command of algebra and basic geometry, corresponding approximately to three years of college-preparatory mathematics.

**Mathematics 1800:** Students qualify by having achieved one of the following within the previous two semesters: a) satisfactory score on the Mathematics Placement Examination, or b) a grade of at least 'C-minus' in MAT 1050. For placement at this level, students should have a command of algebra and basic geometry, corresponding approximately to three years of college-preparatory mathematics.

**Mathematics 2010:** Students qualify by having achieved one of the following within the previous two semesters: a) a grade of at least 'C-minus' in MAT 1800; or b) a sufficiently high score on the Mathematics Placement Examination. For placement at this level, students should have a command of algebra, geometry, trigonometry, and elementary functions corresponding approximately to four years of college-preparatory mathematics.

**Examination Periods:** The Mathematics Placement Examination is administered prior to the beginning of each semester. No placement exams will be given for the current semester after the start of classes. A student may take the Examination only once during an examination period. Consult the Testing and Evaluation Office, 698 Student Center (313-577-3400), for details.

**Time Limitation:** Scores on the Mathematics Placement Examination will be honored for only two semesters: the semester immediately following the testing period and the subsequent semester. For the purpose of counting, there are three semesters: Fall, Winter, and Spring/Summer.

**Studying for the Exam:** Students should review thoroughly before taking the exam and should obtain the 'Study Guide' available from the Mathematics Office.

## BACHELOR'S DEGREES

**Admission Requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 15. Undergraduates will be accepted as mathematics majors only after an interview with a departmental adviser. After a student's acceptance as a major, a student should consult a departmental adviser at least once a year to verify progress.

## Degree Requirements

Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements of one of the following programs. All course work must be completed in accordance with the academic procedures of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively.

**Bachelor of Arts:** The candidate must complete one of options A, B, C, D, or E as described below.

**Bachelor of Science:** The candidate must complete:

1. Option A (see below) or one of Options B, C, D, or E plus MAT 5600. (A candidate for the B. S. degree in another department who wishes to include mathematics as a second major may complete Option B, C, D, or E without the addition of MAT 5600.) All majors must take MAT 5420 and MAT 5993 concurrently.
2. Physics 2170/2171 and 2180/2181.
3. Computer Science 1100.
4. One course elected from the following: BIO 1510, CHM 1220/1230, GEL 1010, NFS 2210, and PSY 1010.

The Department recommends that the Group Requirement in Foreign Language be satisfied by the election of French, German, or Russian.

**Grade Point Average:** For majors, the cumulative grade point average in mathematics (MAT) courses must be at least 2.0 ('A' = 4.0).

## Curricular Alternatives

**Combined Curriculum for Secondary Teaching (CCST):** Under the Combined Curriculum (see Teacher Preparation Curricula, page 406), it is possible to earn a bachelor's degree in mathematics concurrent with a secondary teaching certificate. Students in CCST may satisfy the mathematics part of their degree requirements by any of the degree options specified below. Though Option C is specifically designed for such purposes, students are not restricted to Option C. It is recommended but not required that CCST students take MAT 4010, 2860 and 6140.

**Computer Science Concentration:** Mathematics and computer science are so closely related that a great many students who major in mathematics pursue careers or graduate study in computer science. A mathematics degree, being more than just welcome in the field, is highly regarded. For students who would like to complete a double major in mathematics and computer science or a major in mathematics with a minor in computer science, the Department offers a specially designed program described under Option D, below. Under this option, students are exempt from taking MAT 2350 and have a choice of probability courses MAT 5700 or MAT 2210. Additionally, students can take certain courses that satisfy both mathematics and computer science requirements simultaneously. Specifically, MAT 5100 can be used as a computer science elective and one of CSC 5860, 5870, 6500, 6620, or 6991 (depending on the topic) can be used as a mathematics elective.

**Actuarial Science Concentration:** Students embarking on a career as an actuary will be expected to pass certain exams administered by the profession. Option E (below) provides the coursework covered by the first several exams: Calculus, Linear Algebra, Probability and Statistics, Numerical Analysis and Operations Research. The Department also offers MAT 3310, a problem-solving review course in Calculus and Linear Algebra that is designed to prepare students for the first actuarial science examination.

## Option A

This option is recommended for students who plan to pursue graduate study in mathematics.

1. The Basic Sequence (MAT 2010, 2020, 2030, 2250, and 2350).
2. Advanced Calculus (MAT 5070).
3. Algebra I (MAT 5420/MAT 5993).
4. Analysis I (MAT 5600).
5. Probability (MAT 5700).
6. Algebra II or Analysis II (MAT 5430 or 5610).
7. One course elected from the following: MAT 5230, 5430, 5520, 5530, 5610, and 5800.
8. One additional course elected from (a) mathematics courses numbered above 5000, excluding MAT 5180, 5190, 6130, 6140, 6150; or from (b) CSC 6500, 6620, or 6991 (depending on the topic).

## Option B

This option is for students interested in a broad range of topics.

1. The Basic Sequence (MAT 2010, 2020, 2030, 2250, and 2350).
2. MAT 5070.
3. MAT 5420/5993.
4. MAT 5700.
5. (MAT 5600 is required for the B. S. degree. It is not required for the B. A. degree.)
6. Three additional mathematics courses numbered above 5000, excluding MAT 5180, 5190, 6130, 6140, 6150; or two such courses and one elected from the following: CSC 6500, 6580, 6620, and 6991 (depending on the topic). Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990.

## Option C — Concentration in Secondary Teaching

This option is recommended for students in the Combined Curriculum for Secondary Teaching.

1. MAT 2010, 2020, 2030, and 2250.
2. MAT 2210 and 2860.
3. MAT 4010.
4. MAT 5070.
5. MAT 6140.
6. MAT 5400 or 5520.
7. MAT 5420/5993.
8. (MAT 5600 is required for the B. S. degree. It is not required for the B. A. degree.)
9. One additional mathematics course numbered above 5000, excluding MAT 5180, 5190, 6130, 6140, 6150, or one computer science course numbered above 5100.

## Option D — Concentration in Computer Science

This option is available only to students who complete a second major or a minor in computer science. Students should consult the Computer Science Department for their major and minor requirements.

1. MAT 2010, 2020, 2030, and 2250.
2. MAT 2860.
3. MAT 5070.

4. MAT 5100.
5. MAT 5420/5993.
6. MAT 5700 or 2210.
7. (MAT 5600 is required for the B. S. degree for students completing a minor in computer science. It is not required for students completing a double major in mathematics and computer science, nor is it required for the B. A. degree.)
8. Two additional mathematics courses numbered above 5000, (excluding MAT 5180, 5190, 6130, 6140, 6150), or one such course and one course elected from: CSC 5860, 5870, 6500, 6620, and 6991 (depending on the topic). Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990.

NOTE: The Computer Science Department accepts MAT 5100 as a computer science elective.

## Option E — Concentration in Actuarial Science

This Option is for students interested in a career as an actuary.

1. MAT 2010, 2020, 2030, and 2250.
2. MAT 5070.
3. MAT 5100.
4. MAT 5420/5993.
5. MAT 5700.
6. MAT 5770.
7. MAT 5800.
8. (MAT 5600 is required for the B. S. degree. It is not required for the B. A. degree.)
9. MAT 2350 or one additional mathematics course numbered above 5000, (excluding MAT 5180, 5190, 6130, 6140, 6150), or one computer science course numbered above 5100.

## Honors Program

In order to graduate with honors in mathematics, students must satisfy the following criteria:

1. Completion of the requirements for a Bachelor of Science degree.
2. An overall grade point average of 3.3 or above at graduation.
3. Completion of at least fifteen credits in honors-designated course work, including at least one 4000-level Honors Program seminar; and other courses such as: all or part of the honors calculus sequence, honors courses which fulfill general distribution requirements, and honors option courses (see Honors Program, page 430).
4. Completion of a Senior Task, for which a student registers under MAT 4990, Directed Study: Honors Program. These MAT 4990 honors credits count toward the fifteen-credit requirement.

**Honors Sections in the Basic Sequence:** Honors sections in MAT 2010 and 2030 are taught in the fall semester and in MAT 2020 are taught in the winter semester. A 3.0 or higher grade point average in Basic Sequence courses already taken is required for admittance. (See also 'Emerging Scholars Program,' below.)

## Emerging Scholars Program

The Emerging Scholars Program is a special honors program at the levels of MAT 1800, 2010, and 2020, that features a challenging problem-solving workshop attached to the regular class. The program seeks dedicated, hard-working students who want to excel in mathematics. Students who place into the level below MAT 1800 are encouraged to enroll in MAT 1050 as preparation for the Program. Contact the Department for further information.

## 'AGRADE' Program

The Department of Mathematics participates in the College 'AGRADE' (Accelerated Graduate Enrollment) Program, in which qualified students can obtain a master's degree within one year of receiving the bachelor's degree. For more details about the 'AGRADE' Program, contact the Director of the College's Honors Program (577-3030), the Department Chairperson, or the Graduate Office of the College (577-2960).

## Minor in Mathematics

The requirements for a Minor in Mathematics consist of MAT 2010, 2020, 2030, 2250, and either (a) three mathematics courses numbered above 5000, or (b) MAT 2150 or 2350 or 2210 or 2860 and two mathematics courses numbered above 5000. If MAT 2210 is elected, MAT 5700 may not be used to meet the requirement. In both (a) and (b), the courses MAT 5180, 5190, 6130, 6140, and 6150 do not satisfy mathematics minor requirements. A cumulative grade point average of 2.0 or better must be maintained in these courses. A student who is considering a minor should consult a departmental adviser.

## Scholarships and Awards

*Department of Mathematics Outstanding Undergraduate Award:* A monetary award open to graduating seniors majoring in mathematics.

*Department of Mathematics Undergraduate Scholarship:* Scholarships are available to entering freshmen and current undergraduates who are either majoring in mathematics or planning to major in mathematics, or who have successfully participated in the Department's Honors Program or Emerging Scholars Program.

*Wayne State University Math Corps Scholarship:* Scholarships are available to entering freshman and current undergraduates who were members of the WSU Math Corps in Middle School or High School.

## Advanced Courses for Non-Majors

Because of the fundamental role that mathematics plays in all types of scientific and technical endeavor, the advanced course offerings of the Mathematics Department must serve a group considerably larger than those preparing for a career in mathematics exclusively.

### Economics, Business Administration and Computer Science:

The following basic subjects are recommended to master's degree candidates as preparation for work in their profession; they also provide a solid background for students who intend to pursue doctoral studies after completion of the master's program:

Numerical Methods . . . . .	MAT 5100
Algebra . . . . .	MAT 5420
Operations Research . . . . .	MAT 5770
Probability Theory . . . . .	MAT 5700
Statistical Methods, Applied Time Series & Design of Experiments . . . . .	MAT 5800, 5830

**Engineering and Physical Applications:** The Mathematics Department has several sequences in applied mathematics that provide experienced engineers and scientists from industry and government the means to acquire and maintain the technical competence needed to work at the frontiers of their fields:

Numerical Methods . . . . .	MAT 5100
Applied Analysis . . . . .	MAT 5220, 5230
Probability Theory and Random Processes . . . . .	MAT 5700, 7700, 7710
Graph Theory and Combinatorial Mathematics . . . . .	MAT 6400, 6410
Differential Geometry . . . . .	MAT 5530

Students who feel that they eventually would like to pursue mathematical studies beyond the level of the above sequences should make every effort to take the mathematics sequences that begin with MAT 5600, and 5420, respectively, and MAT 6600. These courses

will help them to understand and work with abstract concepts in advanced courses.

## Statistics

Beginning students are referred to Statistics (STA) 1020 or MAT 2210. Those whose work demands a good foundation in mathematical statistics are referred to MAT 5700 and 5800. MAT 5830 is useful for students interested in applied statistics.

In addition to the interdepartmental course listed in the Courses of Instruction section below, several specialized advanced courses in statistics are offered by individual departments:

ECO 4100 —Economics and Business Statistics  
ECO 5100 —Introductory Statistics and Econometrics  
ECO 6100 —Introduction to Econometrics  
ECO 7100 —Econometrics I  
ECO 7110 —Econometrics II  
MAT 2210 —Elementary Probability and Statistics  
MAT 5700 —Introduction to Probability Theory  
MAT 6830 —Design of Experiments  
MAT 7700 —Advanced Probability Theory I  
MAT 7710 —Advanced Probability Theory II  
MAT 7870 —Topics in Statistics  
PSY 3010 —Statistical Methods in Psychology

For descriptions of these courses and others, see the respective departmental sections of this bulletin.

# UNDERGRADUATE COURSES

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

*NOTE: A minimum grade of 'C-minus' is required in every prerequisite course.*

## MATHEMATICS (MAT)

### Courses Open Only to Undergraduates

#### **0991 (MC) Basic Concepts in Mathematics. Cr. 3**

Prereq: ENG 1020; failure in mathematics proficiency test. Offered for S and U grades only. No degree credit. Introduction to the study of algebra, geometry, probability and statistics. (Former MAT 1080.) (T)

#### **0993 Beginning Algebra. Cr. 3**

Offered for S, M, and U grades only; no degree credit. Review of arithmetic: fractions, decimals, percent, roots, absolute value; algebra: exponents, scientific notation, polynomials, factoring, rational expressions, solving and graphing linear equations, slope; geometry: basic objects and terminology. (T)

#### **0995 Intermediate Algebra. Cr. 3**

Prereq: one of the following within previous two semesters: satisfactory score on placement exam or grade of S in MAT 0993. Offered for S, M, and U grades only; no degree credit. Exponents and radicals, solving polynomial and other types of equations and inequalities, graphs and systems of linear equations, introduction to functions, elementary geometry. (T)

#### **1040 Foundations of Algebra with Trigonometry. Cr. 3-4**

Offered for S and U grades only. No degree credit. Coreq: MAT 1050; mathematics, mathematics education, science, and engineering majors should elect MAT 1040 for 4 cr.; all students must elect classes with the same class ID for MAT 1040 and MAT 1050. (T)

#### **1050 Algebra With Trigonometry. Cr. 2-3**

Prereq: one of the following within previous two semesters: satisfactory score on placement exam or grade of S in MAT 0993; coreq: MAT 1040; mathematics, mathematics education, science, and engineering majors should elect MAT 1050 for 3 cr.; all students must elect classes with the same Class ID for MAT 1040 and MAT 1050). Algebra: properties of the real number system, solving equations and inequalities, lines, introduction to functions and graphing, exponents and logarithms. Geometry and trigonometry: basic concepts, introduction to trigonometric functions, solving triangles. Engineering, mathematics, mathematics education, or science majors should elect the four-credit version of this course, MAT 1050 PREP, which includes problem solving and elements of precalculus and Calculus. (T)

#### **1800 Elementary Functions. Cr. 4**

Prereq: one of following within previous two semesters: satisfactory score on placement exam; or MAT 1050. Only two degree credits after MAT 1500. The properties and graphs of polynomials, rational functions, trigonometric functions, exponentials and logarithms. (T)

#### **1860 Discrete Mathematics for Computer Science I. Cr. 4**

Prereq: MAT 1800. Logic, sets, induction, relations, functions, sequences, matrices, combinatorics, applications to computer science. (T)

#### **1870 Discrete Mathematics for Computer Science II. Cr. 4**

Prereq: MAT 1860 or consent of instructor. Analysis of algorithms, recurrence relations, combinatorics, graphs, Boolean algebra, application to computer science. (T)

#### **1990 Precalculus Workshop. Cr. 2**

Coreq: designated section of MAT 1800. Offered for S and U grades only. Open only to students in Emerging Scholars Program. Students work cooperatively in groups to solve challenging problems based on precalculus; both computational and theoretical mathematics. Learning through discovery rather than by lecture. (T)

#### **2010 Calculus I. Cr. 4**

Prereq: satisfactory score on placement exam or MAT 1800 within previous two semesters. No credit after MAT 1510. Concept and interpretation of the derivative and integral; differentiation of rational and transcendental functions; the definite integral; area under a curve; the indefinite integral. (T)

#### **2020 Calculus II. Cr. 4**

Prereq: MAT 2010. Review definition of definite integral and fundamental theorem of calculus. Techniques of integration; approximate integration; improper integrals; applications of integration; introduction to differential equations; approximating functions. (T)

#### **2030 Calculus III. Cr. 4**

Prereq: MAT 2020. Multivariable calculus with applications. Vectors and vector functions in two and three dimensions; functions of several variables; differentiation; integration; vector calculus. (T)

#### **2110 Calculus Workshop I. Cr. 2**

Coreq: designated sections of MAT 2010. Offered for S and U grades only. Open only to students in Emerging Scholars Program. Students work cooperatively in groups to solve challenging problems based on MAT 2010. Computational and theoretical mathematics, taught through discovery rather than by lecture. (T)

#### **2120 Calculus Workshop II. Cr. 2**

Coreq: designated sections of MAT 2020. Offered for S and U grades only. Open only to students in Emerging Scholars Program. Students work cooperatively in groups to solve challenging problems based on

MAT 2020. Computational and theoretical mathematics, taught through discovery rather than by lecture. (W)

**2150 Differential Equations and Matrix Algebra. Cr. 4**

Prereq: MAT 2030 or equiv. Only one degree credit after MAT 2350. Differential equations and applications; basic operations of matrices from linear algebra. (T)

**2210 (MAT 6150) Elementary Probability and Statistics. 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, the central limit theorem, estimation and hypothesis testing. (T)

**2250 Elementary Linear Algebra. Cr. 3**

Prereq: MAT 2020. Topics include: systems of linear equations, matrices, vector spaces, inner products, linear transformations and eigenvalues. Applications presented. (T)

**2350 Elementary Differential Equations. Cr. 3**

Prereq: MAT 2030 or equiv. No degree credit after MAT 2150. Topics include: first order equations, higher order linear equations, Laplace transforms, linear systems. Applications presented throughout the course. (T)

**2860 (MAT 6130) Discrete Mathematics. Cr. 4**

Prereq: MAT 2020. No credit after MAT 1870. Foundations of mathematics: logic, sets, functions, sequences. Algorithms. The integers. Matrices. Mathematical reasoning: methods of proof, induction, recursive definitions. Combinatorics. Relations: recurrence relations, equivalence relations, orderings. Graph theory and trees. Boolean algebra. Applications to computer science. (Y)

**3310 Actuarial Mathematics. Cr. 1**

Prereq: MAT 2030 and 2250. Problem solving course based on material covered on first Actuarial Exam. Subjects include: differential and integral calculus, multivariate calculus, elementary linear algebra. (Y)

**3600 Honors Topics in Mathematics. Cr. 3**

Prereq: admission to University Honors Program, consent of instructor. Special topics in a branch of pure or applied mathematics, explored in depth. (Y)

**4010 Introduction to Abstract Mathematics and Proof Writing. Cr. 3**

Prereq: MAT 2250 or 2860 or consent of instructor. Introduction to logic (negation, conditional statements, quantifiers), sets, functions and equivalence relations. Structure of standard proofs and proof writing in number theory, topology and algebra. (F,W)

**4990 Directed Study: Honors Program. Cr. 1-4 (Max. 8)**

Prereq: admission to Honors Program by Undergraduate Committee. (I)

## Courses Open to Undergraduates and Graduates

**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 Advanced Calculus. Cr. 4**

Prereq: MAT 2030, and 2250 or 2350. The real numbers; limits; continuity; sequences and series of functions; uniform convergence; power series; Fourier series; basic properties and topology of Euclid-

ean  $n$ -space; transformations, the Jacobian; implicit and inverse function theorems; improper integrals and functions defined by improper integrals; Lagrange multipliers. (T)

**5100 Numerical Methods I. (SCP 7200) Cr. 3**

Prereq: MAT 2030, 2250 and CSC 1020 or familiarity with a programming language. Topics include: numerical errors, solutions of nonlinear equations, interpolation, approximation, numerical integration and differentiation, and matrices and systems of linear equations. (Y)

**5120 Number Theory and Abstract Algebra for Middle School Teachers. (MAE 5120) Cr. 3**

No credit towards major in mathematics or secondary mathematics. No graduate credit for MAT 5120. Prereq: MAT 1120 or MAE 5060, and MAT 1800. Topics from elementary theory of numbers and abstract algebra underpinning middle school mathematics curriculum. (F,W)

**5220 Partial Differential Equations and Boundary Value Problems. Cr. 4**

Prereq: MAT 5070. Boundary value problems of mathematical physics; Sturm-Liouville problems; eigenvalues and eigenfunctions; Green's functions; variational principles; the Rayleigh-Ritz method. (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)

**5350 (PHI 5350) Logical Systems I. 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 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 (PHI 5390) Logical Systems II. Cr. 4**

Prereq: PHI 5350 or MAT 5350 or consent of instructor. 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. Unique factorization theorem; order of magnitude of arithmetic functions; congruences, quadratic residues, law of reciprocity; continued fractions. (Y)

**5410 Applied Linear Algebra. Cr. 4**

Prereq: MAT 2030 and 2250, or consent of instructor. Gaussian elimination, vector spaces, orthogonality, least squares approximation, Householder orthonormalization, definite and semidefinite matrices, Rayleigh's quotient. Applications such as differential equations, Markov processes, linear programming, networks, game theory. (B)

**5420 Algebra I. Cr. 4**

Prereq: MAT 2030 and 2250. 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) and vector spaces: basis, dimension, linear transformations. (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, poly-

nomial 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 2250 or 2350. 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, complexes, 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 Mobius 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 spaces, together with selected applications, such as computational geometry, mathematical elements of computer graphics, as chosen by instructor. (I)

**5600 Introduction to Analysis I. Cr. 4**

Prereq: MAT 5070 or consent of instructor. Completeness, convergence, compactness and continuity in the context of Euclidean spaces; applications to differential and integral calculus. (T)

**5610 Introduction to Analysis II. Cr. 3**

Prereq: MAT 5600. 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; discrete and continuous random variables; expectations; normal, Poisson and binomial distribution; joint, marginal and conditional distribution functions; law of large numbers; central limit theorems. (T)

**5710 Introduction to Stochastic Processes. Cr. 3**

Prereq: MAT 5700 or consent of instructor. Non-measure-theoretic introduction to the theory of stochastic processes and its applications, with emphasis on Markov processes and stationary processes with both discrete and continuous parameters. (B)

**5770 Mathematical Models in Operations Research. Cr. 3**

Prereq: MAT 2030, 2250, and 2210 or 5700 or consent of instructor. Mathematical models (deterministic and/or probabilistic) applied to dynamic programming; games; queues and inventories. (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: college courses in statistics and calculus, or consent of instructor. Time series models; statistical analysis in the time domain and examples; statistical analysis in the frequency domain and examples. (B)

**5870 Methods of Optimization. Cr. 3**

Prereq: MAT 2350. Introduction to basic mathematical theory and computational methods of optimization; optimality conditions in various optimization problems and 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 adviser 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)

**5993 (WI) Writing Intensive Course in Mathematics. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor, MAT 2030 and 2250; coreq: MAT 5420. 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. (T)

**6130 (MAT 6130) Topics in Mathematics for High School Teachers I. Cr. 4**

Prereq: MAT 2020. No credit after MAT 1870. Foundations of mathematics: logic, sets, functions, sequences. Algorithms. The integers. Matrices. Mathematical reasoning: methods of proof, induction, recursive definitions. Combinatorics. Relations: recurrence relations, equivalence relations, orderings. Graph theory and trees. Boolean algebra. Applications to computer science. (Y)

**6140 Topics in Mathematics for High School Teachers II. Cr. 3**

Prereq: MAT 2030, and 2250 or 2350. Axiomatic geometry: logic, methods of proof, models; Hilbert's axioms; the Parallel Postulate; "Neutral," Euclidean and non-Euclidean geometries; Hyperbolic geometry; Poincare models. (Y)

**6150 (MAT 6150) Topics in Mathematics for High School Teachers III. 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)

**6400 Graph Theory. Cr. 4**

Prereq: MAT 5420 or consent of instructor. Basic concepts of graphs and directed graphs; trees; cycles and circuits; connectivity; traversability; planarity; colorability. Further topics from among factorization, line-graph, coverings and independence, graphs and matrices, automorphism groups, enumeration, Ramsey theory, hypergraphs, packing theory, network flows. (B)

**6410 Combinatorics. Cr. 4**

Prereq: MAT 5420 or consent of instructor. Enumeration: the classical theory, principle of inclusion and exclusion, generating functions, the Mobius function; combinatorial designs including Latin squares, difference sets, projective geometries, Hadamard matrices, construction problems; transversal theory; Ramsey's theorem; coding theory; partial orders; lattices. (B)

**6500 Topology I. Cr. 4**

Prereq: MAT 5610 or consent of instructor. 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 or consent of instructor. 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)

## Service Courses

### 1110 Mathematics for Elementary School Teachers I (MAE 5050). Cr. 3

Undergrad. prereq: one of following within previous two semesters: satisfactory score on placement exam; or at least C-minus in MAT 1050 or grade of S in MAT 0995; post-baccalaureate students: satisfy the undergraduate placement or completion of college math course at level of pre-Calculus or above. Undergrads. and post-baccalaureate students must register for MAT 1110, not MAE 5050; grad. students must register for MAE 5050, not MAT 1110, with consent of instructor. No degree credit in Colleges of Science or Liberal Arts. Open only to students in teacher preparation curricula. Whole numbers, integers, geometry. (T)

### 1120 Mathematics for Elementary School Teachers II (MAE 5060). Cr. 3

Prereq: MAT 1110. Undergrad. and post-baccalaureate students must register for MAT 1120, not MAE 5060; grad. students must register for MAE 5060, not MAT 1120. No degree credit in Colleges of Science or Liberal Arts. Open only to students in teacher preparation curricula. Rational numbers, geometry, probability, statistics, number theory. (T)

### 1500 Finite Mathematics for the Social and Management Sciences. Cr. 3

Prereq: one of following within previous two semesters: satisfactory score on placement exam; or at least C-minus in MAT 1050; or grade of S in MAT 0995. Only one degree credit after MAT 1800. Finite mathematical methods for model building in the social and management sciences. Polynomial, exponential, and logarithmic functions, matrices, and linear programming. (T)

### 3430 Applied Differential and Integral Calculus. (E T 3430) Cr. 4

Prereq: MAT 1800. No degree credit in Colleges of Science and Liberal Arts. Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. (T)

### 3450 Applied Calculus and Differential Equations. (E T 3450) Cr. 4

Prereq: MAT 3430. No degree credit in Colleges of Science and Liberal Arts. Continuation of MAT 3430, including logarithmic and exponential functions, first and second order ordinary differential equations, vectors, polar coordinates, Laplace transforms, Taylor series, and Fourier series. (T)

### 5130 Problem Solving for Middle School Teachers. (MAE 5130) Cr. 3

Prereq: satisfactory score on placement exam or MAT 1800, within previous two semesters. No credit towards a mathematics major or secondary mathematics education major; no graduate credit for MAT 5130. 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. (S)

## STATISTICS (STA)

### 1020 Elementary Statistics. (SOC 5280) Cr. 3

Prereq: one and one-half years high school algebra. Not to be counted as a mathematics course by mathematics majors. Descriptive statistics, correlation and regression, notions in probability, binomial and normal distributions, testing hypothesis. (T)

# NUTRITION and FOOD SCIENCE

Office: 3009 Science Hall; 577-2500

Web: <http://www.science.wayne.edu/~nfs>

Chairperson: David M. Klurfeld

Administrative Assistant: Laura Lee Birnie-Lindemann

### Professors

Mary Jane Bostick (Emerita), David M. Klurfeld, K.-L. Catherine Jen, Leora A. Shelef

### Assistant Professors

Nikhil V. Dhurandhar, Thomas V. Fungwe, Ahmad R. Heydari, Pramod Khosla

### Lecturers

Tonia Reinhard, Mary E. Thiede

## Degree Programs

*BACHELOR OF ARTS with a major in nutrition and food science*

*BACHELOR OF SCIENCE with a major in nutrition and food science*

*BACHELOR OF SCIENCE in Dietetics*

*POST BACHELOR CERTIFICATE in Dietetics*

*\*MASTER OF ARTS with a major in nutrition and food science*

*\*MASTER OF SCIENCE with a major in nutrition and food science*

*\*DOCTOR OF PHILOSOPHY with a major in nutrition or food science*

The courses offered by this department are designed for students in three distinct groups: (a) those majoring in nutrition and food science who are interested in entering either the nutrition or the food science profession; (b) those interested in entering the dietetics field; and (c) those majoring in nutrition and food science with the intention of entering non-technical positions in a variety of food businesses.

## BACHELOR'S DEGREES

**Admission Requirements:** See the general requirements for undergraduate admission to the University, page 15. Students contemplating a major program in Nutrition and Food Science should consult with the assigned undergraduate departmental adviser as soon as possible, and no later than the beginning of the sophomore year. Transfer students should consult with the assigned undergraduate departmental adviser during the semester prior to their transfer.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits of course work including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements of one of the following programs. All course work must be completed in accordance with the academic regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## Bachelor of Arts with a Major in Nutrition and Food Science

This curriculum allows students to major in nutrition and food science while following a broader program in liberal arts, science, and business. The degree requires a less rigorous background in chemistry and other natural science courses than is required for the B.S. degree in this discipline. Employment opportunities include sales, customer relations, university or school food services, industrial and commercial food service systems, hospitals, nursing homes or extended care food service operations.

**Admission Requirements:** See above under Bachelor's Degrees.

**DEGREE REQUIREMENTS:** See above under Bachelor's Degrees.

**Major Requirements:** Course requirements for this bachelor's degree consist of courses offered by Wayne State University and courses available from local community colleges on a dual enrollment basis with the University. Requirements are as follows:

### UNIVERSITY CORE COURSES

Nutrition and Food Science 2130, 2140, 2210, 2220, 5130, 5140, 5230,

6160, 6850 and an additional five credits in upper division NFS courses

Biological Sciences 1510

Chemistry 1220, 1230, 1240, 1250, 2220

Economics 2010

Psychology 1020

Management 4510

Statistics 1020

### COMMUNITY COLLEGE COURSES

Candidates for the degree may complete one course in each of the following areas: sanitation, food management, quantity food purchasing, and quantity food production. As many as twelve credits from these courses can be applied to the degree either by transfer from previous community college work or by concurrent enrollment with a local community college. For an approved list of courses from area institutions, consult the Department.

## Bachelor of Science with a Major in Nutrition and Food Science

This program is designed for science-oriented students who are interested in the various food and nutrition professions. Students are prepared for these professions by the integration of chemistry and the biological sciences with courses in food science and nutrition. Employment opportunities may be found in various phases of food processing, research and development, public health, and community education, as well as in positions in state and federal regulatory agencies dealing with food products. The program provides good preparation for medical school application. Students should consult an adviser for program planning.

**Admission Requirements:** See above under Bachelor's Degrees.

**DEGREE REQUIREMENTS:** See above under Bachelor's Degrees.

**Major Requirements:** Students must complete eighty-three credits in science courses of which at least thirty-one must be in the major subject, nutrition and food science:

### CORE COURSES

Nutrition and Food Science 2130, 2140, 2210, 2220, 5130, 5140, 5230, 5250,

6160, 6850 and an additional three credits of upper division course

work in Nutrition and Food Science.

Biological Sciences 1500, 1510, 2200, 2870

Chemistry 1220, 1230, 1240, 1250, 2220, 2230, 2280, 2290

Mathematics 1800

Physics 2130, 2131, 2140, 2141

Statistics 1020

## Bachelor of Science in Dietetics

The coordinated program in dietetics is designed to prepare registration-eligible generalist practitioners. The special body of knowledge for the profession is the science of nutrition; skills for delivery of nutritional care encompass a number of closely-allied fields, such as food science, business, management, psychology, social sciences, economics, and communication. The strong base in science and other areas is developed through selection of relevant prerequisite and supporting cognate courses, and in the professional courses. Students apply the knowledge gained in supervised practice settings in food service, community and clinical dietetics. Graduates of the program receive a Bachelor of Science in Dietetics degree and are eligible to write the national registration examination for professional certification without the need for a separate internship. The dietetics program is currently granted accreditation status by the American Dietetic Association Council on Education Division of Education Accreditation/Approval, a specialized accrediting body recognized by The Council on Post-secondary Accreditation and the United States Department of Education.

**Admission Requirements:** Admission to this program is competitive and open only to students with at least junior standing in the College after completion of the core courses indicated below by an asterisk (\*). Program application should be made during the winter semester preceding the fall semester of anticipated entry into the program. Transfer and post-baccalaureate students must meet the pre-professional science requirements (see core courses, below) before acceptance into the program. Transferability of credit must be verified by the College advisers and dietetics faculty. Additional costs relating to the professional component of the program (uniform, liability insurance, physical examination, transportation) are the responsibility of the student.

### CORE COURSES:

Nutrition and Food Science: 2130\*, 2140\*, 2210\*, 2220\*, 5130, 5140, 5220,

5230, 5250, 5350, 6850

Anthropology 2100\* or Sociology 2000\*

Biological Sciences 1510,\* 2200,\* 2870 \*

Chemistry 1220\*, 1230\*, 1240\*, 1250\*, 2220\*

Economics 2010\*

Psychology 1020\*

Statistics 1020\*

Management 4510 \*

**DEGREE REQUIREMENTS:** Candidates for this degree must complete at least 120 credits including the above core courses, the following sequence in dietetics, as well as any remaining courses necessary to satisfy the College Group Requirements and the University General Education Requirements (see pages 399 and 29 , respectively).

### DIETETICS

Nutrition and Food Science 4205, 4210, 4220, 5200, 5360

## Honors Program

**Admission:** A minimum grade point average (g.p.a.) of 3.3 is required for enrollment in the Department of Nutrition and Food Science Honors program. Prospective Honors students should consult with an adviser in the Department during the freshman year. Transfer students or others with a Nutrition and Food Science g.p.a. of 3.5 may be accepted into the program without having taken the NFS 2210 Honors section.

### Honors Requirements:

1. Enroll in the Honors section of Nutrition and Food Science 2210.
2. Complete at least one 4000-level Honors Program seminar.
3. Complete at least three credits in an independent research project (NFS 5996).
4. Complete at least fifteen credits in honors-designated course work, including the above. The additional course work may be obtained in this department by taking NFS 5990, Honors Directed Study, or an Honors option of upper-level NFS courses, or in any other department of the College.

Students must have an overall grade point average of 3.3 and maintain an overall grade point average of at least 3.0 in the major to be awarded the Honors Degree.

### Minor in Nutrition and Food Science

Completion of the minor in Nutrition and Food Science requires a minimum of eighteen credits in Nutrition and Food Science courses as follows:

Nutrition and Food Science 2130, 2140, 2210, and an additional eleven credits in upper division NFS courses

### 'AGRADE' —Accelerated Graduate Enrollment

Qualified seniors in Nutrition and Food Science having not less than a 3.5 g.p.a. may enroll simultaneously in the undergraduate and graduate program and apply a maximum of fifteen credits towards both the bachelor's and master's degrees in nutrition and food science. Students may apply for the Program as soon as they complete ninety credits towards the undergraduate degree. Graduate courses taken as part of the 'AGRADE' Program are assessed undergraduate rate tuition.

### Post Bachelor Certificate in Dietetics

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 February 15 for program entry the following semester.

**CERTIFICATE REQUIREMENTS:** Students with a dietetics degree generally will have fulfilled all prerequisite course requirements; see Core Courses for the Bachelor of Science in Dietetics degree, above. Any 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-plus' or below must be repeated. Dietetics courses include Foodservice Management, Medical Nutrition Therapy (also called Clinical Nutrition or Diet Therapy), and Community Nutrition. Following successful completion of all Core Courses in the undergraduate degree program, the student will elect the Core Courses for the Post Bachelor Certificate in Dietetics.

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 Core Courses for the Bachelor of Science in Dietetics, or their equivalents at other universities. Students in this category should consult with a dietetics adviser at their earliest

opportunity. Following successful completion of all Core Courses in the undergraduate degree program, the student will elect the Core Courses for the Post Bachelor Certificate in Dietetics.

### CORE COURSES

NFS 4205, 4210, 4220, 5200, 5360, 6850

### UNDERGRADUATE COURSES (NFS)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

#### 2030 (LS) Introductory Nutrition. Cr. 3

Meets General Education Laboratory Requirement only when taken concurrently with coreq: NFS 2220. Food as a carrier of nutrients; food availability; nutrient utilization including digestion, metabolism and excretion. Patterns of food consumption based on biological, psychological and social needs; and anthropological findings. (T)

#### 2130 Introductory Food Science. Cr. 3

Prereq: one college-level chemistry course. Chemical, physical and biological properties of foods which affect their keeping quality, nutritional and organoleptic values. For students interested in the scientific study of foods. (F,W)

#### 2140 Introductory Food Science Laboratory. Cr. 1

Coreq: NFS 2130. Experimental study of principles discussed in NFS 2130. For students interested in the scientific study of food. Material fee as indicated in the Schedule of Classes. (F,W)

#### 2210 Human Nutrition. Cr. 3-4

Prereq: CHM 1030, BIO 2870. Students in honors section elect for four credits. Principles of the science of nutrition. Emphasis on physiological requirements of nutrients for human growth, development and maintenance within the life cycle. Honors students participate in additional reading, discussion and presentations. (T)

#### 2220 Nutrition Laboratory. Cr. 1

Coreq: NFS 2030 or 2210. Laboratory course for introductory nutrition. Material fee as indicated in the Schedule of Classes. (F,W)

#### 4205 Nutritional Assessment. Cr. 2

Open only to students in coordinated dietetics program. Introduction to the practice of dietetics including coordinated education, role components, the nutrition care process, and medical terminology. Practice in basic skills in dietetics: interviewing, diet analysis including use of computers, and anthropometric measurement and analysis. (F)

#### 4210 Dietetic Practice I. Cr. 10

Prereq: NFS 3220, 5230, 5250; coreq: 5200. Open only to students in coordinated dietetics program. Supervised practice in specialty and critical care areas and in community settings; experiences in developing, implementing, evaluating and documenting care plans for individuals needing specialized nutrition support and nutrition education programs for health promotion and for high risk groups. Material fee as indicated in the Schedule of Classes. (F)

#### 4220 Dietetic Practice II. Cr. 10

Prereq: NFS 4210. Open only to students in coordinated dietetics program. Near entry-level practice experience in management of nutritional care and nutrition services in the three areas of dietetic practice: food service and clinical and community dietetics. Material fee as indicated in the Schedule of Classes. (W)

#### 4990 Directed Study. Cr. 1-4

Prereq: consent of instructor. (T)

**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. (W)

**5140 Laboratory Techniques in Nutrition and Food Science. Cr. 4**

Prereq: NFS 2130 and 2210 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. (W)

**5200 Advanced Dietetics. Cr. 3**

Prereq: NFS 4205, 5230, 5250. Recommended for students in coordinated dietetics program. Development and refinement of dietetic practitioner skills through applications in critical care and speciality practice areas and in community agencies; theoretical basis for individual counseling and group process. (F)

**5220 Community Nutrition. Cr. 3**

Prereq: NFS 2130, 2140, 2210, 5230, 5250. 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)

**5230 Nutrition and Metabolism. Cr. 4**

Prereq: NFS 2210, BIO 2870 or equiv. 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)

**5250 Nutrition and Disease. Cr. 4**

Prereq: NFS 5230. 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)

**5350 Organization and Management of Food Service Systems. Cr. 4**

Prereq: NFS 2130, 2140, 2210. 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)

**5360 Management of Nutritional Care and Services. Cr. 3**

Prereq: NFS 4200; coreq: 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)

**5990 Honors Directed Study. Cr. 1-4 (Max. 6)**

Prereq: undergraduate College honors standing; 3.3 g.p.a. (T)

**5992 Supervised Field Experience. Cr. 2-4**

Prereq: consent of instructor. Supervised field experience designed to correlate classroom theory with practical work. (T)

**5996 Research in Food Science and Nutrition. Cr. 1-4 (Max. 6)**

Prereq: consent of instructor. Minimum of 3 hours of lab research for each credit. Open only to undergraduate students. Research projects under direction of faculty active in research. (T)

**6130 Food Preservation. (CHE 6130) Cr. 4**

Prereq: BIO 2200, NFS 2130, and NFS 5130 or equiv. Fundamentals of food preservation: refrigeration, freezing, thermal processing,

dehydration and concentration, salting and smoking, chemical preservation, radiation preservation, fermentation. Material fee as indicated in the Schedule of Classes. (B)

**6160 Food Laws and Regulations. Cr. 3**

Prereq: NFS 2210. For any class designated as Web, contact online: <http://www.classschedule.wayne.edu>. State, federal and international food law; interpretations of regulatory food standards and determination of conformity of food products to them. Methods of food inspection. Role of the food law in assuring food safety, wholesomeness and nutritional quality. (B)

**6210 Nutrition through the Life Cycle. Cr. 3**

Prereq: NFS 2030 or 2210. Biological growth and nutritional requirements from fetal stages of development through aging. Nutritional standards in light of current epidemiological data and scientific research. (I)

**6270 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. (B)

**6850 (WI) Controversial Issues. Cr. 2**

Prereq: consent of instructor; senior standing. Topics to be announced in Schedule of Classes. (F,W)

# PHYSICS and ASTRONOMY

Office: 135 Physics Research Building; 577-2721

Web: <http://www.physics.wayne.edu>

Chairperson: Lowell E. Wenger

Co-Associate Chairperson: Gerald L. Dunifer

Co-Associate Chairperson: Jogindra M. Wadehra

Academic Services Officer: J. Scott Payson

## Professors

George B. Beard (Emeritus), William P. Beres, Henry V. Bohm (Emeritus), Jhy-Jiun Chang, Juei-Teng Chen, Thomas M. Cormier, Harry H. Denman (Emeritus), Gerald L. Dunifer, Lawrence D. Favro (Emeritus), Suraj N. Gupta (Distinguished Emeritus), Paul E. Karchin, Walter E. Kauppila, Paul H. Keyes, Yeong Wook Kim (Emeritus), Pao-Kuang Kuo, Caroline G. Morgan, Ratna Naik, William B. Rolnick, Alvin M. Saperstein, Talbert S. Stein, Melbourne G. Stewart (Emeritus), Robert L. Thomas, Jogindra M. Wadehra, Lowell E. Wenger

## University Professor

John D.G. Rather

## Associate Professors

Rene Bellweid, Giovanni Bonvicini, David A. Cinabro, William E. Dorenbusch, Karur R. Padmanabhan, Claude A. Pruneau, Sergei Voloshin

## Assistant Professors

Sean Gavin, Robert F. Harr, James M. Johnson (Research), Boris Nadgorny, Sanjeev Pandey (Research), Stephen F. Takach

## Adjunct Professors

Gregory W. Auner, Xiaoyan Han, Roger Pryor

## Degree Programs

*BACHELOR OF ARTS with a major in physics*

*BACHELOR OF SCIENCE in Physics with concentrations in general physics, applied physics and pre-medical physics*

*\*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 study of physics involves many of the significant ideas that have shaped Western civilization, and the excitement of ongoing scientific challenges. Currently physicists conduct research into the basic laws of nature and also make use of these ideas to design and develop new technologies. Thus, training in physics offers a variety of opportunities. Careers are possible in research laboratories, in academic teaching capacities, in hospitals, the military, power plants, museums, patent law firms, computer companies, and in a host of other areas.

Faculty members in this Department are devoted to teaching and research and hold national and international reputations in their areas of specialization, which include: high energy physics, nuclear physics, atomic physics, the physics of condensed matter, material science, mathematical physics, applied physics, and quantum field theory. 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.

**Physics Colloquium:** The department colloquium is normally held Thursday afternoons. Advanced undergraduates are invited to attend.

## BACHELOR'S DEGREES

**Admission Requirements:** Admission to the various programs is contingent upon admission to the College, requirements for which are satisfied by the general undergraduate admission requirements for the University; see page 15.

**DEGREE REQUIREMENTS:** A candidate for the bachelor's degree must complete at least 120 credits in course work, including satisfaction of the College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the additional requirements pertaining to the bachelor's program selected. *Note: In some cases the requirements of a specific program will increase the number of credits above 120.* All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-46 and 399-404, respectively.

The University requirement for a writing intensive (WI) course in the major field is satisfied (1) for the general physics and applied physics options of the Bachelor of Science in Physics degree, through PHY 6850; (2) for the Bachelor of Arts degree and the pre-medical physics option of the Bachelor of Science in Physics degree, through PHY 5600. It should be noted in each case that the requirement is satisfied by an additional writing project beyond the normal course requirements.

*Students should consult with the undergraduate physics adviser in the Physics Research Building for more detailed information concerning the various degrees and options outlined below.*

## Bachelor of Science in Physics

The Bachelor of Science program offers several options. Each option is designed to meet the needs of a particular group of students although each is flexible enough to avoid limiting the student to a particular future program. Students take a logically-developed sequence of physics courses on a broad range of topics. The introductory sequence uses calculus, and later courses investigate single areas in greater depth, using more advanced mathematics. In advanced laboratory courses the physics student uses sophisticated equipment and sometimes has an opportunity to join a research team.

### — Basic Requirements for All Options

1. Physics 2170, 2171, 2180, 2181, 3300, 3310, 5200, 5600 (total 21 credits).
2. Elementary mathematics sequence—MAT 2010, 2020, 2030, 2350 (total 15 credits).
3. Chemistry 1220 and 1230 (five credits).
4. Satisfaction of all University and College group and competency requirements.

\* For specific requirements, see the Wayne State University Graduate Bulletin.

## — General Physics Option

This option is primarily for students who intend to go on to graduate study in physics. It also satisfies the requirements of industrial and governmental employers who demand a traditional education in physics.

**Additional requirements** beyond the basic ones listed above:

1. PHY 6200, 6300, 6500, 6600, 6800, and the Modern Physics laboratory courses PHY 6850 and 6890 (*total 21 credits*).
2. MAT 5070 and 5220 (*total eight credits*).

### Typical General Physics Sequence <sup>1</sup>

— including University and College Group Requirements

Fall Semester

Winter Semester

#### Freshman Year

Chemistry 1220/1230..... 5	Physics 2170/2171 ..... 5
Mathematics 2010..... 4	Mathematics 2020..... 4
University Group Req..... 3-4	University Group Req..... 3-4
English (BC)..... 4	English (IC)..... 3-4
UGE 1000 (GE)..... 1	
Total: 17-18	Total: 15-17

#### Sophomore Year

Physics 2180/2181..... 5	Physics 3300/3310..... 4
Mathematics 2030..... 4	Physics 5200..... 3
(LS) Elective..... 4	Mathematics 2350..... 3
University Group Req..... 3-4	College Group Req..... 3-4
Total: 16-17	University Group Req..... 3-4
	Total: 16-18

#### Junior Year

Physics 6200..... 3	Physics 6850..... 2
Physics 5600..... 4	Physics 6300..... 3
Mathematics 5070..... 4	Physics 6600..... 3
College Group Req..... 3-4	Mathematics 5220..... 4
Total: 14-15	College Foreign Lang. I..... 4
	Total: 16

#### Senior Year

Physics 6500..... 4	Elective..... 3
Physics 6890..... 2	Elective..... 3
Physics 6800..... 3	College Foreign Lang. III..... 4
College Foreign Lang. II..... 4	University Group Req..... 3-4
Total: 13	Total: 13-14

## — Applied Physics Option

The B.S. degree in the Applied Physics option is intended to provide the interdisciplinary training that is required for a variety of applied fields, while still providing an understanding of the physical foundations of those fields. Programs are designed to combine fundamental physics courses with engineering and other science courses, in order to prepare students for careers in industry (particularly engineering fields) as well as graduate programs in these areas. There is sufficient flexibility in this program that a set of courses can be designed to match a student's interest in such areas as semiconductor physics, material physics, computational physics, biophysics, optics and laser physics, and other areas. Students interested in enriching their education with on-the-job experience may apply for internships with cooperating research laboratories by contacting the departmental undergraduate adviser.

**Additional requirements** beyond the basic ones listed above:

1. Not including the required oral communication (OC) course and/or a critical thinking (CT) course.

1. PHY 6300, 6500, and the laboratory courses PHY 5620 and 6850 (*total 14 credits*).

2. A total of *at least twenty-four additional credits* in physics, mathematics, or other science/technical courses.

3. MAT 5070 is not required but is recommended for those interested in graduate study in physics (*four credits*).

### Typical Applied Physics Sequence <sup>1</sup>

— including University and College Group Requirements

Fall Semester

Winter Semester

#### Freshman Year

Chemistry 1220/1230..... 5	Physics 2170/2171..... 5
Mathematics 2010..... 4	Mathematics 2020..... 4
English (BC)..... 4	English (IC)..... 3-4
UGE 1000 (GE)..... 1	Applied Elective..... 4
University Group Req..... 3-4	Total: 16-17
Total: 17-18	

#### Sophomore Year

Physics 2180/2181..... 5	Physics 3300/3310..... 4
Mathematics 2030..... 4	Physics 5620..... 5
(LS) Elective..... 4	Mathematics 2350..... 3
University Group Req..... 3-4	College Group Req..... 3-4
Total: 16-17	Total: 15-16

#### Junior Year

Physics 5600..... 4	Physics 5200..... 3
Applied Elective..... 4	Applied Electives..... 7
Foreign Lang. I..... 4	Foreign Lang. II..... 4
Univ. Group Req..... 3-4	Univ. Group Req..... 3-4
Total: 15-16	Total: 17-18

#### Senior Year

Physics 6500..... 4	Physics 6300..... 3
Applied Elective..... 4	Physics 6850..... 2
College Group Req..... 4	Applied Electives..... 5
Foreign Lang. III..... 4	Univ. Group Req..... 3-4
Total: 15-16	Total: 13-14

### Suggested Applied Electives for Various Options

*Semiconductor / Materials Physics: Twenty-five credits*

B E 1300/1310; ECE 4570, 4600, 5500 (or MSE 5010), 5510; PHY 6450

(or PHY 5350), 6600.

*Optics and Laser Physics: Twenty-seven credits*

B E 1300/1310; ECE 4570, 4600, 5870; PHY 5350, 6350, 6600.

*Biophysics: Twenty-nine credits*

BIO 1500, 1510, 3400, 3410, 6020, 6160; PHY 5350, 6600.

*Computational Physics: Twenty-five credits*

CSC 2000, 2110, 2200, 4110; PHY 6860; MAT 5070.

## — Pre-Medical Physics Option

This option is specifically designed for students who wish to go on to medical school. It provides a background enabling the physician to use the full potential of modern medical instrumentation. In addition to required courses in the fundamentals of physics, the student may elect to take courses which will directly benefit his/her intended medical specialty. For example, a prospective ophthalmologist can study optics; an orthopedic surgeon, mechanics; a radiologist, atomic physics and radiation.

**Additional requirements** beyond the basic ones listed above:

BIO 1500, 1510, 3070 and one additional course in biology; CHM 1240, 1250, 2220, 2230, 2280, and 2290 (which fulfill current medical school requirements); PHY 5620 and at least six additional credits in physics at the 5000-level or above. Students should consult the University Advising Office for possible changes in premedical requirements outlined in the following suggested curriculum.

*Typical Pre-Medical Physics Sequence of Science and Mathematics Courses*

University and College Group Requirements must also be satisfied; consult with the Undergraduate Adviser, Physics Research Building.

<i>Fall Semester</i>	<i>Winter Semester</i>
<b>Freshman Year</b>	
Chemistry 1220/1230 ..... 5	Chemistry 1240/1250 ..... 5
Mathematics 2010..... 4	Mathematics 2020 ..... 4
	Physics 2170/2171 ..... 5
<b>Sophomore Year</b>	
Physics 2180/2181 ..... 5	Physics 3300/3310 ..... 4
Biology 1500 ..... 4	Physics 5200 ..... 3
Mathematics 2030..... 4	Biology 1510..... 4
	Mathematics 2350 ..... 3
<b>Junior Year</b>	
Physics 5600 ..... 4	Physics 5620 ..... 5
Chemistry 2220/2230 ..... 5	Chemistry 2280/2290 ..... 5
Biology 3070 ..... 4	
<b>Senior Year</b>	
Physics Elective ..... 3-4	Physics Elective..... 3-4
Biology Elective..... 4	

**Bachelor of Arts  
With a Major in Physics**

This program is intended to meet the needs of several kinds of students:

(a) students wishing to major in physics who have transferred to Wayne State University after one or two years at a community college, but whose background in physics and mathematics does not complement the content, level, or scheduling of remaining course requirements well enough to permit completion of the Bachelor of Science degree curriculum in a reasonable time;

(b) students who wish to pursue a general course of education in the sciences with physics as an area of concentration. Those who undertake such a program are sometimes interested in the study of physics as an integrated part of a broad educational background;

(c) students who decide relatively late in their college careers (for example, during the sophomore year) that they wish to major in physics.

It should be emphasized that completion of the Bachelor of Arts program instead of the Bachelor of Science program does not preclude later graduate work in physics. In most cases, it will mean that the student will spend part or all of his/her first year in graduate school making up deficiencies in his or her physics and mathematics background. Generally speaking, such deficiencies may be determined by consulting the Suggested Course Sequence of the Bachelor of Science degree in physics, presented earlier.

**DEGREE REQUIREMENTS:**

1. Physics 2170, 2171, 2180, 2181, 3300, 3310. A student may present credits in Physics 2130, 2140 or equivalent, in lieu of Physics 2170 and 2180, with the consent of the Departmental Undergraduate Adviser.

- 2. At least seventeen additional credits in physics at the 5000 or 6000 level including 5200 and 5600.
- 3. (a) Elementary Mathematics Sequence: MAT 2010, 2020, 2030, 2350.  
(b) Intermediate Mathematics Course: MAT 5070.
- 4. Chemistry 1220 and 1230 (five credits).
- 5. Satisfy all University and College Group Requirements and Competency Requirements.

**Advanced Placement**

Students should seek to obtain advanced placement in English, mathematics, and foreign languages. Information on advanced placement examinations may be obtained from the University Advising Office.

**Minor in Physics**

The Department of Physics and Astronomy offers a minor in physics to qualified students from other departments. The requirement for a minor consists of Physics 2170, 2171, 2180, and 2181 (or Physics 2130, 2131, 2140, and 2141) plus Physics 3300/3310 and at least two other physics courses at the 3000 level or above. Students should consult the Departmental Undergraduate Adviser for approval of the minor prior to undertaking the program.

**Courses for Non-Science Majors**

The Department of Physics and Astronomy offers several courses designed primarily for non-science majors for which only minimal high school mathematics preparation is needed. The courses are AST 2010, PHY 1020, 1040, 2020, and 3100. The laboratories connected with AST 2010, PHY 1020, and PHY 3100 satisfy the natural science laboratory group requirements.

**Scholarships and Awards**

*Vaden W. Miles Undergraduate Award:* A monetary award is given to a graduating senior(s) majoring in physics with the most outstanding scholastic record(s).

*Department of Physics Undergraduate Scholarships:* Scholarships of \$500 and \$1000 are available to entering freshmen and current full-time undergraduates who are majoring in physics. Selection is based primarily on scholastic achievement and secondarily on the basis of financial need. One scholarship is awarded to an incoming freshman physics major, and depending upon satisfactory progress of the recipient, will be renewed annually up to four years. Another scholarship is open to all full-time undergraduate physics majors with a minimum grade point average of 3.0 or above. For further information, contact the Department of Physics and Astronomy, 135 Physics Building.

**UNDERGRADUATE COURSES**

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

**ASTRONOMY (AST)**

**2010 (PS) Descriptive Astronomy. Cr. 4**

Lecture course that introduces the concepts and methods of modern astronomy, the solar system, stars, galaxies, and cosmology; recent discoveries about planets, moons, the sun, pulsars, quasars, and black holes. (T)

**2011 Descriptive Astronomy Laboratory. Cr. 1 (LAB: 2)**

Coreq: AST 2010 or 5010, PHY 5010, or consent of instructor. Laboratory exercises and observations; includes two late evening viewing sessions. Satisfies General Education Laboratory requirement when taken concurrently with AST 2010. Material fee as indicated in the Schedule of Classes. (T)

**5010 Astrophysics and Stellar Astronomy. (PHY 5010)  
Cr. 3 (LCT: 3)**

Prereq: PHY 2140 or PHY 2180, MAT 2010, or consent of instructor. Electromagnetic radiation and matter; solar characteristics; stellar distances; magnitudes; spectral classification; celestial mechanics; binary stars; stellar motions, structure and evolution; compact and variable stars; Milk Way Galaxy and interstellar medium; galaxies and clusters of galaxies; quasars; Hubble's Law; cosmology. (B:W)

**6180 (PHY 6180) Astronomy and Planetary Geology for  
Secondary-School Educators. Cr. 3-4**

Open only to middle- or high school teachers. Prereq: PHY 2130, 2140. Material fee applies when taken for four credits (optional laboratory). Quantitative description of constituents of solar system. Required math: algebra and trigonometry. Material fee as indicated in the Schedule of Classes. (S)

## PHYSICS (PHY)

*All courses with a laboratory have a non-refundable materials fee and are so indicated in the Schedule of Classes.*

**1020 (PS) Conceptual Physics: The Basic Science. Cr. 3-4**

Meets General Education Laboratory Requirement when elected for 4 credits (fee applies). Physical concepts and practical applications to everyday life of the basic principles of motion, forces, energy, matter, heat, sound, electricity, magnetism, and light. Lectures, demonstrations and optional laboratory; laboratory is strongly recommended. Material fee as indicated in the Schedule of Classes. (T)

**1040 (PS) Einstein, Relativity and Quanta: A Conceptual  
Introduction. Cr. 3-4**

Open for four credits only to Honors students. Einstein and the origin of the special theory of relativity; the curvature of space; the uncertainty principle; the quantum theory; the interaction of observer and measurement; fission and fusion; the influence of modern physical theories on society and philosophy. Honors students have one additional hour per week of recitation and are required to write a major paper. (I)

**1070 (PS) Energy and the Environment. Cr. 4 (LCT: 3;LAB:2)**

Prereq: high school algebra. Introduction to energy production and usage, and environmental impact. Topics include: fossil fuels, electricity, pollution, nuclear power, solar power. Meets General Education Laboratory requirement. Material fee as indicated in the Schedule of Classes. (I)

**2020 Science, Technology, and War. (HIS 2510) (P S 2440)  
(PCS 2020) Cr. 4**

May not be used to fulfill natural science group requirement. Modern weapons, nuclear and otherwise, becoming increasingly available and dangerous; people with grievances eager to use them. Science and technology behind weapons development and use; impact of technologies on prospects and results of war and peace. Constraints of career, bureaucracy and society upon development, deployment and use of weapons. History of humanity and its tools of war. (W)

**2130 (PS) General Physics. Cr. 3**

Prereq: high school algebra and trigonometry; coreq: PHY 2131. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2131. No credit after PHY 2170. For general Liberal Arts and Science students and for students preparing for medicine, dentistry, pharmacy and allied health sciences. Mechanics, thermal physics, wave motions, and optics. (T)

**2131 General Physics Laboratory. Cr. 1**

Coreq: PHY 2130. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2130. Laboratory experiments in mechanics, thermal physics, wave motions and optics. Material fee as indicated in the Schedule of Classes. (T)

**2140 General Physics. Cr. 3**

Prereq: PHY 2130; coreq: PHY 2141. No credit after PHY 2180. Continuation of PHY 2130. Electricity, magnetism and introduction to modern physics. (T)

**2141 General Physics Laboratory. Cr. 1**

Coreq: PHY 2140. Laboratory experiments in electricity, magnetism and modern physics. Material fee as indicated in the Schedule of Classes. (T)

**2170 (PS) General Physics. Cr. 4**

Prereq: MAT 2010; coreq: MAT 2020, PHY 2171. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2171. No credit after PHY 2175. For students specializing in physics, biology, chemistry, mathematics or engineering. Statics, kinematics, dynamics, energy and linear momentum, rotational kinematics and dynamics, angular momentum, solids and fluids, vibrations and wave motion, thermodynamics. (T)

**2171 General Physics Laboratory. Cr. 1**

Coreq: PHY 2170. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2170. Laboratory experiments in statics, kinematics, dynamics, energy and linear momentum, rotational kinematics and dynamics, angular momentum, simple harmonic motion, optics, continuum mechanics, thermodynamics. Material fee as indicated in the Schedule of Classes. (T)

**2175 (PS) General Physics. Cr. 4**

Prereq: MAT 2010; coreq: MAT 2020. Open only to College of Engineering students; others by written consent of instructor. No credit after PHY 2170. For students specializing in engineering. Statics, kinematics, dynamics, energy and linear momentum, rotational kinematics and dynamics, angular momentum, solids and fluids, vibrations and wave motion, thermodynamics. (T)

**2180 General Physics. Cr. 4**

Prereq: PHY 2170, MAT 2020; coreq: PHY 2181. No credit after PHY 2185. Electric forces and electric fields, electrical energy, capacitance, current, resistance, direct current circuits, magnetism, induced voltage and inductance, AC circuits, electromagnetic waves, geometric and wave optics. (T)

**2181 General Physics Laboratory. Cr. 1**

Coreq: PHY 2180. Laboratory experiments in electrostatics, currents and circuit elements, magnetic fields, magnetic induction, AC circuits, electromagnetic waves, interference of waves. Material fee as indicated in the Schedule of Classes. (T)

**2185 General Physics. Cr. 4**

Prereq: PHY 2175, MAT 2020. Open only to College of Engineering students; others by written consent of instructor. No credit after PHY 2180. Electric forces and electric fields, electrical energy, capacitance, current, resistance, direct current circuits, magnetism, induced voltage and inductance, AC circuits, electromagnetic waves, geometric and wave optics. (T)

**2210 General Physics Laboratory. Cr. 1-2 (Max. 2)**

Prereq: PHY 2175 or 2185 if taken for four credits or consent of instructor. No credit after PHY 2170 or PHY 2180 if taken for five credits; register for one credit per section. Laboratory for PHY 2170 and PHY 2180. Material fee as indicated in the Schedule of Classes. (T)

**3100 (PS) The Sounds of Music. Cr. 4**

Prereq: sophomore standing. Meets General Education Laboratory Requirement. For music majors and other students interested in the physical foundations of the production, perception, and reproduction



of musical sounds. Makes only limited use of simple mathematics. Includes topics such as wave properties, loudness levels and the human ear, hearing loss, tone quality, frequency and pitch, musical intervals and tuning, room acoustics, the production of sound by various musical instruments, and electronic reproduction of music. Material fee as indicated in the Schedule of Classes. (Y:F)

**3300 Introductory Modern Physics. Cr. 3**

Prereq: PHY 2180 or consent of instructor; coreq. for physics majors only: PHY 3310. For physics, chemistry, engineering, mathematics majors and other interested students. Introduction to relativity, quantum phenomena, atomic structure, quantum mechanics, condensed matter physics, quantum optics, nuclear physics, elementary particles, and anti-particles. (F,W)

**3310 Modern Physics Laboratory. Cr. 1**

Prereq: PHY 2140 or 2180; coreq: PHY 3300. Laboratory course to accompany PHY 3300. Hands-on experience in logical and rigorous analysis of phenomena of modern physics. Material fee indicated in Schedule of Classes. (F,W)

**3990 Directed Study. Cr. 1-3 (Max. 5)**

Prereq: consent of adviser 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)

**5010 (AST 5010) Astrophysics and Stellar Astronomy. Cr. 3**

Prereq: PHY 2140 or 2180, MAT 2010 or consent of instructor. Electromagnetic radiation and matter; solar characteristics; stellar distances; magnitudes; spectral classification; celestial mechanics; binary stars; stellar motions, structure and evolution; compact and variable stars; Milk Way Galaxy and interstellar medium; galaxies and clusters of galaxies; quasars; Hubble's Law; cosmology. (B:W)

**5030 Plasma Physics. Cr. 3**

Prereq: PHY 5600, or 2180 and consent of instructor and MAT 2020. Introduction to plasma physics for students in science and engineering. Motion of charged particles in electromagnetic fields; magnetohydrodynamic theory including electron conductivity and mobility; wave propagation in a plasma; plasma kinetic theory with emphasis on Boltzmann, Vlasov and Fokker-Planck equations; plasma sheaths. (B:W)

**5200 Mechanical Phenomena. Cr. 3**

Prereq: PHY 2180, or 2140 with consent of instructor; MAT 2030. Dynamics of particles and systems including central force motion, coupled oscillations and waves in elastic media. (W)

**5350 Optics. Cr. 3-5**

Prereq: PHY 2180 or 2140, MAT 2030. Only non-physics majors may take course without laboratory. Geometrical and physical optics: wave motion, interference, diffraction, refraction, dispersion, polarization. Material fee as indicated in the Schedule of Classes. (F)

**5550 Basic Electronics. Cr. 4**

Prereq: PHY 2140. Not open to physics majors. Basic electronics for biologists, chemists, high school science teachers and other interested students. D.C. and A.C. circuits, transistor circuits, solid state devices, amplifiers, oscillators, basic logic, and applications to measurement and instrumentation. Material fee as indicated in the Schedule of Classes. (F)

**5600 (WI) Electricity and Magnetism I. Cr. 4**

Prereq: PHY 2180, or 2140 with consent of instructor; MAT 2350. Electric forces, fields, potentials, Gauss' law, electrostatics, currents, Ampere's and Faraday's Laws, vector potential, Maxwell's equations. (F)

**5620 Electronics and Electrical Measurements. Cr. 5**

Prereq: PHY 5600 or consent of instructor. Amplifier circuits, operational amplifiers, oscillators, digital electronics, analog and digital measurements. Material fee indicated in Schedule of Classes. (W)

**5990 Directed Study. Cr. 1-3 (Max. 6)**

Prereq: junior standing and consent of adviser 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)

**6050 Special Topics in Physics for Secondary-School Educators. Cr. 3**

Prereq: introductory physics courses in mechanics, and in electricity and magnetism; or consent of instructor. Open only to pre-college or community college teachers. Special topics in physics designed for secondary teachers. Topics offered as needed; may include: astronomy and cosmology, meteorology, relativity, quantum theory, atomic and nuclear physics, optics. (I)

**6100 Classical Physics for Secondary School Educators. Cr. 3**

Open only to middle- or high school teachers. Prereq: PHY 2130, 2140. Mechanics, electricity, magnetism: fundamentals. Applications to problem solving. Selected special topics. Required math: algebra and trigonometry. (F)

**6120 Energy Generation and Consumption 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). Different sources of energy and how their use impacts the environment. Required math: algebra and trigonometry. Material fee as indicated in the Schedule of Classes. (W)

**6160 Meteorology 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). Earth's atmosphere and various weather processes. Required math: algebra and trigonometry. Material fee as indicated in the Schedule of Classes. (S)

**6180 Astronomy and Planetary Geology for Secondary-School Educators. (AST 6180) Cr. 3-4**

Open only to middle- or high school teachers. Prereq: PHY 2130, 2140. Material fee applies when taken for four credits (optional laboratory). Quantitative description of constituents of solar system. Required math: algebra and trigonometry. Material fee as indicated in the Schedule of Classes. (S)

**6200 Theoretical Mechanics. Cr. 3**

Prereq: PHY 5200 and MAT 2350. 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. (F)

**6300 Quantum Theory. Cr. 3**

Prereq: PHY 3300; MAT 5070 and MAT 5220. Presentation of quantum mechanics in a self-consistent manner in which basic principles are introduced directly. The concepts of quantum-mechanical states and amplitudes are clearly established before the introduction of wave functions. (W)

**6350 Applied Modern Optics. Cr. 3**

Prereq: PHY 5350. Coherent radiation, laser physics and optical devices, optical techniques in experimental science, topics in modern optics. (B:F)

**6450 Introduction to Material and Device Characterizations. Cr. 4**

Coreq: PHY 7050 or ECE 5500 or ECE 5550 or equiv. 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,S)

**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. Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. (F)

**6600 Electricity and Magnetism II. Cr. 3**

Prereq: PHY 5600 and MAT 5070. Electromagnetic radiation, electromagnetic waves, magnetic materials, superconductivity, special relativity, 4-vectors, fields in bounded regions, wave guides, resonant cavities. (W)

**6800 Atoms, Molecules and Solids. Cr. 3**

Prereq: PHY 5300, 5600, MAT 2350. Study of one-electron atoms using solutions of three-dimensional Schroedinger Equation, magnetic moments, transition rates, multielectron atoms, x-ray excitations, LS coupling, Zeeman and Paschen-Bach effects, molecules, bonds, various types of spectra, solids, conductors, semiconductors, band theory, superconductivity. (F)

**6810 Nuclei and Elementary Particles. Cr. 3**

Prereq: PHY 6800. Basic understanding of subatomic physics. Modern ideas in nuclear and elementary particle physics; emphasis on common concepts and features. Relationships to experimental results. (W)

**6850 (WI) Modern Physics Laboratory I. Cr. 2**

Prereq: PHY 3300 or consent of instructor. 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**

Introduction to computational languages and local computational environment; description of techniques in numerical analysis including linear algebra, integration, algebraic and differential equations, data analysis and symbolic algebra; optimization and parallel computing. (B:W)

**6890 Modern Physics Laboratory II. Cr. 2**

Prereq: PHY 6850. Continuation of laboratory procedures learned in PHY 6850. Further presentation of techniques and experiments in the physics of atoms, atomic nuclei, molecules, solid state physics and other areas of current interest. Material fee indicated in Schedule of Classes. (F)

**6991 Special Topics. Cr. 1-4 (Max. 4)**

Prereq: consent of instructor. Offered for S and U grades only. Topics and prerequisites for each section to be announced in Schedule of Classes. More than one section may be elected in a semester. (F)

**6992 Physics Graduate Teaching Assistant Training. Cr. 1**

Prereq: graduate standing or consent of instructor. Offered for S and U grades 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)

# PSYCHOLOGY

Office: Room 214, 71 West Warren; 577-2800

Interim Chairperson: Joseph L. Jacobson

Associate Chairperson: Kathryn A. Urberg

## Professors

Ernest L. Abel, Sheldon Alexander, David Asdourian (Emeritus), Alan R. Bass (Emeritus), Donald V. Coscina, Donald N. Elliott (Emeritus), Ira J. Firestone, Joseph M. Fitzgerald, Joseph L. Jacobson, Chris-Ellyn Johanson, Kalman J. Kaplan, M. Marlyne Kilbey, Gisela Labouvie-Vief, Sheldon G. Levy, Hilary Ratner, Annette U. Rickel (Emeritus), Hjalmar Rosen (Emeritus), Gerald Rosenbaum (Emeritus), Carolyn M. Shantz, Rebecca A. Treiman, Kathryn Urberg, Francine Wehmer (Emeritus), Glenn E. Weisfeld, R. Douglas Whitman, Alice M. Young

## Associate Professors

Douglas Barnett, George Borszcz, Rita Casey, Kenneth Davidson (Emeritus), Sebastiano Fiscaro, Winifred R. Fraser (Emeritus), Melissa G. Kaplan-Estrin, Brian Lakey, Cary M. Lichtman, Mark Lumley, Lisa Rapport, Michael M. Reece (Emeritus), Patricia Siple, Paul Toro

## Assistant Professors

Boris Baltes, Rodney Clark, Marcus Dickson, Thomas Fischer, Melissa Franks, Melinda Henderson, Lee Wurm

## Research Professor

Sandra W. Jacobson

## Research Scientists

Ali Naqvi, Frederika Shea

## Adjunct Professors

Kenneth Adams, Naomi Breslau, John Hannigan, Mitchell Rosenthal

## Adjunct Associate Professors

Antonia Abbey, Mark Ketterer, Helene Lycaki, Daphna Oyserman, Timothy Roehrs

## Adjunct Assistant Professors

Linda Angell, Bradley Axelrod, Rebecca Baird, Jesse Bell, Allan Dehorn, Jerel Del Dotto, Grenac Dudley, Lisa Fruchtman, Robert Guenther, Pamela Keenan, Mark Kelland, Joan Lessen-Firestone, Ronald Lewis, Ira Lourie, Michael Marsiske, Scott Millis, John O'Leary, Lynn Pantano, Steven Putnam, Kenneth Reeder, Joseph Ricker, Robert Roethermel, William Schafer, Richard Smith, Barry Tanner, Marie Waung

## Degree Programs

*BACHELOR OF SCIENCE with a major in psychology*

*BACHELOR OF ARTS with a major in psychology*

*\*MASTER OF ARTS with a major in psychology*

*\*MASTER OF ARTS in Human Development*

*\*Also see: MASTER OF ARTS in Industrial Relations*

*\*DOCTOR OF PHILOSOPHY with a major in psychology and specializations in biopsychology, clinical, cognitive, developmental, industrial/organizational, or social psychology*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

Undergraduate training offered by the Department of Psychology serves several related purposes. For the science major and the liberal arts major, the study of psychology provides an opportunity to learn the scientific approach to the study of behavior which will include material helpful in increasing self-understanding and insight into the behavior of others. For students preparing for medicine, law, education, nursing, business, and other professions, psychology provides important basic knowledge useful in these vocations. For those planning to carry on graduate study in psychology, undergraduate instruction establishes a sound foundation for entering graduate programs in psychology. For those students who plan to work as technicians or paraprofessionals in an area related to human development, psychology provides a theoretical foundation and basic skills.

During the freshman year, or as early as possible, students interested in psychology should visit the department's undergraduate office to obtain brochures describing the various psychology programs. Students considering a major in this field should read the *Bulletin for the Psychology Major* before meeting with an adviser to discuss their declaration of major. The *Bulletin* is available from the Undergraduate Adviser of the Psychology Department, who will arrange student appointments.

Students planning to enter a Ph.D. program in psychology after graduation should have a solid background in the core areas of the field. These areas include learning, perception, abnormal, social, developmental, physiological, and cognitive psychology. In addition, all graduate programs require a background in statistics and experimental design.

## Bachelor of Science or Bachelor of Arts

**Admission Requirements** for the College are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**Declaring a Major:** Before declaring a major in psychology, students must complete PSY 1010, Introductory Psychology, and have at least a 2.0 overall grade point average. Although students normally declare their major during the semester in which they will have earned sixty credits, they may declare a major in psychology prior to that time.

A student is not considered a psychology major until he/she completes the process to declare a major, the first step of which is an appointment with an adviser at the University Advising Center. The second step in the process is an appointment with a psychology adviser. The final step is delivery of the signed Declaration of Major form to the Dean's Office of the College of Science.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of College Group Requirements (see page 399) and the University General Education Requirements (see page 29), as well as the major requirements. All course work must be completed in accordance with the academic procedures of the University and the College; see pages 15-46 and 399 - 404, respectively.

**Major Requirements:** To graduate with a major in psychology, a student must complete satisfactorily at least thirty-three credits in the Department of Psychology beyond Introductory Psychology. Degree requirements include:

Psychology 1010 . . . . . (LS) Introductory Psychology  
Psychology 3010 . . . . . Statistical Methods in Psychology

In the following curriculum, students are strongly urged to take PSY 3010 within one year after completion of PSY 1010. Transfer students are advised to take PSY 3010 in their first semester at Wayne State, or within one year of completion of PSY 1010. PSY 3010 is important in preparation for other courses, especially PSY 3050, 3070, and 3090.

*One lecture/laboratory combination chosen from the list below:*

Psychology 3040 Psychology of Perception: Fundamental Processes  
and  
Psychology 3050 . . . . . Laboratory in Psychology of Perception  
OR

Psychology 3060 . . . Learning and Memory: Fundamental Processes  
and  
Psychology 3070 . . . . . Laboratory in Learning and Memory  
OR

Psychology 3080 . . . Cognitive Psychology: Fundamental Processes  
and  
Psychology 3090 . . . . . Laboratory in Cognitive Processes

In satisfying a given laboratory course requirement, the lecture and laboratory sections can be taken concurrently or in separate semesters, but if taken separately, the lecture **MUST** be taken first. PSY 5993, the Writing Intensive (WI) Course in Psychology, may only be satisfied by co-registration with one of the laboratory courses above. (See course description for details.)

*Three of the following courses:*

Psychology 2400 . . . . . Developmental Psychology  
Psychology 2600 . . . . . Psychology of Social Behavior  
Psychology 3120 . . . . . Brain and Behavior  
Psychology 3350 . . . . . Psychology of Personality  
Psychology 3500 . . . . . Psychology and the Workplace  
Psychology 4020 . . . . . Research in Psychology  
Psychology 5050 . . . . . Physiological Psychology

OR

Another (second) laboratory course from the selection listed above :  
PSY 3040/3050, 3060/3070, 3080/3090

No more than forty-six credits in psychology can be counted toward the total required for a degree. Transfer students must complete at least twenty credits in the Psychology Department at Wayne State University.

For information on special interest concentrations within the major, please contact the Academic Services Officer at 577-2809, or pick up a complete list from the Undergraduate Office, Room 223 of the Psychology Department.

**The Bachelor of Science** degree requires a minimum of sixty credits in the natural sciences. Of these sixty credits a minimum of twenty-seven credits must be earned in natural science outside the field of psychology.

**The Bachelor of Arts** degree incorporates all of the College Group Requirements; see page 399.

**Preparation for Psychology Graduate Work:** While individual graduate programs in psychology have different requirements for admission, students who intend to do graduate work are advised to earn the B.A. or B.S. degree and take the following courses: Psychology 2400, 2600, 4020, 4990, and 5050. Additional courses in mathematics, computer science, biology, and sociology are strongly recommended.

**Psychology-related employment** for graduates with a bachelor's degree has increased in recent years. Such employment, of course, has depended on the personal characteristics of the individual, on the special qualifications and training of the individual, and particularly on job opportunity.

## Honors Program

Students with an overall grade point average of 3.3 are eligible for admission to the department's Honors Program. Satisfactory completion of the Honors Program will lead to a degree 'With Honors in Psychology' on the diploma. Students interested in the program should

obtain detailed information from the Academic Services Officer of the Psychology Department.

**Honors Sections** provide smaller classes, somewhat more advanced readings, and opportunities for independent work by students in the following courses: 1010 (Introductory Psychology), 2400 (Developmental Psychology), 2600 (Psychology of Social Behavior), and 3310 (Abnormal Psychology). In addition, there is a senior Honors course (4998) in which students complete a senior thesis.

## Minor in Psychology

All students considering psychology as a minor field of concentration may obtain an information sheet from the psychology undergraduate office.

**Minor Requirements:** For a minor in psychology, a student must complete a minimum of eighteen credits in psychology, one course of which must be Introductory Psychology (PSY 1010 or 1020). At least three of the courses must be taken at Wayne State. Psychology 4993 or 4994 (offered for S and U grades only) may not be counted in the eighteen required credits.

**Health Psychology Minor:** For this minor, a student must complete a minimum of eighteen credits in psychology. Courses must include: PSY 2410, 3310, 3120 or 5050; plus one of the following electives: PSY 2080, 2400, 2600, 3380, 5070, 6490, 4990, or 4993 (PSY 4990 and 4993 require prior approval from health psychology faculty).

**Non-majors** are encouraged to consult with departmental advisers regarding optimum course selections for various purposes.

## Financial Aid

See Office of Scholarships and Financial Aid, page 20.

## UNDERGRADUATE COURSES (PSY)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **1010 (LS) Introductory Psychology. Cr. 4**

Meets General Education Laboratory Requirement. No credit after PSY 1020. Introduction to the science of behavior. Principles, concepts, and theories of human thought and action. Selected concepts illustrated through laboratory experiments. (T)

### **1020 (LS) Elements of Psychology. Cr. 3**

No credit after PSY 1010. Principles, theories and applications of psychological knowledge. (T)

### **2080 Introduction to Drugs, Behavior, and Society. Cr. 3**

Introduction to drugs and their actions. Emphasis on psychoactive drugs, their effects, and the consequences of their use and misuse to the individual and society. (Y)

### **2300 Psychology of Everyday Living. Cr. 4**

Prereq: PSY 1010 or 1020. Applications of psychological principles to everyday life. How research can be used to guide positive self-change in various contexts (e.g., stress, psychological problems, personality, persuasion, attitudes). (T)

### **2400 Developmental Psychology. Cr. 4**

Prereq: PSY 1010 or 1020. Facts, principles, theories of psychological development. Development of intellectual, emotional, perceptual, linguistic, and social behavior. Developmental trends. (T)

### **2410 Health Psychology. Cr. 4**

Prereq: PSY 1010 or 1020. Clinical, social, developmental, and biopsychosociological theory and research on relationship of psycholog-

ical and behavioral factors to physical health and well-being. Positive and negative health behaviors, stress and coping, social relations and social support, psychoneuroimmunology, patient-practitioner interaction and health utilization, management of chronic illness. (Y)

### **2500 Psychology of Racism. Cr. 3**

Dynamics and attendant problems of racism directed toward African Americans. Lectures, class discussions, film presentations. (Y)

### **2600 Psychology of Social Behavior. Cr. 4**

Prereq: PSY 1010 or 1020. Social behavior of the individual as influenced by the group. Particular attention given to social perception, motivation, and learning; attitudes and values; dynamics of social groups. (T)

### **3010 Statistical Methods in Psychology. Cr. 4**

Prereq: PSY 1010 or 1020 or consent of instructor for non-psychology majors. Primarily for psychology majors. Principles and computational methods that apply to quantitative aspects of psychological procedure; elementary correlation theory and prediction, sampling problems, tests of hypotheses, elementary test theory, interpretation of results. (T)

### **3040 Psychology of Perception: Fundamental Processes. Cr. 3**

Prereq: PSY 1010 or equiv. Fundamental theories, concepts, and empirical studies of basic sensory processes and the perception and organization of sensory phenomena. (Y)

### **3050 Laboratory in Psychology of Perception. Cr. 2**

Prereq: PSY 1010 and 3010; prereq. or coreq: 3040. Laboratory investigations of basic perceptual phenomena and sensory processes involving vision, hearing, smell and touch. Use of different experimental paradigms including traditional psychophysical methods. This course will satisfy the Writing Intensive (WI) requirement when elected with coreq. PSY 5993. Material fee as indicated in the Schedule of Classes. (Y)

### **3060 Psychology of Learning and Memory: Fundamental Processes. Cr. 3**

Prereq: PSY 1010 or equiv. Fundamental theories, concepts, and empirical findings in field of learning. (Y)

### **3070 Laboratory in Learning and Memory. Cr. 2**

Prereq: PSY 1010 and 3010; prereq. or coreq: 3060. Laboratory investigations of basic learning processes, including sensory and motor learning and complex learning processes. This course will satisfy the Writing Intensive (WI) requirement when elected with coreq. PSY 5993. Material fee as indicated in the Schedule of Classes. (Y)

### **3080 Cognitive Psychology: Fundamental Processes. (LIN 3080) Cr. 3**

Prereq: PSY 1010 or equiv. Fundamental theories, concepts, and empirical findings in study of human cognition. Topics include: thinking, problem solving, language comprehension and production, memory and attention. (Y)

### **3090 Laboratory in Cognitive Psychology. Cr. 2**

Prereq: PSY 1010 and 3010; prereq. or coreq: 3080. Laboratory investigations of cognitive processes, including attention, memory, language processing and problem solving. This course will satisfy the Writing Intensive (WI) requirement when elected with coreq. PSY 5993. Material fee as indicated in the Schedule of Classes. (Y)

### **3120 Brain and Behavior. Cr. 3**

Prereq: PSY 1010 or 1020. No credit after PSY 5050. Introduction to the brain and its influence over behavior. Structure and function of the nervous system, neural communication, and neural mechanisms of higher nervous system functions and dysfunctions. Topics include: biological basis of sleep, sex, learning, memory, language, schizophrenia, and depression. (T)

**3200 Motivation, Feeling and Emotion. Cr. 3**

Prereq: PSY 1010 or 1020. Experimental findings in psychological and allied fields on topics of motivation, feeling, and emotion; evaluation of classical theories and an attempt to develop a theoretical approach based on factual knowledge. (Y)

**3250 Psychology of Women. Cr. 3**

Prereq: PSY 1010 or 1020. Scientific issues relating to the psychological understanding of women: gender identity, psychobiology, mental health, achievement motivation, role conflict, psychology of career choice. (T)

**3310 Abnormal Psychology. Cr. 4**

Prereq: PSY 1010 or 1020. Nature and causes of various forms of abnormal behavior, including schizophrenia, depression, and neurosis, viewed from psychological, biological, cultural, developmental and historical perspectives. Diagnosis and treatment of pathological behavior. (T)

**3350 Psychology of Personality. Cr. 3**

Prereq: PSY 1010 or 1020. An examination of the major approaches to the study of personality. Current psychological findings in the field of personality and their implications for psychotherapy and assessment. (T)

**3380 Human Sexuality. Cr. 3**

Prereq: PSY 1010 or 1020. Biological, psychological and socio-cultural aspects of human sexuality. Topics include anatomy and development, sexual behavior, and cultural influences. (T)

**3430 Infant Development. Cr. 3**

Prereq: PSY 2400. Not open to psychology doctoral students. Development of the infant from conception through the toddler years. Physical, motor, perceptual, cognitive, language, social and emotional development. Current findings and their implications for parenting, programming and care. (Y)

**3440 Psychology of Child Behavior and Development. Cr. 3**

Prereq: PSY 2400. Developmental processes in childhood; language acquisition, cognitive development, development of peer-peer interactions. (Y)

**3460 Psychology of Adolescent Behavior and Development. Cr. 3**

Prereq: PSY 1010 or 1020. Factors that promote the emergence of new relationships with parents, changes in peer relationships, increased independence, preparation for marriage and parenthood, and socioeconomic integration into the larger society. Biological and anthropological perspectives on sex roles. (Y)

**3480 Parent-Child Interaction Across the Lifespan. Cr. 3**

Prereq: PSY 2400. Theory and research on interactions between parents and children. Focus on normal developmental concerns, infancy through adulthood: discipline, sibling rivalry, sex-role identification, parental support. (Y)

**3490 Psychology of Adult Development and Aging. Cr. 3**

Prereq: PSY 1010, 2400. The adulthood and aging years from a developmental perspective, including: intelligence, memory, personality, and social behavior. (Y)

**3500 Psychology and the Workplace. Cr. 3**

Prereq: PSY 1010 or 1020. Psychology as applied to business and industry. Major areas of industrial psychology: selection, placement, and training procedures; human factors research. Industrial social psychology: motivational and organizational research and theory. (T)

**4020 Research in Psychology. Cr. 3**

Prereq: PSY 1010 or 1020. Primarily for students interested in future graduate studies in planning and evaluation of psychological research. Critical evaluation of scientific literature and the planning and development of psychological research proposals. The range of research methods and areas in psychology. (Y)

**4110 Psychological Testing and Measurement. Cr. 3**

Prereq: PSY 1010 or 1020, and 3010. Principles of psychological measurement, development, administration, and analysis of psychological tests. Quantitative methods of assessing reliability and validity of psychological test scores. Interpretation and application of psychological testing in educational, clinical and industrial settings. (I)

**4310 Psychological Disorders of Children. Cr. 3**

Prereq: PSY 1010 or 1020. Points of view, methods of study and research findings regarding psychopathology in children. (I)

**4320 Introduction to Clinical Psychology. Cr. 3**

Prereq: PSY 1010 or 1020. An introduction to the methods, rationale, and empirical foundations of clinical psychology. Issues in the assessment and treatment of psychopathology. (I)

**4990 Directed Study and Research. Cr. 2-4 (Max. 9)**

Prereq: psychology major; written consent of adviser and instructor. Library or laboratory study of an advanced problem in psychology under the guidance of a faculty member. (T)

**4991 Honors Directed Study. Cr. 2-4 (Max. 9)**

Prereq: written consent of instructor. Open only to honors majors in psychology. Honors library or laboratory study of advanced problem in psychology under guidance of a faculty member. (T)

**4993 Field Study. Cr. 3 (Max. 6)**

Prereq: two courses in psychology. Students must register for two semesters in order to receive credit. Offered for S and U grades only. Assignment to a hospital, clinic or other agency under faculty supervision. Term paper on observations made in the field. Agency placement contingent upon appropriate background and training in psychology. (F,W)

**4994 Special Projects. Cr. 2-3 (Max. 9)**

Prereq: two courses in psychology; written consent of instructor. Offered for S and U grades only. Departmental assignment to special projects such as tutoring introductory courses. (T)

**4995 Special Topics in Psychology. Cr. 3 (Max. 6)**

Prereq: PSY 1010 or 1020. Topics of current interest to be announced in Schedule of Classes. (I)

**4998 Senior Thesis Seminar. Cr. 3-6**

Open only to honors majors in psychology. Pro-seminar leading to the design and execution of a senior honors thesis in psychology. (W)

**5020 Research Methods in Developmental Psychology. Cr. 3**

Prereq: admission to master's program in human development. Basic principles of research design in psychology: reliability and validity of measurement of psychological constructs, experimental design, control for confounding in correlation studies, multivariate analysis. (Y)

**5050 Physiological Psychology. Cr. 3**

Prereq: PSY 1010 or 1020. Physiological mechanisms underlying behavior and mental processes: sensory-motor mechanisms; integrative action of the nervous system; neuro-physiological mechanisms involved in emotional behavior, learning and memory; influences of hormones on behavior. (F)

**5060 Laboratory in Physiological Psychology. Cr. 3**

Prereq: PSY 3120 or 5050 or consent of instructor. Outline of gross neuroanatomy, basic experiments in physiological psychology utilizing brain lesions, chronic electrode implantations in small animals, and measurement of human autonomic responses. Material fee as indicated in the Schedule of Classes. (I)

**5070 Bio-behavioral Bases of Drug Action. Cr. 3**

Prereq: PSY 3120 or 5050 or equiv., or BIO 1020 or equiv.. Physiological and behavioral bases of drug action, with emphasis on brain neurotransmitters, psychopharmacology, and substance abuse disorders. (W)

**5100 Applied Statistics in Psychology. Cr. 4**

Prereq: PSY 3010 or equiv. or consent of instructor. General linear model, coding techniques, multiple correlation and regression, analysis of variance and covariance, planned and post hoc tests, use of statistical computer packages. (I)

**5490 The Aging Individual in Society. Cr. 3**

Prereq: PSY 1010 or 1020. Biological, social, and psychological theories of aging; time-associated changes in behavior; personality changes in later life; social and personal adjustment and psychopathology in later life. (I)

**5540 Motivation in the World of Work. Cr. 3**

Prereq: PSY 1010 or 1020. Relationships among motivation, satisfaction, and organizational behavior. Motivational theory and research; organizational influences on motivation and satisfaction; motivational intervention; survey and evaluation. (Y)

**5680 Social Psychology of Personality. Cr. 3**

Prereq: PSY 1010 or 1020. Consideration of social, structural and interpersonal determinants of personality formation, functioning and change; social learning, role theory, and cognitive approaches to personality in children and adults. (I)

**5700 (AFS 5700) The Psychology of African Americans. Cr. 4**

Prereq: upper division standing. Methodological approaches to and theories of Black behavior and personality development. Topics include: race and pathology, life-span and psycho-sexual development, personality formation, social and environmental stress and adaptation. (B)

**5710 (PCS 5000) Dispute Resolution. (CRJ 5994) (P S 5890) Cr. 3**

Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

**5750 Engineering Psychology. Cr. 3**

Prereq: PSY 3050, 3090, graduate standing; or consent of instructor. Theory and research on people's interaction with machines and systems in their environment, within framework of cognitive psychology. Product design and skilled performance. (B)

**5993 (WI) Writing Intensive Course in Psychology. Cr. 0**

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: PSY 3050, 3070, or 3090. 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)

**6010 (ELE 6010) Family Centered Collaboration in Early Childhood Intervention. (O T 6150) (S W 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)

**6200 Development of Memory. Cr. 3**

Prereq: PSY 3080 and 2400 or equiv.; and 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)

**6270 (NFS 6270) Eating Behavior and Body Weight Regulation. 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. (B:W)

**6420 Psychology of Infant Behavior and Development. Cr. 3**

Undergrad. prereq: PSY 2400 and either 2430 or 2440. Not open to psychology doctoral students. 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. (Y)

**6470 Human Development Practicum: Infancy. Cr. 3**

Prereq: satisfactory health record. Orientation to infant research, assessment, and programming. Experience in infant observation and testing within the Psychology Child Development Laboratory. (I)

**6480 Psychology of Myth, Magic and Religious Experience. Cr. 3**

Prereq: PSY 1010, 2400, or consent of instructor. Theoretical and empirical literature on psychological origins and adaptive functions of myth, magic, and religious experiences in individuals and social groups, both historical and modern. (I)

**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)

**6540 Organizational Staffing. Cr. 3**

Prereq: PSY 3500 or equivalent industrial/organizational psychology course with consent of instructor. Not open to psychology doctoral students. Job analysis, recruitment and screening, prediction and measurement of job performance, selection procedures, principles and methods of testing and measurement. (Y)

**6550 Training and Employee Development. Cr. 3**

Prereq: PSY 3500 or equivalent industrial/organizational psychology course with consent of instructor. 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. (Y)

**6570 Applied Research Methods in Union-Management Relations. Cr. 3**

Prereq: one semester of statistics comparable to PSY 3010. Not open to psychology graduate students. Topics include review of scientific methods and research design, measurement issues, ethical considerations in applied research and data collection techniques such as job analysis, training needs assessment, and opinion surveys. (Y)

**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. (Y)

**6995 Advanced Special Topics. Cr. 1-3 (Max. 6)**

Prereq: senior standing; psychology major with 3.0 g.p.a. or honors program seniors. Topics to be announced in Schedule of Classes. (I)

# SCHOOL OF SOCIAL WORK

INTERIM DEAN: Phyllis I. Vroom

# Foreword

## Social Work

The School of Social Work at Wayne State University has as its mission the teaching of the knowledge, values, and skills of the social work profession. Graduates of the School should understand the needs of vulnerable populations and those for whom the quality of life is threatened. Through research, the faculty of the School contributes to the knowledge base of the social work profession, and the faculty and students serve the community by participating in professional societies, 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 and technologically advanced, metropolitan area. The School is committed in its teaching, research, and service activities to address the problems of people living in this environment. Both in class and in the 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's activities are intended ultimately to alleviate the condition of those affected by poverty, racism, sexism, ageism, homophobia, unemployment, and those with emotional disturbances, or physical and/or developmental challenges, oppressive environmental conditions, and political oppression. Students learn methods of intervention with individuals, families, groups, communities, and organizations. Consistent with its emphasis on serving people in the Detroit metropolitan area, the School shares with the University a commitment to recruiting students of minority ethnic backgrounds.

## Accreditation

The undergraduate program leading to the Bachelor of Social Work degree and the graduate program leading to the Master of Social Work degree are accredited by the Council on Social Work Education, the authorized accrediting body for social work education.

## Programs

The School of Social Work offers opportunity for study at the undergraduate and graduate levels to prepare students for practice in the profession of social work. Its principal programs lead to the Bachelor of Social Work degree and the Master of Social Work degree.

The Bachelor of Social Work degree program prepares students for entry-level generalist practice. Course work in this program includes University-wide General Education Requirements as well as the core knowledge, values and skills — the professional foundation — for social work practice.

An individual course is also available at the freshman and sophomore levels and post-degree courses are available to those who have been awarded the bachelor's and master's degrees. The Master of Social Work degree program includes concentrations in community practice and social action; family, children and youth services; health care services; and mental health services. The School conducts special institutes and workshops for persons working in the fields of social work and social welfare. Continuing education in social work is offered also through the College of Lifelong Learning.

Information Meetings: The School holds bi-weekly information meetings on its undergraduate and graduate programs. Potential applicants are encouraged to attend one of these meetings prior to making application. Information about the schedule of meetings may be obtained by calling the School's Office of Admissions and Student Services (313-577-4409).

## Degree Programs

*BACHELOR OF SOCIAL WORK*

*\*MASTER OF SOCIAL WORK*

*\*GRADUATE CERTIFICATE PROGRAM IN SOCIAL WORK PRACTICE WITH FAMILIES AND COUPLES*

## SCHOOL OF SOCIAL WORK DIRECTORY

Dean . . . . . 201 Thompson Home; Telephone: 577-4400  
Fax: 577-6555

Associate Dean . . . . . 240 Thompson Home; Telephone: 577-4404  
Fax: 577-8770

General Information . . . . . 105 Thompson Home;  
Telephone: 577-4409

Admissions and Student Services  
105 Thompson Home; Telephone: 577-4409  
Fax: 577-4266

Coordinator of the BSW Program  
236 Thompson Home; Telephone: 577-4433

Coordinator of the MSW Program  
237 Thompson Home; Telephone: 577-4408

Coordinator of Field Education  
144 Thompson Home; Telephone: 577-4479

Recruitment of Minority Students  
105 Thompson Home; Telephone: 577-4409

Student Organization  
21 Thompson Home; Telephone: 577-1639

National Association of Black Social Work Students  
21 Thompson Home; Telephone: 577-1639

Student Organization of Latino/a Social Workers  
21 Thompson Home; Telephone: 577-1639

*Website:* <http://www.socialwork.wayne.edu/>

Mailing address for all offices: School of Social Work, Wayne State University, Detroit, Michigan 48202

\* For specific requirements, see the Wayne State University Graduate Bulletin.



## FACULTY and ADMINISTRATION

*Interim Dean:* Phyllis I. Vroom

*Interim Associate Deans:* David P. Moxley, Susan W. Whitelaw

*Director of Admissions:* Janet M. Clerk

*Academic Adviser:* Anwar Najor-Durack

*Business Manager:* Juanitta D. Hill

*Assistants to the Interim Dean:* Mary Anne Cotton, Marilyn Knall

### *Professors*

Creigs C. Beverly, Jerrold Brandell, Leon W. Chestang, David Moxley

### *Associate Professors*

Beverly Black, Ronald L. Jirovec, Brenda McGadney-Douglass, Durrenda Onolemhemen, Melvyn C. Raider, Anna Santiago, Mavis M. Spencer, Eileen Trzcinski, Phyllis I. Vroom, Susan Whitelaw

### *Assistant Professors*

Ann Alvarez, Loren Hoffman (clinical), John Murphy, Carmen Perez, Joanne Soback, James Tripp (clinical), Arlene Weisz, Annette Woodroffe

### *Senior Lecturer*

Margaret O. Brunhofer

### *Lecturers*

Cassandra Bowers, Lois J. Garriott, Sally Jo Large

### *Emeriti Professors*

Sidney Dillick, Joseph P. Hourihan, Charles N. Lebeaux, Leon Lucas, Maryann Mahaffey, Betty Rusnack, Kurt Spitzer, Betty L. Welsh

### *Emeriti Associate Professors*

Helen Francis, Theodore Goldberg, Edna S. Harrison, Carl Hartman, Alice E. Lamont, Edna P. Miller, Elizabeth J. Phillips, Lois L. Quig, Sandy G. Reid

### *Adjunct Faculty*

Roxanne Clover, Paul A. Koonter, Robert H. Wills

## BACHELOR OF SOCIAL WORK

The Bachelor of Social Work degree program prepares for entry level generalist practice in social work and consists of four semesters of study in the junior and senior years. Approximately two thirds of the four semester curriculum is in professional courses in social work and about one third is in corequisite courses and electives. Field work is concurrent with class work except in the first semester of the junior year. It is required that the student enroll in the entire professional component of the curriculum during any one semester.

Usually the four-semester program of class and field work is a program of full-time study extending over two successive academic years, beginning in the fall semester. There is also a part-time, extended study option that allows students to earn the Bachelor of Social Work degree in up to eight semesters. The School offers admission to the Bachelor of Social Work degree program each fall term to students who wish to attend classes at the Macomb University Center located on the Macomb Community College Center Campus. A limited number of students are admitted in January to the full-time on-campus program leading to the degree of Bachelor of Social Work, beginning in the winter semester; it continues, without interruption, for four consecutive semesters, including the spring-summer semester. January admission leads to graduation in May of the following year.

### Admission

Completed applications for admission to the program leading to the Bachelor of Social Work degree are given careful review in order to select those students best able to fulfill the requirements for professional education in social work. Applications may be submitted after the student has completed forty semester credits in course work or its equivalent at the freshman and sophomore levels.

Each applicant must: (1) complete and forward to the Office of Admissions, Wayne State University, the form *Application for Undergraduate Admission* (for information on application fee, see 'Student Fees,' in the General Information section of this Bulletin); (2) submit to the Office of Admissions, Wayne State University, directly from colleges and universities of recognized standing, official transcripts of all credits previously earned, whether in one or several educational institutions; (3) complete and forward to the School of Social Work, Office of Admissions and Student Services, the form *Application for Admission, Bachelor of Social Work Degree Program*; (4) have earned a minimum overall grade point average of 2.6; (5) show evidence to the Director of Admissions of the School of Social Work of suitability and fitness for the profession of social work and the ability to pursue successfully undergraduate professional education in social work.

**NOTE:** Students who have already attended Wayne State University should omit steps one and two above.

Applications are reviewed only when all supporting materials have been received. Priority deadlines for submission of initial and all supporting materials for September and January admission are February 28 and August 31, respectively. Students wishing to enroll in the Bachelor of Social Work degree program offered at the Macomb University Center may apply for September admission only. Applications received after the closing date cannot be guaranteed processing. The applicant may be required to attend an individual or group interview as part of the application process. The responsibility for deciding whether a student shall or shall not be admitted rests with the School.

Once a student is admitted, admission to the BSW program is conditional until all requirements are completed. The student must present a transcript verifying completion of sixty semester credits, his or her

grade point average, and prerequisites completed. The letter of admission does not constitute a contract; admission may be withdrawn if a student fails to meet requirements following entry to the School.

**Transfer of Undergraduate Credit:** No more than sixty-four semester credits from two-year colleges may be used toward the B.S.W. degree. A maximum of twelve Technical, Vocational, or Applied Practice credits (designated 'TVA') in the human service areas (for example, mental health, child care, gerontology, empathy training, human services and substance abuse) will count toward the degree. Any such transfer credits will be counted as general elective credit. Social work courses from programs not accredited by the Council on Social Work Education (CSWE) also will be transferred as 'TVA' general elective credit. See page 16 of this Bulletin for the University transfer policy.

## 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 page 9 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.

## Academic Credit and Work/Life Experience

No academic credit for life experience or previous work experience will be awarded in the Bachelor of Social Work or Master of Social Work degree programs, in whole or in part, in lieu of the field practicum or of courses in professional foundation areas.

## Withdrawal from the B.S.W. and M.S.W. Programs

A student who has been admitted to the Bachelor of Social Work program or the Master of Social Work degree program shall be considered to have withdrawn if the student is not enrolled in a course 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 terminate in good standing, students who withdraw from any degree program, for whatever reason, must formalize their withdrawal with the Director of Admissions and Student Services in the School of Social Work. A copy of the procedure for withdrawal 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 Bachelor of Social Work degree, 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 in the senior year will be required to repeat this term, and may be required to enroll concurrently in a course or courses in social work practice methods or directed study in social work. Students who have withdrawn and wish to be readmitted may be required to obtain an assessment of their physical or mental health from a health professional approved or selected by the School.

## Pre-Social Work Preparation

To qualify for admission to the Bachelor of Social Work program in the School of Social Work sixty semester credits (or its equivalent) at the freshman and sophomore levels must be completed. Such course work must be distributed according to one of the curricular

patterns cited below. The General Education Requirements of the University must be met at the same time.

Many pre-social work courses also help satisfy the University General Education Requirements. These courses are indicated by parenthetical two-letter prefixes to their titles. For a definition of the General Education Requirements and a list of courses which satisfy each of them, see pages 29-39.

The two patterns outlined below are available through the College of Liberal Arts and the Interdisciplinary Studies Program of the College of Lifelong Learning, designated Pattern 'A' and Pattern 'B,' respectively. Students may also select elective credits at the freshman and sophomore levels from such professional schools as the School of Business Administration, the College of Education, the College of Nursing, and the School of Social Work.

### Pattern A (College of Liberal Arts/College of Science)

Some of the following subject areas are prefixed with two-letter parenthetical codes. These codes indicate General Education categories which may be satisfied (entirely or in part) by the corresponding requirement in the pre-social work curriculum. For a definition of the General Education Requirements and a list of courses which satisfy each of them, see pages 29-39.

*A. Social Sciences:* The following distribution of courses is required.

1. (SS) Anthropology—3-4 credits (Note: Physical Anthropology does not meet this requirement.)
2. (SS) Economics—3 credits (Principles of Macroeconomics, ECO 2020, recommended)
3. (HS) History—3 credits (Do not select HIS 1300)
4. (AI) Political Science—3-4 credits
5. (SS) Sociology—two courses

*B. Natural Sciences:* The following distribution of courses is required, including a laboratory course in one of the LS or PS areas designated below.

1. (LS) Biology—3-4 credits
2. Psychology—three courses. Field practicum courses do not meet this requirement. A course in developmental psychology is required. Introduction to Principles of Psychology will NOT satisfy the LS (laboratory) requirement.
3. (PS) One course (3-4 credits) to be selected from the following: Physics, Chemistry, Geology, Astronomy.

*C. Humanities:* The following distribution of courses is required.

1. (PL) Philosophy/Letters—3 credits
2. (VP) Humanities — 3 credits

*D. English:* The following distribution of courses is required.

1. (BC) Freshman Composition—4 credits
2. (IC) English Elective (2000 level or above)—3 credits

*E. (OC) Basic Speech: 2-3 credits*

*F. Electives:* Recommended: Select electives from General Education Requirements in Foreign Culture (FC), Computer Literacy (CL), Critical Thinking (CT), UGE 1000. Electives should be selected in conjunction with an appropriate academic adviser.

### Pattern B (College of Lifelong Learning)

Titles of some of the following courses are prefixed with two-letter parenthetical codes. These codes indicate General Education categories which may be satisfied (entirely or in part) by the corresponding requirement in the pre-social work curriculum. For a definition of the General Education Requirements and a list of courses which satisfy each of them, see pages 29-39.

*A. Social Sciences:* The following distribution of courses is required.

credits

- 1. GSS 2710 — (SS) Selected Perspectives on Ethnicity . . . . . 4
- 2. GSS 2720 — Culture, Community, and Identity: Faces of Culture. 3
- 3. AGS 3480 — (SS) Theoretical and Practical Analysis of  
Work Organizations . . . . . 4

- 4. GSS 1510 or AGS 3420
  - (AI) American Political Development . . . . . 4
  - (AI) The American Constitution and the Judicial System 4

5. Economics 2020— (SS) Principles of Macroeconomics . . . . . 3

*B. Natural Sciences:* The following distribution of courses is required.

- 1. GST 2010 — Health Concepts and Strategies . . . . . 3
- 2. GST 2020 — Changing Life on Earth . . . . . 3
- 3. GST 2310 — (LS) Living in the Environment . . . . . 4
- 4. GST 2420 — (PS) Atoms and Stars . . . . . 3
- 5. Two courses in Psychology (a course in  
developmental psychology is required) . . . . . 6-8

*C. Humanities:* The following distribution of courses is required.

- 1. GUH 2710 — (PL) Art and Aesthetics: Literature and Philosophy 4
- 2. GUH 2730— (VP) Meaning in the Visual and Performing Arts . . . 3

*D. English:* The following distribution of courses is required.

- 1. GIS 1510 — (BC) Written Communication Skills . . . . . 4
- 2. English (IC) elective, 2000 level or above . . . . . 3

*E. Basic Speech:*

- 1. GIS 1560 — (OC) Dimensions of Oral Communication . . . . . 4

*F. Recommended Electives:* Select electives from General Education courses in Foreign Culture (FC), Computer Literacy (CL), Critical Thinking (CT), and UGE 1000. Electives should be selected in conjunction with an appropriate academic adviser.

## Degree Requirements

The Bachelor of Social Work degree requires satisfactory completion of a minimum of one hundred twenty credits. These consist of sixty credits in the freshman and sophomore years, including prerequisite courses (see Pre-Social Work Preparation, above) for admission to the professional component of the program and sixty credits in the junior and senior years, including forty-five credits in field work and related courses and a minimum of nineteen credits in corequisite and elective courses (see below).

**Grade Point Average:** To be awarded a Bachelor of Social Work degree, the student must achieve a cumulative grade point average of 2.0, and a grade point average of 2.0 during the junior and senior years. A minimum of thirty credits must be earned in residence in the School of Social Work, and the student must be in residence during the final semester prior to graduation.

**General Education Requirements:** University-wide General Education Requirements apply to all undergraduate students seeking baccalaureate degrees from Wayne State University. These requirements include group requirements in basic disciplines, and competency requirements in written communication, mathematics, oral communication, computer literacy, and critical thinking (competency examinations in each of these areas are available). See the General Information section of this Bulletin, page 29; and consult an undergraduate adviser regarding the pre-Social Work pattern and General Education courses.

**Suitability and Fitness for the Profession:** Students must show suitability and fitness for the profession of social work. Any breach of the values and ethics of the profession embodied in the Code of Ethics established by the National Association of Social Workers may result in termination from the B.S.W. or M.S.W. program.

## Curricula

The undergraduate social work curriculum is structured to provide the knowledge, values and skills essential for entry level generalist

social work practice. It is composed of five curricular areas: human behavior and the social environment, research, social work practice, social welfare policy and services, and field education. In addition, the following four themes will be found to intersect some or all curricular areas: values and ethics, social justice, oppression and discrimination, and populations at risk. The professional component of the curriculum is built upon a liberal arts foundation in the social and behavioral sciences, the humanities, English, mathematics, and the natural sciences. Students are required to enroll in selected courses in anthropology, economics, English, foreign culture, history, human biology, philosophy, political science, humanities, psychology, sociology, and speech.

Students in field education are placed in a wide variety of social service agencies and work with individuals, families, groups, organizations, and communities. Emphasis is placed on working in urban areas with the poor and oppressed, persons of color, and other at-risk populations representing a variety of ethnic, racial, and cultural groups. Field work stresses both amelioration and prevention of personal, interpersonal, and social problems, as well as improvement of the human condition.

Students are required to file an educational plan of work with the School of Social Work academic adviser, and to update the plan periodically.

## REQUIRED PROFESSIONAL CONTENT

### Junior Year

*First Semester* *credits*

- S W 3010—Social Work Practice Method I . . . . . 2
- S W 3510 — Human Development and Dysfunction . . . . . 3
- S W 3710—Social Welfare & the Social Work Profession: . . . . . 2

*Second Semester*

- S W 3020—Social Work Practice Method II . . . . . 3
- S W 3610 — Organizational and Community Change . . . . . 3
- S W 3810 — Research Methods, Data Analysis, & Practice Eval. I 3
- S W 4998 —Field Practice in Social Work. . . . . 5

### Senior Year

*First Semester*

- S W 4010 —Social Work Practice Method III . . . . . 3
- S W 4710 —Social Welfare in the United States: Current Programs 2
- S W 4810 —Research Methods, Data Analysis, & Practice Eval. II 3
- S W 4998 —Field Practice in Social Work. . . . . 5

*Second Semester*

- S W 4020 —Social Work Practice Method IV . . . . . 2
- S W 4520 —Social Functioning and the Effect of Stress. . . . . 2
- S W 4997 — (WI) Integrative Seminar in Social Work . . . . . 2
- S W 4998 —Field Practice in Social Work. . . . . 5

## COREQUISITES AND ELECTIVES

**Corequisites:** The corequisites for the program during the junior and senior years must be distributed as follows:

- Anthropology 3110 — 3 credits, to be taken no later than second semester of junior year
- History 1300— 3 credits, to be taken no later than second semester of junior year.

**Electives:** Electives must be selected in consultation with the School of Social Work academic adviser.

**PART-TIME EXTENDED STUDY OPTION:** Students interested in the part-time extended study option for the BSW program must file a plan of work with the School's academic adviser of the School. The extended study option may be elected only if approved by the Coordinator of the BSW program, or if the student is admitted to this option in the junior year.

## UNDERGRADUATE COURSES (S W)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### 1010 Introduction to Social Work and Social Welfare. Cr. 2-3

Survey of selected social welfare programs in the United States; history and development; focus on issues related to poverty and dependence. (Y)

### 3010 Social Work Practice Method I. Cr. 2

Prereq: junior standing; admission to the BSW program. First of four courses providing knowledge, skills and framework for entry level generalist practice: social work purposes, functions, focus, values; problem-solving process; principles of observation, interpersonal relationships and communication; emphasis on worker-client interactions during the beginning phases of service. (F,W)

### 3020 Social Work Practice Method II. Cr. 3

Prereq: S W 3010; coreq: 4998. Continuation of four-course sequence. Introduction to a problem-solving guide for effecting situational change; emphases on assessment in the problem-solving process and on worker-client interactions during the middle and ending phases of service. Comparing and contrasting knowledge, skills and dynamics in work with individuals and groups. Analysis of student experience in practicum. (W,S)

### 3510 Human Development and Dysfunction. Cr. 3

Prereq: admission to the BSW program. Assessment of the phenomenon of social functioning with reference to the human life cycle and human diversity in the context of families, groups, neighborhoods, communities, organizations and society. (Y)

### 3610 Organizational and Community Change. Cr. 3

Prereq: junior standing; admission to BSW program. Theories of organizational and community change and social networks, neighborhoods, interorganizational and organizational behavior within a social work framework; study and simulation of change processes within human communities. (W,S)

### 3710 Social Welfare and the Social Work Profession: History, Trends and Basic Concepts. Cr. 2

Prereq: admission to the BSW program. History of social welfare in the United States. Basic concepts of social welfare. The profession of social work in historical perspective. Current trends and issues in social welfare and in the profession of social work. (Y)

### 3810 Research Methods, Data Analysis, and Practice Evaluation I. Cr. 3

Prereq: junior standing, admission to BSW program; coreq: S W 3020. Descriptive research methods for social work concepts and skills of problem formulation; research design; description and critical analysis of research studies; integration of descriptive statistics and data analysis within social work context. (W,S)

### 4010 Social Work Practice Method III. Cr. 3

Prereq: S W 3020; coreq: 4998. Continuation of four-course sequence. Utilization of systems and problem-solving approaches to plan for and apply appropriate social work interventions with emphasis on individuals, families and small groups. Analysis of student experience in practicum; use of simulation, videotapes, role-playing, and discussion. (Y)

### 4020 Social Work Practice Method IV. Cr. 2

Prereq: S W 4010; coreq: 4998. Continuation of four-course sequence. Utilization of systems and problem-solving approaches to plan for and apply appropriate social work interventions with emphasis on service delivery and change within complex organizations

such as agencies, neighborhoods, and communities. Focus on the integration of a generalist model of practice. (F)

### 4520 Social Functioning and the Effect of Stress. Cr. 2

Prereq: S W 3510; coreq: 4998. Examination of stress as an outcome of maladaptive exchanges between persons and their environments, with emphasis on three interrelated areas: life transitions, unresponsive environments, communication and relationship problems. (W)

### 4710 Social Welfare in the United States: Current Programs. Cr. 2

Prereq: S W 3710; coreq: 4998. Description and analysis of major social welfare programs in the United States. (F)

### 4810 Research Methods, Data Analysis, and Practice Evaluation II. Cr. 3

Prereq: S W 3810; coreq: S W 4998. Continuation of S W 3810. Integration of inferential statistics and components of quantitative and qualitative designs appropriate for evaluating service delivery and related policy. (F)

### 4990 Directed Study. Cr. 1-4 (Max. 4)

Prereq: written consent of adviser and graduate officer. Individual direction in reading and research on selected topics. (T)

### 4997 (WI) Integrative Seminar in Social Work. Cr. 2

Prereq: S W 4010; coreq: S W 4998, 4020. Integration of classroom learning and field experiences to promote student's understanding of social work knowledge, skills and values. Assessment of knowledge and experiential bases for generalist social work practice. (W)

### 4998 Field Practice in Social Work. Cr. 1-11

Coreq: one course in social work practice method. Minimum of 15 credits must be taken over not less than 3 semesters; open only to junior and senior BSW students. Offered for S, M, and U grades only. The ratio of clock hours to credits is 46 to 1. Practicum of BSW professional component interrelated with courses in social work method, human behavior and the social environment, social welfare organization and policy, and research. Field placements assigned by the Coordinator of Field Education. (T)

### 5720 Social Services for the Aged. Cr. 2-3

Identification, description and analysis of the problems of the aged; development of social work services to meet their needs. (Y)

### 5880 (SOC 5880) Family Violence: Intervention. Cr. 1-2

Prereq. or coreq: SOC 5870. Open to PACT students; others by consent of instructor. Application of theory and intervention techniques in the family experience of maltreatment. (Y)

### 6010 (ELE 6010) Family Centered Collaboration in Early Childhood Intervention. (O T 6150) (PSY 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)

### 6460 (SOC 6460) Family-Based Intervention Techniques. Cr. 4

Open to PACT students; others by consent of instructor. Appropriate theories and strategies for working with families on an in-home basis to change family interaction, child-rearing patterns, health practices and management behavior. Focus on high-risk, urban families. (Y)

### 6500 Social Work and the Law. (ULM 6600) Cr. 2

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)

**6510 Social Work and the Black Community. (AFS 6510) Cr. 2**  
An examination of the variety of points of view and trends within the black community as a background for social work assessment and intervention. (Y)

**6540 Effects of Drugs and Alcohol on Social Functioning. Cr. 2**  
Prereq: senior or graduate standing. Types of substances most frequently abused, their effects on physiological, psychological and social functioning, and patterns of use among different age groups and populations. (T)

**6550 Social Work Issues in the Work Place. Cr. 2**  
The nature and causes of occupational stress and other work-related behavior; existing and needed social work services in work settings, union programs, and community social agencies. (Y)

**6560 Social Work and Sexual Orientation. Cr. 2**  
Prereq: senior or graduate standing. Theories of human behavior that relate to sexual orientation; impact of gay, lesbian, bisexual sexual orientation on social functioning; transference and counter-transference issues and homophobia, assessment of their impact on practice and policy. (Y)

**6720 Social Services in Schools: Policy Analysis and Formulation. Cr. 3**  
Prereq: S W 7050 or 7070 or consent of graduate officer. Offered only for two credits to students with MSW degree. Components of social welfare program, and policy analysis and formulation, illustrated by content derived from the field of social services in schools. (T)

# ACADEMIC REGULATIONS and FINANCIAL AID

*For complete information regarding academic rules and regulations of the University, students should consult the section of this bulletin beginning on page 5. 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 procedures, and fulfilling all course and degree requirements in proper sequence with satisfactory scholarship. In case of doubt regarding any matter, the student should consult the School's academic adviser. The primary responsibility rests with the student. All students are urged to file a plan of work with the School's academic adviser, and to update the plan periodically. Electives should be selected in consultation with the School's academic adviser.

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, copies of which may be obtained in the dean's office.

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.

## Attendance and Residency

Students are expected to attend all sessions of courses for which they are registered and to notify the instructors or their secretaries prior to the class session, if possible, when absence is necessary due to illness or similar emergency. Absence from the field practicum must be reported prior to the scheduled time, both to the agency and the faculty adviser. Consistent absence or tardiness in the class or field practicum may have an adverse effect on the student's grade and may result in termination from the B.S.W. program.

A student must complete thirty semester credits in the School of Social Work and must be in residence during the final semester prior to graduation.

## Maximum Hours

A student engaged in full-time or part-time study in the School of Social Work should plan a program in consultation with the adviser, limiting it within a framework of required courses and electives in order to maintain a standard of scholarly attainment and academic excellence.

## Field Education

All students enrolled in S W 4998, Field Practice in Social Work, are required to carry professional liability insurance 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 manual is distributed to each student enrolled in S W 4998.

## Field Education Health Clearances 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 students in field educa-

tion if their physical or mental health status indicates such action is warranted in order to safeguard clients, agencies, the students themselves, other students, or the School.

## Degree Application

Application for the degree must be filed in the University Records Office no later than the first day of classes for the semester in which the student expects to complete the requirements for the degree. The applicant must be recommended for the degree by the faculty. The applicant is requested and expected to attend the commencement at which the Bachelor of Social Work degree is conferred.

## FINANCIAL AID

Scholarships, fellowships, and other forms of financial aid are available on a limited basis for those students who cannot undertake study without some financial assistance. The School expects students to utilize their own resources as much as possible to cover the costs of professional education. Financial aid through University resources should be considered as supplementary.

Applications for student aid, submitted on the appropriate form, are evaluated by the University Office of Scholarships and Financial Aid based on financial need as reflected in the information provided by the students, their families, or both. All requests for applications should be sent to the Office of Scholarships and Financial Aid, Wayne State University. Information on Guaranteed Student Loans may be obtained by contacting the Office of Scholarships and Financial Aid.

When financial aid is necessary, the School of Social Work will cooperate with the University Office of Scholarships and Financial Aid (see page 20) 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 an intention to enroll after being notified of admission.

Some awards are administered directly by the Office of Admissions and Student Services, School of Social Work. Information and appropriate application forms may be obtained by contacting the Office of Admissions and Student Services, School of Social Work.

## Loan Funds

The following funds offer loans to eligible social work students:

*Everett Beishlag Student Loan Fund, Charles Brink Loan Fund, Bette Kalichman Student Loan Fund, Elizabeth Livingston Student Loan Fund, Aaron Mendelson Memorial Trust Fund*

## Scholarships and Awards

For most financial aid opportunities at the School, application deadlines are: the first Monday in March for summer M.S.W. students in advanced standing; the final Friday in April for B.S.W. students admitted for the fall term; the final Friday in November for B.S.W. students admitted for the winter term.

*Edith N. Brehler Memorial Scholarship.* Manuscript competition. Students submit a twelve- to fifteen-page paper on social work values and practice to be judged by a panel of faculty and students.

*Fred and Freda Gentsch Scholarship.* Award of variable amount, based on merit and financial need.

*School of Social Work Scholarship.* Awarded on the basis of scholastic achievement, character, leadership, and financial need.

*Shirley P. Thrasher Scholarship.* Awarded on the basis of scholastic achievement and a history of service to minority and vulnerable populations.

*Mary Turner Scholarship.* Award of variable amount, made to full-time female students on the basis of academic achievement and financial need.

*Beryl Zlatkin Winkelman Scholarship.* Awarded on the basis of scholastic achievement, character, leadership, and financial need.

# SCHOOL ACTIVITIES

## Student Organization

The Student Organization is a vital component in the programs of the School of Social Work. In existence since 1949, it is the student's voice in matters regarding school and profession. It is involved with School issues as well as broader educational and social issues. All students currently enrolled in undergraduate or graduate programs in the School of Social Work are members of the Student Organization.

Student Organization activities include: a student newspaper, weekly meetings, participation on curriculum and policy committees of the School, social and recreational activities, assistance in attendance at relevant conferences. Other student activities include participation in the National Association of Social Workers.

## National Association of Black Social Work Students

The School chapter of the National Association of Black Social Workers (NABSW) involves itself in educational, research and community service activities on a year-round basis. NABSW assists African American students in making the adjustment to the School of Social Work and provides students with supportive educational services. NABSW also works closely with the Detroit Chapter of the National Association of Black Social Workers (NABSW) in sponsoring forums, luncheons, conventions and fund raising events, as well as a schedule of social and leisure time activities.

## Student Organization of Latino and Latina Social Workers (S.O.L.A.S.W.)

The Student Organization of Latino and Latina Social Workers (SOLASW) is an organization for students interested in Hispanic affairs. SOLASW works to increase the number of Hispanic students and faculty in the School, to integrate the Hispanic experience into the School's program and academic settings, to link the Hispanic community needs with School resources, and to provide an Hispanic-related student forum in the University community. Membership in SOLASW is open to Hispanic and non-Hispanic students.

## Special Interest Groups

Each year there are students with special interests who organize themselves into student activity groups around their interests: Arab/Chaldean student group, Center for Community Social Work, Gay/Lesbian/Bisexual student group, Jewish student group, and Christian student group.

## Alumni Association

The Alumni Association serves to enhance School and professional identification. To this end the Association organizes promotional and interpretative activities, sponsors forums, institutes and workshops which encourage professional development, conducts special activities in support of the work of the School, and promotes fellowship among alumni, faculty and students through its social programs. It also provides scholarships and financial support to the School through fund raising efforts. Through the Association's newsletter, graduates are informed about one another and the School of Social Work.

# FIELD EDUCATION

The following agencies and persons have worked with members of the Faculty in field instruction during the academic year 1999-2000:

- AIDS PARTNERSHIP MICHIGAN: H.C. Milbourne  
ARC SERVICES OF MACOMB, INC.: Luanne DeGueisippe  
ALL SAINTS NEIGHBORHOOD CENTER: Dennis I. Nordmoe  
AMERICAN RED CROSS: Dorthaer Norwood  
ARAB CHALDEAN COUNCIL: Walid Gammouh  
ARBORVIEW HOSPITAL: Kim Campolong  
AURORA HEALTHCARE, INC.: Mary Roxburgh, Kristen Sorrells, Duane Stasiewicz, Louisa Thompson, Ted Varkas  
BEACON DAY TREATMENT: Gregory Warner  
BIG BROTHERS/BIG SISTERS — MACOMB COUNTY: Eric D. Franklin  
BLACK FAMILY DEVELOPMENT: Alice Thompson  
BLUE WATER CENTER FOR INDEPENDENT LIVING: John R. Williams  
BON SECOURS NURSING CARE CENTER: Sharon R. Bogucki  
BOYS HOPE — GIRLS HOPE OF DETROIT: Mitch Rosenzweig  
BOYS AND GIRLS REPUBLIC: Noreen Haggerty, Gregory Schreiberger  
BOYSVILLE OF MICHIGAN: Sharon R. Berkobien, Barbara Leo, Ed Overstreet  
BRIGHTMOOR COMMUNITY CENTER: Peter Lisiecki  
CANFIELD HEALTH SERVICES: Oliver J. Johnson  
C.A.R.E.: Barbara Browe  
CASS COMMUNITY UNITED METHODIST CHURCH: Linda McQueen  
CATHEDRAL TERRACE: Charles Johnson, Juanitta Sims  
CATHOLIC SOCIAL SERVICES OF FLINT: Betty Rathfon  
CATHOLIC SOCIAL SERVICES OF MONROE COUNTY: Sara Andrews-Navare, Susan Davis, Barry Eitel  
CATHOLIC SOCIAL SERVICES OF ST. CLAIR COUNTY: Edward Cleslinski  
CATHOLIC SOCIAL SERVICES OF WASHTENAW COUNTY: Cathy Kelly  
CATHOLIC SOCIAL SERVICES OF WAYNE COUNTY: Vicki Nowak  
CENTER FOR HUMAN RESOURCES: Mary Sue Flowery, Lois Garriott  
CHILDREN'S CENTER OF WAYNE COUNTY: Martha Bauman, Pat Cook, Doris Johnson, Ted Lewis, Floyd Robinson  
CHILDREN'S HOME OF DETROIT: Martha Maxwell  
CHIPPEWA VALLEY SCHOOLS: Charlene McGunn  
CHRIST CHILD HOUSE, THE: Julia Winston  
CITIZENS FOR BETTER CARE: Nida Donar  
CLARKSTON COMMUNITY SCHOOLS: Jim Butzine  
COMMON GROUND/SANCTUARY: Maria Linsalata, Molly Macaulay, Emily Norton, Sheri Wargnier  
COMMUNITY CARE SERVICES: Sheryl Dey  
COMMUNITY SERVICES OF OAKLAND: John Erich  
CORNELL CENTER: Jane Diehl  
CROSSROADS FOR YOUTH: Carol Teachworth  
CROSSROADS OF MICHIGAN: Joe Schillmoeller  
CYPRIAN CENTER, INC.: Carl Dade  
DETROIT ACADEMY OF ARTS AND SCIENCES: Arlene Hunter  
DETROIT BOARD OF EDUCATION: Rosetta Bailey, Cheryl El-Amin, Marie Hamilton, Barbara Jenkins, Harriet Kirk, Faustinia Loper, Jacquelyn Marshall, Cande Tellez-Urarek, Shealah Treice, Kenneth Warren  
DETROIT CITY COUNCIL: Sara Gleicher  
DETROIT EAST COMMUNITY MENTAL HEALTH CENTER: Floyd Hayden  
DETROIT HEALTH DEPARTMENT: Olivia Ramsey  
DETROIT INSTITUTE FOR CHILDREN: Mary Ellen Bayko, Deanne Curran, Debbie Whelan  
DETROIT MEDICAL CENTER — CHILDREN'S HOSPITAL OF MICHIGAN: Shirley Mann-Gray  
DETROIT MEDICAL CENTER — DETROIT RECEIVING HOSPITAL/UNIVERSITY HEALTH CENTER: Larry Hanbridge  
DETROIT MEDICAL CENTER — GRACE HOSPITAL: Rosemary Bell, Barbara Tunstall  
DETROIT MEDICAL CENTER — REHABILITATION INSTITUTE: Patrick Donnellon  
DETROIT MEDICAL CENTER — SINAI HOSPITAL DEPARTMENT OF PSYCHIATRY: Judy Nowinski  
DETROIT PUBLIC SCHOOLS — EAP: Dorothy Jenkins  
DETROIT RIVERVIEW HOSPITAL: Eric Rasmussen  
DEVELOPMENT CENTERS, INC.: Steven S. Nims, Linda Parker, Joyce Pringle  
DON BOSCO HALL: Lawrence Abner, Jo-Anne S. Woodard  
DOVES FAMILY DEVELOPMENT INSTITUTE: Henrietta Reaves  
DOWNRIVER COMMUNITY SERVICES INC.: Penny Hader  
DOWNRIVER GUIDANCE CLINIC: Jackie Carmichael, Rosemary Insley, Carol Oleksiak, Mark Small  
DOWNTOWN SENIOR CITIZENS CENTER: Amy Park  
EAST DETROIT PUBLIC SCHOOLS: Katherine Madajski  
EL CENTRO: Sonia Acosta, Patricia Fridman  
ENNIS CENTER FOR CHILDREN: Cynthia Bell, Lisa Fikany  
EVANGELICAL HOME: Carrie Eriksen  
EVERGREEN CHILDREN'S SERVICES: Ron Jackson  
FAIRLANE BEHAVIORAL SERVICES: Karen Jordan, Carlos Ruiz  
FAMILY INDEPENDENCE AGENCY — DETROIT: Beverly Butler, Joyce Lamar  
FAMILY INDEPENDENCE AGENCY — ST. CLAIR COUNTY: Ivan Benedict, Sheila Wolak  
FAMILY INDEPENDENCE AGENCY — WAYNE COUNTY: Cassandra Bowers, Anna Genus, Stephanie Laughlin, Sharon Pontillo  
FAMILY SERVICES OF DETROIT: Dennis Muzzi, Jo Neal, Ramona Smith, Roosevelt Stacy  
FAMILY YOUTH INTERVENTIONS: Debbie Parsons  
FARMINGTON PUBLIC SCHOOLS: Lynn M. Levin  
FIRST STEP: Judith Barr, Ilene Hogan  
FIRST UNITARIAN UNIVERSALIST CHURCH: Larry Hutchison  
FITZGERALD PUBLIC SCHOOLS: Polly Hardy  
FLAT ROCK COMMUNITY SCHOOLS: Claudia Williamson

FLINT BOARD OF EDUCATION: Elonzo Duncan  
 FLINT SCHOOLS: Arminda Garcia  
 FRASER VILLA: Debbie Meers  
 FRIEND OF THE COURT: Dave Manville  
 GARDEN CITY HOSPITAL: Margaret Sasena  
 GENESEE COUNTY COMMUNITY MENTAL HEALTH SERVICES:  
 Elizabeth Veasey, Paul Zick  
 GILDA'S CLUB, METRO DETROIT: Kathleen Hardy  
 HAVEN: Cokey Millar  
 HARBOR, THE: Sally Currie  
 HARTLAND HEALTH CARE CENTER: Glen D. Lowery  
 HEGIRA PROGRAMS, INC.: Doreen Lightner  
 HENRY FORD BEHAVIORAL SERVICES: Nanette Colling, Carol  
 McGillis, Mancy Meyer, Dave Moore, Kathy Ransome, Darlene Teal  
 HENRY FORD CONTINUING CARE: Elizabeth Pewitt  
 HENRY FORD COTTAGE HOSPICE: Kathleen Barletta, Tim Holmer,  
 Michelle Kreft, Diana Tomezak  
 HENRY FORD HEALTH SYSTEM — EAP: Lynda Mance,  
 Tom Matlas  
 HENRY FORD HEALTH SYSTEM (GITT): Rod Autin, Norma Har-  
 paz, Dan Kummer  
 HENRY FORD HOME HEALTH CARE: Beth Newman, Karen  
 Ruwoldt, Jennifer Tucker  
 HENRY FORD HOSPITAL: Polly McGreevy  
 HIGHLAND PARK COMMUNITY JUNIOR/SENIOR HIGH SCHOOL:  
 David Sampson, LeVan Townsel  
 HIGHLAND PARK SCHOOL DISTRICT: Odevia Brown  
 HOSPICE OF MICHIGAN: Shannon O'Neill  
 INFORMATION CENTER, INC., THE: Doug Plant  
 INKSTER SCHOOL DISTRICT: Carolyn Miles, Barbara Woodson  
 INSTITUTE FOR TRAUMA AND LOSS IN CHILDREN: William  
 Steele  
 INTERNATIONAL INSTITUTE OF METROPOLITAN DETROIT, INC.:  
 Valerie White  
 JEWISH FEDERATION APARTMENTS: Andrea Rosner, Sandra  
 Smith  
 KADIMA: Janette Shallal  
 LIVONIA PUBLIC SCHOOLS: Stephanie Smith  
 LULA BELLE STEWART CENTER: Ladora Barnett, Edna Walker  
 LUTHERAN ADOPTION SERVICE: Delores Parsons  
 LUTHERAN CHILD AND FAMILY SERVICES OF MICHIGAN: Mary  
 Vostal, Patricia Walsh  
 LUTHERAN SOCIAL SERVICES OF MICHIGAN: Marion McCarthy,  
 Carol Severn  
 MACOMB COUNTY COMMUNITY MENTAL HEALTH: Paul Allen  
 MACOMB COUNTY FAMILY INDEPENDENCE AGENCY: Mildred  
 Smith-Roberts, Linda Wilson  
 MACOMB FAMILY SERVICES: Laura Henderson  
 MACOMB INTERMEDIATE SCHOOLS: Nadine Lovell  
 MARRIOTT COURTYARD: Diana Mousseau  
 MARWOOD MANOR NURSING AND REHABILITATION:  
 Patti Sullivan  
 MERCY HOSPITAL OF DETROIT: Kim Gusse, Corine Mann  
 MERCY NETWORK CENTRAL: John Kosik  
 MICHIGAN SUPPORTED EDUCATION RESEARCH PROJECT:  
 Frank Verdejo  
 MT. CLEMENS GENERAL HOSPITAL: Angel Marsiglio  
 MYASTHENIA GRAVIS ASSOCIATION: Sharon Lotoczky  
 NEIGHBORHOOD SERVICE ORGANIZATION: Angela Kennedy,  
 Carla Spight  
 NORTHEAST DROP-IN CENTER: David E. Gallagher  
 NORTHEAST GUIDANCE CENTER: Steve Batson  
 OAKLAND COUNTY CHILDREN'S VILLAGE: Suzanne P. Farran  
 OAKLAND COUNTY COMMUNITY MENTAL HEALTH AUTHORITY:  
 Mary M. Touhey McLeod  
 OAKLAND COUNTY YOUTH ASSISTANCE: Patrick Breen, Gabri-  
 elle Osooli  
 OAKLAND FAMILY SERVICES: Barbara Campbell, Cora Haskins,  
 Natalie Marchion  
 OAKLAND UNIVERSITY: Glenn McIntosh, David Moxley  
 OAKWOOD HOSPITAL: Loyla Abdul-Dhani, Mark Russell  
 OLHSA — HEAD START: Lauren Billeau, Kim Hill, Ethel Mertz  
 OXFORD AREA COMMUNITY SCHOOLS: Anthony Bronzo, Fern  
 Fosgate  
 PARENTS AND CHILDREN TOGETHER (P.A.C.T.): Dorene Brown,  
 Cienora Byes, Nichole Paradis  
 PORT HURON AREA SCHOOL DISTRICT: Dennis Bilena, Sheri  
 Kaiser, Jack N. Peters, Harvey Stremmer  
 POSITIVE IMAGES: Maisha Kenyatta  
 PROVIDENCE HOSPITAL AND MEDICAL CENTER:  
 Deborah Wetzler  
 PROVIDENCE HOSPITAL CANCER CENTER: Carol Birkett  
 QUALITY BEHAVIORAL HEALTH, INC.: Nora Holt, Naveed V. Syed  
 RAPE COUNSELING CENTER: Althea Grant  
 RENAISSANCE WEST COMMUNITY SERVICES: Charlotte  
 Harshaw-Smith  
 RESTORATION TOWERS: Gladys Murphy, Betty Roberts  
 ROSE HILL CENTER, INC.: Bryan Kyrolainen  
 ROYAL OAK SCHOOLS: Diane Alvin, Ann Davies, Dayle Prinstein  
 SAGINAW COMMUNITY MENTAL HEALTH: Pam Barckholtz, Ardis  
 Green  
 ST. CLAIR COUNTY FAMILY INDEPENDENCE AGENCY: Marilyn  
 Bauman, Ivan Benedict, Gail Gruenburg  
 ST. FRANCIS FAMILY SERVICES: Derrick Forbers  
 ST. JOHN DETROIT RIVERVIEW HOSPITAL: Sari Abromovich  
 ST. JOHN MACOMB HOSPITAL: Susan Schwartz, Maryann  
 Woodard  
 ST. JOHN NORTHEAST COMMUNITY HOSPITAL: Pat Falk, Nancy  
 Fennell  
 ST. JOSEPH MERCY HOSPITAL: Michelle Navarre, Kathleen  
 Strader  
 ST. PETER THE APOSTLE ELEMENTARY SCHOOL: Ron Jirovec,  
 Marion McCarthy  
 SALVATION ARMY, THE: Kay Merritt  
 SALVATION ARMY DENBY CENTER: Phyllis Aronson  
 SALVATION ARMY HARBOR LIGHT: Linda Powell



SANCTUARY, INC., THE: Barb Broesamle, Harold Shriman, Steve Overstreet  
SCHOOL-BASED MENTAL HEALTH EVALUATION GRANT: Melvyn C. Raider  
SHUMARD COUNSELING, P.C.: Barbara Shumard  
SOUTHFIELD PUBLIC SCHOOLS: Karen Weiner  
SOUTHGATE COMMUNITY SCHOOL DISTRICT: Beverly A. Baroni-Yeglic  
SOUTHWEST DETROIT COMMUNITY MENTAL HEALTH: Jorge Cassares, Graciela Villalobos  
SPAULDING FOR CHILDREN: Addie D. Williams  
STARFISH FAMILY SERVICES: Lyn Fox, Mary Ellen Rehse  
STARR COMMONWEALTH: Shawntiera Livingston  
SUBURBAN WEST COMMUNITY MENTAL HEALTH: Alice Meng, Kathleen Rock, Henrietta Warren  
TAYLOR SCHOOL DISTRICT: Pat Collins, Loren Hoffman, Sandra Whaley  
TODD-PHILLIPS DEVELOPMENT CENTER, INC.: Cheryl K. Seay  
TRAINING AND TREATMENT INNOVATIONS, INC.: Kelly LeRoux, Juliana Stitz  
TROY SCHOOL DISTRICT: Sheryl Butzine  
TURNING POINT, INC.: Suzanne Coats, Victoria Olekinski  
TUSCOLA INTERMEDIATE SCHOOL DISTRICT: Rebecca Ducham  
UNITED WAY COMMUNITY SERVICES: Edward S. Egnatios, Susan Himle  
UNITED WAY OF WINDSOR-ESSEX COUNTIES: Harry Kessler  
UNIVERSITY MIDDLE SCHOOL: Roxanne Clover  
UNIVERSITY PSYCHIATRIC CENTER: Kate Connors, Elsee Hairston  
UTICA COMMUNITY SCHOOLS: Diane Redmond, Bev Solomon  
VETERANS' ADMINISTRATION HOSPITAL — SAGINAW: Peggy Asher, Judith Davidson, Joanne Montgomery  
VETERANS' ADMINISTRATION MEDICAL CENTER — ANN ARBOR: Shelley Wagner  
VETERANS' ADMINISTRATION MEDICAL CENTER — DETROIT: Delores Reynolds, Aaron Rubin, Lynn Senia, Sheila Vogel, Sandy Wilson  
VAN DYKE PUBLIC SCHOOLS: Peggy Brunhofer, Joe Fedorczyk, Patricia Magas, Mary Reilly  
VANTAGE POINT— NCA/DD: Linda Woodward  
VISTA MARIA: Catherine Simmons, Deborah Wright  
WALTER P. REUTHER PSYCHIATRIC HOSPITAL: Amy Allen  
WASHTENAW COUNTY O'BRIEN CENTER: Shirley Watters  
WATERFORD SCHOOL DISTRICT: Karen Gomez, Danny Ribadou  
WAYNE CENTER: Michael Spooner  
WAYNE COUNTY JUVENILE DETENTION FACILITY: Janice Pearson  
WAYNE STATE UNIVERSITY — COUNSELING AND PLACEMENT SERVICES: Amy McCollum, Lynne Rose  
WAYNE STATE UNIVERSITY DEVELOPMENTAL DISABILITIES INSTITUTE: Elizabeth Jenks  
WAYNE-WESTLAND COMMUNITY SCHOOLS: Diana Yurk  
WEDGEWOOD ACRES: Judith Walton  
WESTWOOD COMMUNITY SCHOOL DISTRICT: Michael Nathan

WHALEY CHILDREN'S CENTER: Racquel Hatter, Barbara Hyatt  
WILLOW RUN COMMUNITY SCHOOLS: Christine Lofft  
WINDSOR REGIONAL HOSPITAL COMMUNITY MENTAL HEALTH: Elaine Finnott  
WINDSOR-ESSEX CHILDREN'S AID SOCIETY: Chris Reid  
WOLVERINE HUMAN SERVICES: Gregg Everett, Kathleen Neuman  
WOMEN'S JUSTICE CENTER: Anthea Grant, Norma Tucker



COLLEGE OF URBAN,  
LABOR, and METROPOLITAN AFFAIRS

DEAN: Alma H. Young

# Foreword

The College of Urban, Labor, and Metropolitan Affairs was approved by the Board of Governors, effective Fall Term 1987. The primary mission of the college is to promote, stimulate and engage in pure and applied urban-oriented research and scholarship; to provide instructional programs (credit and non-credit curricula) in urban and labor affairs; and to develop and conduct programs of service to public and private institutions and to individuals, consistent with the overall mission of the University. The major context of the college's work is the urban setting of metropolitan Detroit. Utilizing an interdisciplinary and interdepartmental approach, the College draws upon numerous departments in the University for its programs of study, research, and public service.

The College of Urban, Labor, and Metropolitan Affairs includes the Center for Chicano-Boricua Studies; the Center for Peace and Conflict Studies; the Department of Geography and Urban Planning; the Labor Studies Center; the Douglas A. Fraser Center for Workplace Issues; the Center for Urban Studies; the Archives of Labor and Urban Affairs; the University Professors for Labor Studies; the Skillman Center for Children; and the Detroit Orientation Institute. The State Policy Center is also located in the College.

The College is responsible for the administration of the graduate programs in Geography, Industrial Relations, Urban Planning; and Dispute Resolution; the Bachelor of Arts in Labor Studies; the Graduate Certificate Program in Economic Development; the Graduate Certificate Program in Dispute Resolution; and the Co-Majors in Urban Studies and Chicano-Boricua Studies, and Peace and Conflict Studies. (For information on the Bachelor of Arts program in Geography, consult the College of Liberal Arts section of this bulletin.) For further information, contact the Office of Instructional Programs, College of Urban, Labor, and Metropolitan Affairs, 1622 Faculty Administration Building; 577-6092.

## Archives of Labor and Urban Affairs

Walter P. Reuther Library; 577-4024

The Archives of Labor and Urban Affairs, College of Urban, Labor and Metropolitan Affairs, was established in 1960 to collect, preserve and make available to qualified researchers records of the American labor movement and related social, economic and political reform groups, and twentieth-century urban America. The Archives has since become the official depository for the inactive files of the Congress of Industrial Organizations, the United Auto Workers, the American Federation of Teachers, The Newspaper Guild, the United Farm Workers, the American Federation of State, County and Municipal Employees, the Airline Pilots Association, the Association of Flight Attendants, the Industrial Workers of the World and many state and local labor organizations. Files have also been gathered from such groups as the Citizens' Crusade Against Poverty, the American Civil Liberties Union, the National Association for the Advancement of Colored People, the United Community Services of Detroit, and New Detroit, Inc. Many individuals who played leading roles in labor and urban affairs have also placed their papers in the Archives. Correspondence, minutes, clippings, notes, newspapers and other written records, as well as films, tapes and photographs, are available for research. The Archives Newsletter is published periodically to describe recent acquisitions, research in progress and other topics.

## University Archives

Walter P. Reuther Library; 577-4024

The University Archives, College of Urban, Labor and Metropolitan Affairs, was established in 1958 to collect, preserve, organize and make available to qualified researchers those University records which have research value. The Archives also collects the records of student organizations, professional associations and personal papers of faculty members who have contributed to the development

of the University and higher education. The collections include manuscripts, photographs, publications, tape recordings, Board of Governors Proceedings, catalogs, schedules of classes and an extensive vertical file. The Archives currently holds over 500 newsletters and publications including *Wayne Report*, *The South End*, and less commonly known titles such as *Crumbs and Ravelings*, *Gabriel's Horn* and *Short Circuit*.

## Industrial Relations

Office: 1262 Faculty Administration Building; 577-6092

This graduate program provides a curriculum leading to the M.A. degree in Industrial Relations (MAIR). MAIR is inter-college, as well as interdisciplinary, and is administered by the College of Urban, Labor, and Metropolitan Affairs.

MAIR is jointly sponsored by the Departments of Economics and Psychology in the College of Liberal Arts, and Management in the School of Business Administration. Policy direction is provided by an Advisory Committee comprised of one representative of each sponsoring department.

MAIR is designed to provide professional preparation for a career in industrial relations with a focus on the substance and process of collective bargaining. Students will be prepared for industrial relations positions in government, business and union organizations, and MAIR intends to assist in the appropriate job placement of its graduates. MAIR will also provide knowledge and skills for persons who contemplate entering or who are already engaged in self-employment involving industrial relations, such as labor arbitration.

For further information, consult the Wayne State University Graduate Bulletin.

## Degree Programs

*BACHELOR OF ARTS with a major in labor studies*

*(The Bachelor of Arts with a Major in Geography degree is awarded by the College of Liberal Arts; see page 262.)*

*\*MASTER OF ARTS with a major in geography*

*\*MASTER OF ARTS in Dispute Resolution*

*\*MASTER OF ARTS in Industrial Relations*

*\*MASTER OF URBAN PLANNING*

*\*GRADUATE CERTIFICATE IN ECONOMIC DEVELOPMENT*

*\*GRADUATE CERTIFICATE IN DISPUTE RESOLUTION*

## Co-Major Programs

Degrees with co-majors in the following areas are granted in the College of Liberal Arts and the College of Fine, Performing and Communication Arts in conjunction with the College of Urban, Labor, and Metropolitan Affairs:

*Chicano-Boricua Studies*  
*Peace and Conflict Studies*  
*Urban Studies*

\* For specific requirements, see the Wayne State University Graduate Bulletin.

# BACHELOR'S DEGREE REQUIREMENTS

## Credits

Candidates for the Bachelor of Arts degree must complete at least 120 credits. Certain curricula may require additional credits above this minimum. (See 'Restrictions on Credit,' below.)

## Group Requirements

University-wide general education requirements and College-wide group requirements are designed to enhance students' basic skills and the diversity of their intellectual background. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth.

Beginning with the Fall semester of 1987, all first-semester freshmen entering the College of Urban, Labor, and Metropolitan Affairs and all Urban, Labor, and Metropolitan Affairs students who transfer twelve or fewer credits into the College are required to satisfy both the University General Education Requirements (see page 29) and the College of Liberal Arts Group Requirements (see page 223). While these two sets of requirements substantially overlap and complement each other, the College Group Requirements, in several respects, supplement and modify the University program by requiring additional course work or restricting the use of certain courses to satisfy these requirements.

*University Requirement In American Government* for students enrolled prior to Fall Term 1987: See General University Information, page 33.

## Proficiency in English and Mathematics

All undergraduate students who register for the first time at Wayne State University in Fall Semester 1983 or thereafter will be required to demonstrate proficiency in English and mathematics by the time they have earned sixty semester credits towards a bachelor's degree. For full particulars, as well as the requirements applicable to registrants at the University prior to Fall 1983, see the General Information section of this Bulletin, pages 29 - 33.

## Major and Co-Major Requirements

A major or co-major is a program of concentrated study in a department or area within the College. Specific course requirements for majors are listed in this bulletin under each of the departments or areas of the College. Students are expected to select areas of concentration during their sophomore year and to declare majors in the subject or field of choice by the beginning of their junior year. Students must complete all courses in their majors with an overall average of 'C' (2.0).

**Declaration of Major:** To declare a major, the student should consult a departmental adviser well in advance of a formal declaration, since the acceptance of the declaration of major is subject to the advice of the department concerned. An up-to-date cumulative record of the student's work should be obtained by the student from the Records Office and delivered to the department for its files. At the time of formal declaration, the student must obtain the signature of the department chairperson or the designated representative on the major declaration form and file the form in the Office of Instructional Programs, College of Urban, Labor, and Metropolitan Affairs. All courses elected or changed by the student after the declaration of a major should be approved by the department adviser.

The major must include at least twenty credits in one subject, exclusive of the introductory courses and inclusive of some advanced work. No more than forty-six credits in the major subject (including introductory courses) may be counted toward a degree.

Within the above limits, each major program has specific requirements, which may be modified from time to time; therefore, it is the student's responsibility to obtain the current requirements from the major department.

For interdepartmental or field majors, the rule regarding minimum credits required in one subject is waived.

For majors which require intensive study in a particular subject, more than forty-six credits are allowed.

The major completed is part of the degree designation on the diploma.

## Restrictions on Credit

*The College imposes the following restrictions on credit:*

**Maximum Credits in One Subject:** Students may not count toward a degree more than forty-six credits in any one subject except for special curricula which specified additional courses in the curriculum outline.

**Over-age Credits:** Students attempting to complete majors after a protracted interruptions in education, or those attending the University on a part-time basis over an extended period of time, may find that some early course work is out of date. In such cases, a department may require refresher work or a demonstration that the student is prepared for advanced courses in the department.

**Restrictions on Transfer Credit --Two-Year Colleges:** No more than sixty-four semester credits may be transferred from two-year colleges.

*--Weekend College (College of Lifelong Learning):* No more than sixteen credits, which may include six credits of Independent Study, may be transferred from Weekend College. Courses transferred will not count towards fulfilling group or major requirements.

*--Labor School:* A maximum of ten hours of elective credit may be granted students who have been certified as having completed the Labor School curriculum, have a letter of recommendation from the Director, and have earned sixty credits with a grade point average of at least 2.0.

**Restricted Courses:** Degree credit is not given for elections in restricted courses which exceed the approved limit specified below.

## Professional Courses

Students may elect a maximum of sixteen credits as cognate work from elected courses offered for degree credit by the several professional schools and colleges within the University. Eight of these credits may be elected with the approval of an academic adviser prior to the declaration of a major, and eight additional credits may be chosen with the approval of the major department. Where academic advisers have approved fewer than eight credits, the major department may approve credit up to the sixteen maximum credits allowed. In curricula which specifically require professional courses in excess of the maximum, additional credits may be elected.

## Specialized Courses

Unless a curriculum specifies otherwise, the maximum amount of degree credit which may be earned in certain specialized areas is limited as follows:

	<i>maximum degree credit</i>
Areas	
Dance (approved courses) .....	16
Health .....	8

Applied Music (including limitation stated below) . . . . .	16
Physical Education (approved courses) . . . . .	4

**A total of not more than four credits** from the following list of courses may be counted toward a degree unless a curriculum specifically requires more extensive elections:

MUA 2800 . . . . .	University Bands
MUA 2810 . . . . .	University Symphony Orchestra
MUA 2820 . . . . .	Jazz Lab Band
MUA 2830 . . . . .	Men's Glee Club
MUA 2840 . . . . .	Choral Union
MUA 2850 . . . . .	Concert Chorale
MUA 2870 . . . . .	Women's Chorale
MUA 2880 . . . . .	Chamber Music and Special Ensembles
SPR 2670 . . . . .	Radio-Television-Film Laboratory
SPC 2240 . . . . .	Forensics Practicum

## Repeated Subjects

It is understood that degree credit will not be granted for course work in which credit has already been granted. Since similar courses may have different names at different times and at different colleges, students are advised to make sure they do not offer repeated work as credit towards a degree.

## Extra Credits

Extra credits are credits taken in excess of the normal load of eighteen credits. Students with 3.0 (or above) grade point averages may take more than eighteen credits when their proposed programs carry the written approval of the adviser and the Dean.

## Advanced Courses

At least fifteen credits in courses numbered 3000 or above *must* be earned.

**Combined Degrees:** Courses taken in the first year of professional school may be applied toward the required fifteen credits in advanced courses.

## Grade Point Average

All students are required to maintain an over-all grade point average of 'C' (2.0) for all degree work elected. See 'Grade Point Average' in the General Information section of this Bulletin, page 45.

## Residence

To qualify for a baccalaureate degree in the College of Urban, Labor, and Metropolitan Affairs, a minimum of thirty credits must be earned at Wayne State University. In addition, the last thirty credits applicable to the degree, not including credit by special examination, must be completed at the University. Credit by special examination may not be counted as residence credit, but such credit, if earned during a semester in which the student is registered, will not be considered an interruption of residence.

In special circumstances, senior residence may be interrupted with the approval of the student's major department and the approval of the Dean; however, when the candidate has fewer than the minimum thirty credits of residence at Wayne State University, no such exceptions are permitted.

# ACADEMIC REGULATIONS

*For complete information regarding academic rules and regulations of the University, students should consult the General Information Section of this bulletin, beginning on page 5. The following additions and amendments apply to the College of Urban, Labor, and Metropolitan Affairs.*

## Recommended High School Preparation

The College of Urban, Labor, and Metropolitan Affairs strongly supports the University's recommendations concerning academic preparation. See page 15.

## Attendance

Regularity in attendance and performance is necessary for success in college work. Attendance requirements will be announced by instructors at the beginning of each course.

## Normal Program Load

The requirements for graduation are based upon an average program of fifteen credits per semester for eight semesters. A normal load should not exceed eighteen credits.

Because two hours of outside preparation are normally expected for each class hour, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy. A few hours of employment a week may be safely added to this program by a capable student.

## Retention of Records

Term papers and examinations shall either be returned to the student or retained by the instructor for a minimum of six months. Thereafter they may be destroyed. Instructors shall retain grade books for at least five years following the end of a term, and instructors who leave the institution shall give grade books for courses conducted during the past five years to their department chairperson. Five years after the end of a course, grade books may be returned to the instructor or destroyed by the department.

## Study Abroad

For more than a quarter of a century, the University has provided its students with the opportunity to study abroad for a year in order to experience the cultural, academic, and social life of a foreign country.

The College of Urban, Labor, and Metropolitan Affairs has initiated an Undergraduate Student Exchange in Urban Affairs with the University of Salford, England. Students in good academic standing studying in the social sciences in the University, with the approval of the major department, may apply for one or two semesters of study in Salford. Prerequisites include: a minimum 3.0 g.p.a. or departmental nomination for the program; at least twelve credits earned towards a major; and satisfactory completion of at least fifty-four credits prior to departure. Participants will register as full-time students and pay tuition at Wayne State University and will receive University credit for Salford study. Interested students should contact the Office of the Dean, College of Urban, Labor, and Metropolitan Affairs; telephone: 577-5071.

College of Urban, Labor, and Metropolitan Affairs students are also eligible for other opportunities to study abroad that the University provides, including the Junior Year in Munich or Freiburg Program, the Wayne at Gordes Program, and the exchange program with the Jagiellonian University in Krakow, Poland. For these and other opportunities for foreign study, see 'Study Abroad,' page 231; and contact the University Advising Center, 577-2680.

## Phi Beta Kappa

Phi Beta Kappa, the nation's oldest honor society, was founded at the College of William and Mary in Virginia on December 5, 1776. The one hundred and fifty-sixth chapter of the society, Gamma of Michigan, was installed at Wayne State University on January 16, 1953 under a charter granted to the College of Liberal Arts by the United Chapters. Membership in the chapter is restricted to its charter members and to those members of the junior and senior classes of the College of Liberal Arts who have been elected to membership by the chapter and who have formally accepted election and participated in initiation ceremonies of this or some other cooperating chapter. In addition, all members of the University staff who have been elected to membership by other chapters of Phi Beta Kappa automatically become affiliated members of the local chapter for the duration of their stay at the University.

Students in the College of Urban, Labor, and Metropolitan Affairs are also eligible for election if they meet the chapter's requirements and are enrolled in a degree program transferred from the College of Liberal Arts at the time the College of Urban, Labor, and Metropolitan Affairs was formed or afterwards.

Election to membership is restricted to students with at least two academic years of residence in the College of Liberal Arts, and is based not only on high scholarship and integrity, but also on breadth and depth of program. Students who wish further information are urged to consult with the secretary of the chapter concerning the requirements.

## Graduation With Academic Distinction

Candidates eligible for the bachelor's degree may receive a special citation placed on their diplomas under the following circumstances: The designations of *Summa Cum Laude*, *Magna Cum Laude*, and *Cum Laude* will be conferred upon graduating students whose cumulative grade point averages at Wayne State University fall within approximately the upper 5%, the next 5% and the next 10% or the senior class, respectively. The grade points used to identify the lower limits for each designation will be based upon the grade points attained by seniors in the College of Liberal Arts at these percentile levels during the preceding academic year. Only students who have earned sixty or more credits at Wayne State University are eligible to graduate with one of the above distinction citations.

## Academic Probation

**Low Grade Point Average:** Student's whose grade point average falls below 2.0 will be placed on academic probation. If serious grade point deficiencies are incurred, the students may be required to obtain permission from the Office of the Dean before registering. Such permission will be granted only after an interview during which some assurance is given that previous causes of failure have been ameliorated.

**Lack of Progress:** Students whose records reveal an excessive number of 'Withdrawal,' 'Incomplete' and 'X' marks and who, as a result, make little or no progress towards earning a degree, will be placed on academic probation. Such students may be required to confer with an academic adviser in the Undergraduate Office in order to register. Students on academic probation are encouraged to use support services of the University.

**Restriction:** While on academic probation, a student may not represent the College in student activities.

**Removal of Academic Probation:** Probation will be removed at the end of any term in which an over-all average of 'C' or better for all degree work taken in the College or earned as cognate credit is achieved.

## Exclusion

**Low Grade Point Average:** Students on academic probation who incur serious deficiencies or fail to raise their grade point averages within a reasonable length of time, may be excluded from the Col-

lege. Such an exclusion will be reviewed by the Probation Committee and the Dean upon the request of the student.

**Lack of Progress:** After having conferred with an academic adviser, students who make little or no progress towards a degree may be excluded from the College.

**Readmission:** After one year of exclusion, students may apply for readmission to the College. The decision to readmit will be based upon evidence which indicates that circumstances have changed during the year and that the probability of success has increased.

**Cheating and Plagiarism:** The principle of honesty is recognized as fundamental to a scholarly community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. Serious acts of dishonesty may lead to suspension or exclusion.

The instructor has the responsibility of notifying the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Information on procedures is available in the Office of Instructional Programs.

## Academic Advising

**Freshmen and sophomores** are encouraged to consult advisers each time they register. A staff of academic advisers is available in the University Advising Center. Students should confer with advisers on all questions concerning degree requirements, academic regulations, course elections, and programs of study. It is of primary importance that students talk with an adviser when they are having difficulties in their academic work. Students may choose either to see a specific adviser or any available adviser. Freshman and sophomore students in some of the special curricula are required to consult departmental advisers or advisers in other colleges.

**Juniors and seniors** are assigned to advisers in their major departments, and their course elections in the last two years are arranged in consultation with these departmental advisers.

## DIRECTORY OF THE COLLEGE

### *Office of the Dean*

**Dean:** Alma H. Young  
**Associate Dean:** Robin Boyle  
**Business Manager:** Pamela Day  
3198 Faculty/Administration Building . . . . . 577-5071  
Fax: 577-8800  
Web: <http://www.culma.wayne.edu>

### *Office of Instructional Programs*

**Academic Services Officer:** Linda Johnson  
1262 Faculty/Administration Building . . . . . 577-6092  
Fax: 577-9969

### *Archives of Labor and Urban Affairs*

**Director:** Fred Stielow  
231 Reuther Library . . . . . 577-4024  
Fax: 577-4300

### *Center for Chicano-Boricua Studies*

**Director:** Jose Cuello  
**Assistant Director:** Katalina Berdy  
3324 Faculty/Administration Building . . . . . 577-4378  
Fax: 993-4073

### *Center for Peace and Conflict Studies*

*Director:* Fred Pearson  
2319 Faculty/Administration Building ..... 577-3468  
Fax: 577-8269

### *Center for Urban Studies*

*Director:* David Fasenfast  
*Associate Director:* Edwina Henry  
3043 Faculty/Administration Building ..... 577-2208  
Fax: 577-1274

### *Dispute Resolution*

*Director:* Loreleigh Keashly  
*Research Associate:* William Wartens  
2319 Faculty/Administration Building ..... 577-3221  
Fax: 577-8800

### *Geography and Urban Planning*

*Interim Chairperson:* Robin Boyle  
225 State Hall ..... 577-2701  
Fax: 577-0022

### *Industrial Relations*

*Director:* Michael Belzer  
1262 Faculty/Administration Building ..... 577-6092

### *Labor Studies Center*

*Director:* Hal Stack  
3168 Faculty/Administration Building ..... 577-2191  
Fax: 577-7726

### *Skillman Center for Children*

*Associate Director:* Kristine Miranne  
3198 Faculty/Administration Building ..... 577-5225  
Fax: 577-8800

### *State Policy Center*

*Director:* Peter Eisinger ..... 577-0635  
3231 Faculty/Administration Building  
Fax: 577-8800

### *Fraser Center for Workplace Issues*

*Director:* William N. Cooke  
Reuther Library ..... 577-2100  
Fax: 577-7599

### *Faculty of Urban and Labor Studies*

#### *Professors*

Timothy M. Bates, Diane Brown, Peter Eisinger, Michael Goldfield, Philip P. Mason, Thomas L. Thompson

#### *Associate Professors*

Heidi Gottfried, Loreleigh Keashly, Ernestine Moore

#### *University Professors*

Douglas Fraser, Jordan Rossen, Ernest Savoie  
253 Reuther Library ..... 577-5196

### *Clarence B. Hilberry Endowed Chair of Urban Affairs*

George C. Galster

### *Coleman A. Young Endowed Chair of Urban Affairs*

Alma H. Young

472 *College of Urban, Labor, and Metropolitan Affairs*

# CHICANO-BORICUA STUDIES

*Office:* 3324 Faculty Administration Building; 313-577-4378

Fax: 313-993-4073

Web: <http://www.cbs.wayne.edu>

*Director:* Jose Cuello  
e-mail: [aa4636@wayne.edu](mailto:aa4636@wayne.edu)

*Assistant Director:* Katalina Berdy  
e-mail: [ah3826@wayne.edu](mailto:ah3826@wayne.edu)

#### *Assistant Professor*

Jorge L. China

#### *Coordinate Faculty*

Jorgelina Corbatta

## Purpose

The mission of the Center for Chicano-Boricua Studies (CBS) is to provide equitable access to a quality university education at Wayne State University to Latina/o students in the Detroit metropolitan area, and to enhance the environment of diversity on the campus. The Center accomplishes its mission through a four-part program in (1) student services; (2) research on Latina/o and Latin American issues; (3) internal University advocacy on Latina/o perspectives; and (4) outreach to the Latina/o and larger metropolitan communities. The research and teaching specializations of the faculty associated with the Center are Mexican history, Caribbean history, South American literature, United States Latina/o history and student learning strategies in higher education.

## Student Academic Self-Empowerment Program

Chicano-Boricua Studies is a comprehensive student services center. CBS recruits Latina/o students from the metropolitan area into a two-year program based on a reality-check and academic self-empowerment model. The Program is designed to enhance the transition from high school to the university. It strengthens students' abilities to analyze the university environment and improves their preparation, planning and commitment for academic, professional and life achievement. The Program serves the needs and goals of students at various levels of accomplishment, from honor students to those who need extra support in university learning skills. The goal of the Program is to educate students for more than just a job, as conceptual individuals with an appreciation for the life of the mind, a wisdom of the world and a sense of ethical responsibility to society. Students have access to the Center's resources through graduation and as alumni.

**Admission:** Requirements include submission of an official Wayne State Application for Undergraduate Admission, a minimum high school grade point average of 2.0, and minimum scores of 15 on the ACT Reading, English, and Composite sections. The average g.p.a.s for incoming classes are usually higher than 2.75. High achievers are encouraged to join the Program.

## Co-Major in Chicano-Boricua Studies

The Chicano-Boricua Studies Co-Major Program is the equivalent of a Latina/o-Latin American Studies co-major. The multi-disciplinary program of study is designed to strengthen the career preparation of students in all majors who plan to work in national and international multicultural environments with peoples of Latin American descent. Completion of the co-major is noted on the student's transcript.



**Admission:** Students submit a Declaration of Major Form at the beginning of their junior year. (See page 469 for instructions on declaring a major.)

**Co-Major Requirements:** Completion of the following core courses (fifteen credits) and a minimum of eighteen credits from the list of elective courses. Appropriate courses may be substituted with the prior approval of the director.

*Required Core Courses (fifteen credits) credits*

CBS 2100 -- Chicano Literature and Culture . . . . .	3
CBS 2110 -- Puerto Rican Literature and Culture . . . . .	3
CBS 2410 -- (FC) History of Mexico . . . . .	3
CBS 2420 -- (FC) History of Puerto Rico and Cuba . . . . .	3
CBS 2430 -- History of Latinos in the United States . . . . .	3

*Elective Courses (eighteen credits)*

ANT 3110 -- Detroit Area Minorities . . . . .	3
ANT 3220 -- The Inca and their Ancestors . . . . .	3
ANT 3540 -- (FC) Cultures and Societies of Latin America . . . . .	3
HIS 3995 -- Special Topics in History: Latin America . . . . .	3-4
P S 5770 -- Government and Politics of Latin America . . . . .	4
SPA 3630 -- Survey of Spanish American Literatures . . . . .	3
SPA 5560 -- Spanish American Cultures and Their Traditions . . . . .	4
SPA 6600 -- Spanish American Colonial Literature . . . . .	4
SPA 6620 -- The Spanish American Novel II . . . . .	4
SPA 6630 -- Spanish American Poetry . . . . .	4
SPA 6670 -- Latin American Novel to 1900 . . . . .	3

**Latino En Marcha Scholarship:**

CBS administers an annual scholarship fund of \$150,000, available to all of the approximately 600 Latina/o students at Wayne State University. Competition is for the academic year comprising the fall and winter semesters, with an additional competition for spring-summer. Minimum requirements for continuing Wayne State students are a 2.0 or above cumulative and last-semester g.p.a.s (2.5 g.p.a. for entering first-year students).

**UNDERGRADUATE COURSES (CBS)**

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

**1410 Student Success Seminar. Cr. 1 (Max. 2)**

Prereq: consent of instructor. Open only to students in Chicano-Boricua program. Developing academic skills. (T)

**2010 Introduction to Chicano-Boricua Studies. Cr. 3**

Survey of social, economic and political problems and experiences of the Chicano and Puerto Rican communities in the United States. (I)

**2100 Chicano Literature and Culture. (SPA 2400) Cr. 3**

Examination of Chicano literature. Themes and figures in a social and historical context. (B)

**2110 Puerto Rican Literature and Culture. (SPA 2500) Cr. 3**

Examination of Puerto Rican literature. Themes and figures in a social and historical context. (B)

**2410 (FC) History of Mexico. (HIS 2440) Cr. 3**

Historical development of Mexico and the Mexican people from the Spanish conquest to the present. Interaction of political, social, economic and cultural influences. (Y)

**2420 (FC) History of Puerto Rico and Cuba. Cr. 3**

Historical development of Puerto Rico and Cuba from the pre-Columbian period to the present. Interaction of political, social, economic and cultural influences. (I)

**2430 History of Latinos in the United States. (HIS 2430) Cr. 3**

Historical development of people of Hispanic descent in the United States from the early nineteenth century to the present. Cultural conflict, interaction of political, social, and economic forces. (Y)

**5560 (SPA 5560) Spanish American Cultures and their Traditions. Cr. 3**

Prereq: SPA 4610 or SPA 4620 or consent of instructor. Panorama of Latin American civilization and culture from the pre-Colombian period to the present. (Y)

# GEOGRAPHY and URBAN PLANNING

Office: 225 State Hall; 577-2701; Fax: 577-0022

Web: <http://www.science.wayne.edu/~gup>

Interim Chairperson: Robin M. Boyle

## Professors

Robert M. Boyle, Fred E. Dohrs (Emeritus), Robert J. Goodman (Emeritus), George J. Honzatko (Emeritus), Laura Reese, Robert Sinclair, Alma H. Young

## Associate Professors

Eugene D. Perle, Gary Sands

## Assistant Professor

Kami Pothukuche

## Lecturers

Kelly Patterson, Richard Sauerzopf

## Adjunct Faculty

Ibrahim Abdel-Karim, Ernando Minghine, Bryan Swartz, Robert Swartz, Paul Vigeant

## Degree Programs

*BACHELOR OF ARTS with a major in geography*

*\*MASTER OF ARTS with a major in geography*

*\*MASTER OF URBAN PLANNING*

*The discipline of geography* is concerned with the analysis of environmental and social systems, their variations over the earth's surface and their interactions in different regions. The undergraduate program has three major goals: (1) to provide students with a geographic framework for understanding global, regional and local issues and problems; (2) to prepare students for many occupations in which geographic understanding is essential, including locational analysis, community and regional development, resource conservation and management, cartography, urban and environmental planning, and numerous government positions; and (3) to train students for advanced geographic research. Students are invited to consult with geography faculty members concerning the content of the discipline, as well as employment opportunities available for geographers. A voluntary internship program permits a limited number of credits for on-the-job experience.

*The profession of urban planning* takes major responsibility in the development of comprehensive plans and programs for local communities as well as larger regional units. These plans visualize future conditions of social, economic, and physical change, and provide an estimate of the community's long-range needs for various facilities and services. Professional urban planners perform a variety of tasks such as developing plans for housing, transportation, rehabilitation of blighted metropolitan areas, and improving the appearance and efficiency of communities. The program seeks to prepare individuals for working with local community planning agencies and regional groups.

\* For requirements, consult the Wayne State University Graduate Bulletin.

Undergraduate degrees in geography are offered by the College of Liberal Arts (see page 262). Master's degree programs in geography and in urban planning are offered by the College of Urban, Labor and Metropolitan Affairs; full descriptions of these programs may be found in the Wayne State University Graduate Bulletin.

## UNDERGRADUATE COURSES (U P)

*The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.*

### **3530 Urban and Regional Planning. (GPH 3530) (U S 3530) Cr. 3**

Introduction to urban and regional planning concepts, including zoning, growth management and economic development. Emphasis on metropolitan Detroit. (Y)

### **5010 Resources and Communication in Planning. Cr. 2**

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)

### **5100 Field Studies on Urban Problems. Cr. 2-4 (Max. 6)**

Field research on selected urban problems. Preparation of applied research report based on agency data, census data, or analyses of public documents. (Y)

### **5110 Urban Planning Process. Cr. 4**

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**

Practical application of planning theory to current issues of planning and community development, including land use, economic development, and environmental concerns. (B)

### **5420 (GEG 6150) Internal Structure of the City. (GPH 6150) Cr. 4**

Topics include: perception of the urban environment, spatial interaction and movement, models of structure and growth, migration to and within the city, ethnic and social areas, community extension, social processes and spatial form. (Y)

### **5520 (GEG 6240) Industrial Geography. (GPH 6240) Cr. 4**

Theory and practice of the location of industry, analysis of selected manufacturing industries and selected industrial regions. The role of industrial location in urban and regional development. (B)

### **5620 (GEG 6280) Marketing Geography. (GPH 6280) Cr. 4**

Factors underlying retail location and shopping center development; evaluation of population, income levels, access and competition for location decisions; techniques applicable to sales potential/rent-up/sell-out estimates for retail units, housing developments, recreation facilities, office buildings; retail impact on urban land use; crime and commercial location; considerations for the elderly in commercial locations. (B)

### **5700 (GEG 5700) Urban Canada. (GPH 5700) Cr. 4**

Geographic introduction to Canada; emphasis on urban topics, including: images of the Canadian city; evolution of the urban system; internal characteristics of cities; urban regions; specific cities; comparisons between cities in Canada and the United States. (B)

### **5820 (ECO 5800) Urban and Regional Economics I. Cr. 4**

Prereq: ECO 2010 or 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. (Y)

**6120 Planning Studies and Methods. Cr. 4**

Economic base, population, and land use studies. Discussion of approaches used to solve selected community development problems. (Y)

**6210 Urban Design Elements. Cr. 3**

Introduction to the role of urban design and the concept of design criteria, design variables, and terminology. (B)

**6310 Housing Development. Cr. 3**

Process of urban residential development; emphasis on housing market analysis, the construction industry, and residential finance. (Y)

**6320 Quantitative Techniques I. (GEG 6420) (GPH 6420) Cr. 4**

Statistical inference with emphasis on applications including control tendency, dispersion, hypothesis testing, correlation and regression. (Y)

**6350 Housing Policy and Programs. (ULM 6400) Cr. 3**

Governmental housing policies and programs at the Federal, state and local levels. Role of community-based organizations in housing activities. (Y)

**6400 Planning Issues. Cr. 2-4 (Max. 6)**

Studies of urban policy issues as they affect land use. Social and economic determinants of the physical composition of urban areas. (B)

**6420 Quantitative Techniques II. Cr. 4**

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)

**6510 Urban and Regional Systems. (GEG 6510) (GPH 6510) Cr. 4**

Theory course dealing with concepts, processes and organization of urban and metropolitan regions, primarily focusing on the western world experience. Some comparative perspective derived from non-western experiences. Primary focus on system structure and change. (Y)

**6520 Transportation Policy and Planning. Cr. 4**

Introduction to the role of transportation in the planning process involving both regional and urban considerations. (Y)

**6550 (ULM 6210) Regional, State, and Urban Economic Development: Policy and Administration. (ECO 6650) (P S 6440) Cr. 3**

Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

**6650 Planning and Development Law. Cr. 3**

Techniques available to guide land development. Concepts in zoning, subdivision regulations, timing and sequence of land development. (Y)

**6670 (ULM 6150) Political Economy of the Urban Ghetto. (ECO 6810) (SOC 6850) Cr. 3**

Prereq: graduate standing; upper division undergraduates by consent of instructor. Examination of the economic, social and political transformation of U.S. cities; particular attention to the formation, dynamics, economics and social sub-systems of urban ghettos and their relationship to broader contexts. (B)

**6680 (ULM 6680) Neighborhood Decline and Revitalization.**

**Cr. 3**

Examination of reasons for neighborhood change and how plans and policies can be specified and implemented for neighborhood improvement. (B)

**6850 Cost-Revenue Workshop. Cr. 3**

Offered for S and U grades only. No credit after U P 6050. Evaluation of the fiscal impacts of land use projects as they affect community tax revenue. Presentation of methods for assessing costs and revenues associated with residential and nonresidential growth. (B)

# LABOR STUDIES

Office: 3178 Faculty/Administration Building; 577-2191

Director: Hal Stack

## Degree Program

*BACHELOR OF ARTS with a major in Labor Studies*

The Labor Studies Program provides students with the opportunity to develop the critical skills necessary to analyze employment and workplace issues, with a special focus on the needs and interests of workers and their unions. An interdepartmental program, the labor studies major examines the social, political, and economic dimensions of these issues in the context of a broad liberal arts education. For labor studies, the issues to be considered are not only processes in the workplace, but outcomes; not only peace and harmony, but justice and power. Students completing the program will receive a bachelor of arts degree from the College of Urban, Labor and Metropolitan Affairs.

## Bachelor of Arts with a Major in Labor Studies

The Labor Studies major prepares students for work with unions, private employers, and government in the areas of labor relations, personnel, and human resource management. Graduates work with unions as field representatives, organizers and research analysts; in government as labor relations specialists, mediators and policy makers; and with employers as labor relations, personnel and human resource administrators. Many graduates continue their studies in law school or graduate school. Students considering graduate study are encouraged to consult with the adviser regarding graduate school requirements.

**Admission Requirements** for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

**DEGREE REQUIREMENTS:** Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College of Liberal Arts Group Requirements (see page 223) and the University General Education Requirements (see page 29 ), as well as the core courses and specialized and applied curricula listed below. All course work must be completed in accordance with the academic procedures of the University and the College of Urban, Labor, and Metropolitan Affairs governing undergraduate scholarship and degrees; see pages 15-46 and 470 -471, respectively.

### REQUIRED CORE COURSES (Twenty Credits)

	<i>Credits</i>
LBS 2500 --Introduction to Labor Studies . . . . .	4
LBS 4700 -- (WI) Senior Seminar . . . . .	3
HIS 5290 --American Labor History . . . . .	4
PSY 3500 --Psychology of the Workplace . . . . .	3
SOC 5700 --Inequality and Social Class . . . . .	3
P S 6070 -- Labor and American Politics . . . . .	3

**Applied and Specialized Curriculum:** Four courses (twelve credits) must be selected from the following lists:

### RELATED COURSES (12 credits)

LBS 4500 -- Applied Labor Studies: Collective Bargaining . . . . .	3
LBS 4500 -- Applied Labor Studies: Labor Law . . . . .	3
LBS 4500 -- Applied Labor Studies: New Forms of Work Organization . . . . .	3
PSY 5710 -- Dispute Resolution . . . . .	3
PSY 5540--Motivation in the World of Work . . . . .	3
PSY 5630-- Group Dynamics . . . . .	3

PSY 6560 --Psychology of Union-Management Relations . . . . .	3
HIS 5630 -- Socialism and the European Labor Movement . . . . .	3
MGT 5740 -- Collective Bargaining . . . . .	3
PCS 5000 -- Dispute Resolution (CRJ 5994, P S 5890, PSY 5710) . . . . .	3
P S 3020 -- Political Parties and Elections . . . . .	4
P S 3030-- Power and Pressure Groups . . . . .	4
P S 3040 -- The Legislative Process . . . . .	4
P S 6070 -- Labor and American Politics . . . . .	3

Students are referred to the program director for information concerning courses, directed study, internships, career information, and graduate study.

## Non-Credit Offerings

In addition to the undergraduate degree program described above, the Labor Studies Center also offers a variety of non-credit courses, conferences and specially designed programs for unions and their members throughout southeast Michigan.

**Non-Credit Courses:** The Labor Studies Center offers a full range of short, non-credit courses on skills and issues important to unions and their members. These include courses on labor law, collective bargaining, parliamentary procedure, steward training, grievance analysis, arbitration, union administration, public speaking, new technology, occupational health and safety, and new forms of work organization. These courses typically meet for six two-hour sessions and are held both on campus and at local union halls. The courses are open to all workers regardless of previous educational background. They are not regular credit courses, and should not be confused with University credit courses identified by three-letter subject area codes and numbers.

**Labor School Program:** In addition to the short non-credit courses, the Labor Studies Center also offers a two-year, non-credit program designed to strengthen workers' leadership and communication skills and increase their understanding of the complex issues confronting workers and their unions in contemporary society. Open to all workers regardless of previous educational background, the Labor School meets once a week for two and one-half hours thirty weeks each year. Students who successfully complete the Labor School program are eligible for undergraduate admission to the University regardless of previous educational background.

### FIRST YEAR

*Labor Perspectives* -- Union history and current issues.

*America, Past and Present* -- Significant events and people in the history of the United States.

*Power and Politics* -- Power and politics in society and the workplace.

*Labor and the Media* -- Analysis of news reporting and the media

### SECOND YEAR

*Economics for Workers* --Functioning of the American economy.

*Writing for Impact* -- effective written communication.

*Union Skills* -- Labor law, collective bargaining, etc.

*Labor Strategies* -- Strategies for increasing union power and effectiveness

## UNDERGRADUATE COURSES (LBS)

The following courses, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 493.

### **2500 (HUM 2500) Images of Labor in the Arts and Literature. Cr. 4**

Diverse history of labor as reflected in the popular arts (films, songs, stories, and graphics). (T)

### **4500 Applied Labor Studies. Cr. 3 (Max. 12)**

Prereq: consent of instructor. Practical training in various labor relations specialties, such as collective bargaining or labor law. Consult coordinator on specific topic. (T)

### **4700 (WI) Senior Seminar. Cr. 3 (Max. 6)**

Prereq: consent of instructor. Research, reflection, discussion and analysis of labor relations practice. (Y)

### **4990 Directed Study. Cr. 3-6 (Max. 6)**

Prereq: consent of coordinator. Supervised reading and research in labor studies. (T)

# PEACE and CONFLICT STUDIES

Office: 2320 Faculty/Administration Building; 577-3468;

Fax: 577-8269; Web: <http://www.mtds.wayne.edu>

Director: Frederic S. Pearson

## *Executive Committee*

Sheldon Alexander, *Psychology*

Ronald Aronson, *Weekend College*

Barbara Aswad, *Anthropology*

Ron Brown, *Political Science*

Otto Feinstein, *Political Science*

George Galster, *Urban, Labor, and Metropolitan Affairs*

Joella Gipson-Simpson, *Education*

Errol Henderson, *Political Science*

Eboe Hutchful, *Africana Studies*

Mark Kahn, *Economics (Emeritus)*

Bernice Kaplan, *Anthropology (Emerita)*

Marjorie Katz, *Detroit Council of World Affairs*

Loreleigh Keashly, *College of Urban, Labor and Metropolitan Affairs*

Marlyne Kilbey, *Psychology*

Kevin Krause, *Political Science*

Eugene Perrin, *Medicine (Emeritus)*

Anthony Perry, *Political Science*

Marc Rosa, *Education*

Brad Roth, *Political Science*

Alvin Saperstein, *Physics*

Melvin Small, *History*

Guy Stern, *German and Slavic*

Frances Trix, *Anthropology*

Olga Tsoudis, *Criminal Justice*

William Warters, *Political Science*

Marvin Zalman, *Criminal Justice*

Marilyn Zimmerman, *Art*

## Co-Major Program

The Peace and Conflict Studies (PACS) Co-Major Program integrates a variety of practical courses and interdisciplinary research to allow students to combine with their own majors training, study, and experience in the emerging field of dispute resolution (both national and international). The curriculum deals with the most fundamental of human concerns: how to manage or resolve conflict constructively. Students are introduced to the causes of human conflict, as well as approaches to conflict management ranging from diplomacy, law and negotiation, to mediation and arbitration. Questions are raised concerning the issues of peace, social justice, ethnicity, race, and culture, and violence.

The PACS curriculum provides a framework useful for careers in legal, educational, governmental, business, social service, and health professions, as well as in graduate education. Students are offered opportunity for hands-on experience, and are encouraged to build adaptive skills useful for future situations. Courses in this curriculum may also count toward satisfaction of University General Edu-

cation Requirements, as well as college group and major requirements.

The program is designed around a set of core courses, which introduce the student to the field, provide introductions to various approaches to conflict management and to application of conflict management methods, and finally assess the student's overall progress in a senior research seminar. Seventeen elective credits are required, of which at least six must be upper-divisional. These may be chosen generally from the list below, or may be focussed in one of seven specialty areas: race, gender and religion; peace and conflict theory; human rights; international issues of peace and conflict studies; peace and conflict studies in the United States; peace studies in human development; and dispute resolution. Some electives may also count toward satisfaction of major requirements or of college group requirements.

Students are encouraged to participate in the development of their curriculum; in addition to selecting from a wide variety of suggested PACS electives, co-majors are able to choose other elective courses with prior consent of the Director. Students are also encouraged to participate in the Peace and Conflict Studies Student Forum, which organizes speakers and other special educational programs and events on various subjects.

**CORE REQUIREMENTS** *Credits*

PCS 2000 --Introduction to Peace and Conflict Studies . . . . . 3  
 PCS 6000 --Senior Seminar in Peace and Conflict Studies . . . . . 3

*plus two courses from the following:*

AFS 2210 -- (SS) Black Social & Political Thought . . . . . 4  
 ANT 5200 -- Social Anthropology . . . . . 3  
 ECO 5300 -- International Trade . . . . . 4  
 HIS 5130 -- American Foreign Relations Since 1933 (HIS 7130) . . 4  
 PCS 2010 -- Topics in PACS <sup>1</sup> (P S 2830) (HIS 2520) . . . . . 1-4  
 PCS 2050 - Non-Violence . . . . . 3  
 PCS 5100 - Advanced Special Topics <sup>1</sup> . . . . . 3-4  
 PCS 2020 -- Science, Technology and War (HIS 2510) (P S 2440) . 4  
 PCS 5999 -- Special Readings/Research . . . . . 3  
 PHI 2330 -- Introduction to Social & Political Philosophy . . . . . 3  
 P S 2510 -- Introduction to Political Ideologies . . . . . 4  
 P S 2810 -- World Politics . . . . . 4  
 PSY 2600 -- Psychology of Social Behavior . . . . . 4  
 SOC 3300 -- (SS) Social Institutions and Social Structure . . . . . 4

*Plus one course from the following:*

PCS 5000 - Dispute Resolution . . . . . 3  
 PCS 5010 - Internship . . . . . 3  
 PCS 5500 - Ethnicity . . . . . 4

**ELECTIVES (Seventeen Credits)**

The University offers a large number of conflict- and peace-related courses in a variety of colleges which are suitable electives for this program. The following are appropriate for the co-major; a number of others might qualify for inclusion upon petition of the student.

*Race, Gender and Religion* *credits*

AFS 2210 -- (SS) Black Social & Political Thought . . . . . 4  
 AFS 2600 -- Race and Racism in America (SOC 2600) . . . . . 3  
 AFS 3420 -- Pan-Africanism: Politics of the Black Diaspora . . . . . 4  
 AFS 3860 -- Race, Class & the Criminal Justice Sys. (SOC 3860) . 3  
 AFS 5570 - Race Relations in Urban Society . . . . . 3  
 ANT 3110 -- Detroit Area Minorities: Arabs, Hispanics,  
 & African Americans . . . . . 3-4  
 ANT 3530 -- Native Americans . . . . . 3  
 ANT 5240 -- Cross-Cultural Study of Gender . . . . . 3  
 ANT 5260 -- The African Religious Experience: A Triple Heritage  
 (AFS 5260) (GIS 5260) . . . . . 3

HIS 3150 -- The Black Experience in America II:  
 1865 to the Present (AFS 3150) . . . . . 3-4  
 HIS 5200 -- Women in American Life & Thought (HIS 7200) . . . . . 3  
 HIS 5480 -- Nazi Germany (HIS 7480) . . . . . 3-4  
 N E 2020 -- Survey of Jewish History & Civilization (HIS 2320) . . . 3  
 P S 4780 -- Contemporary African Politics (AFS 4780) . . . . . 4  
 P S 5030 -- African American Politics (AFS 5030) . . . . . 4  
 PSY 3250 -- Psychology of Women . . . . . 3  
 SOC 4460 -- Women and Society . . . . . 3  
 SOC 5570 -- Race Relations in Urban Society (AFS 5570) . . . . . 3  
 SPC 4030 -- Gender and Communication (W S 4030) . . . . . 3  
 SPC 5040 -- The Rhetoric of Racism (S E 5370) (AFS 5040) . . . . . 3

*Peace and Conflict Theory*

ANT 5140 -- Biology and Culture . . . . . 3  
 CRJ 5060 -- Comparative Criminal Justice Systems . . . . . 3  
 GER 2700 -- (PL) Anguish & Commitment: European Existentialist  
 Literature (SPA/FRE/ITA/RUS 2700) . . . . . 3-4  
 HIS 3350 -- Revolution in the Modern World: 1750 to the Present . 3  
 PCS 2010 -- Non-Violence (P S 2550) (SOC 2050) . . . . . 3  
 PHI 3270 -- Foundations of Law . . . . . 3  
 P S 2460 -- Policy and Rationality: Dilemmas of Choice . . . . . 4  
 P S 3510 -- (PL) Law, Authority & Rebellion . . . . . 4  
 P S 3520 -- (PL) Justice . . . . . 4  
 P S 3530 -- Great Political Thinkers . . . . . 4  
 P S 5560 -- Biopolitics . . . . . 4  
 P S 5830 -- International Conflict and Its Resolution . . . . . 4  
 PSY 3040 -- Psychology of Perception: Fundamental Processes . . 3  
 PSY 3080 -- Cognitive Psychology Fundamental Processes . . . . . 3  
 PSY 3200 -- Motivation, Feeling & Emotion . . . . . 3  
 PSY 3310 -- Abnormal Psychology . . . . . 4  
 SOC 3820 -- Theories of Crime & Delinquency . . . . . 3  
 SOC 5870 -- Violence in the Family . . . . . 3-4

*Human Rights*

AFS 2600 -- Race & Racism in America (SOC 2600) . . . . . 3  
 AFS 3860 -- Race, Class, & the Criminal Justice Sys. (SOC 3860) 3  
 AFS 5320 -- Black Labor History (HIS 5320) . . . . . 3  
 AFS 5580 -- Law & the African American Experience (SOC 5580). 4  
 CBS 2430 -- History of Latinos in the U.S. (HIS 2430) . . . . . 3  
 CLA 3100 -- Law and Ancient Society . . . . . 3-4  
 CRJ 4600 -- The Police in America . . . . . 4  
 CRJ 5720 -- Criminal Law . . . . . 4  
 ECO 5490 -- American Labor History (HIS 5290) (HIS 7290) . . . . 4  
 PHI 3270 -- Foundations of Law . . . . . 3  
 PCS 2010 -- Topics in PACS: Humanitarian Intervention  
 (P S 2830) (HIS 2520) . . . . . 3  
 P S 5120 -- Constitutional Rights & Liberties . . . . . 4  
 P S 5820 -- International Law . . . . . 4  
 SOC 2600 -- Race and Racism . . . . . 3  
 SOC 3860 -- Race, Class, and the Criminal Justice System . . . . . 3  
 SOC 5700-- Inequity and Social Class . . . . . 3  
 SPC 5300 -- Women's Rights/Suffrage Rhetoric . . . . . 3

*International Issues in Peace & Conflict Studies*

ANT 3100 -- Cultures of the World . . . . . 3-4  
 ANT 3540 -- (FC) Cultures & Societies of Latin America . . . . . 3  
 ANT 3550 -- (FC) Arab Society in Transition (N E 3550) . . . . . 3  
 ECO 5300 -- International Trade . . . . . 4  
 ECO 5310 -- International Finance . . . . . 4  
 GIS 3610 -- (FC) Interdisciplinary Perspectives in Foreign Culture:  
 The Africans (AFS 3610) . . . . . 4  
 GPH 2700 -- Introduction to Canadian Studies . . . . . 3  
 HIS 1400 -- (HS) The World Since 1945 . . . . . 3-4  
 HIS 3050 -- United States & the Vietnam Experience . . . . . 4  
 JPN 4550 -- (FC) Japanese Culture & Society I . . . . . 4  
 JPN 4560 -- (FC) Japanese Culture & Society II . . . . . 4  
 N E 2040 -- (HS) The Modern Middle East (HIS 1810) . . . . . 3  
 P S 2700 -- Introduction to Canadian Studies  
 (HIS 2700) (GPH 2700) (ENG 2670) . . . . . 3

1. Course may be taken only once for satisfaction of Core Requirement.

P S 2710 -- Introduction to Comparative Politics	4
P S 3810 -- Foreign Policies of Major Powers	4
P S 3991 -- Directed Study: WSU-Salford Exchange	3-9
P S 5720 -- China, Japan, and the Far East	4
P S 5770 -- Government & Politics of Latin America	4
P S 5810 -- American Foreign Policy and Administration	4
SLA 3410 -- (FC) New Soil, Old Roots: The Immigrant Experience (ARM/GER/POL/RUS 3410)	3
SLA 3700 -- The Changing Face of Europe (ARM/GER/POL/RUS/UKR 3700)	1-2
SLA 3710 -- Russia & East European Film (RUS/UKR/POL/ARM 3710)	3
SOC 5600 -- Soc. of Intern'l Inequality and Underdevelopment	3
<i>Peace &amp; Conflict Studies in the United States</i>	
AFS 5110 -- Black Women in America (W S 5110)	3
HIS 5200 -- Women in American Life & Thought (HIS 7200)	3
HIS 5220 -- The Changing Shape of America: WW I to Present (HIS 7220)	3-4
HIS 5290 -- American Labor History	4
HIS 5300 -- Economic History of the U.S. (HIS 7300)	4
P S 3170 -- The Living Constitution	4
P S 5030 -- African American Politics (AFS 5030)	4
SOC 5570 -- Race Relations in Urban Society (AFS 5570)	3
SOC 6750 -- Sociology of Urban Health	3
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U S 2000 -- (SS) Introduction to Urban Studies (SOC 2500) (GPH 2000) (P S 2000)	4
<i>Peace Studies in Human Development</i>	
AFS 5130 -- The Black Family (GIS 5130)	4
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<i>Dispute Resolution (assumes completion of PCS 5000)</i>	
ECO 6420 -- Labor Relations Institutions & Public Policy	3
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MGT 4520 -- Managing Organizational Behavior	3
MGT 5740 -- Collective Bargaining	3
P S 3030 -- Political Interest Groups	4
P S 3040 -- The Legislative Process	4
PSY 3500 -- Psychology of the Workplace	3
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S W 1010 -- Introduction to Social Work & Social Welfare	2-3

## Minor Program

To receive a Minor in Peace and Conflict Studies, a student must complete four core courses (PCS 2000, 6000, and one from each of the core groups above), in addition to six credits in conflict-related elective courses, all of which must be upper-divisional. Electives may

be selected from the courses listed above, or from other curricula, with approval of the Peace and Conflict Studies Director.

## UNDERGRADUATE COURSES (PCS)

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses numbered 7000-9999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### 2000 Introduction to Peace and Conflict Studies. (HIS 2500) (P S 2820) Cr. 3

Open to all undergraduate students. Introduction to the peace and conflict studies co-major. Survey, ranging from biology to international politics; conflict among animals, within the individual, the family, the neighborhood and region, the nation and global community. (F,W)

### 2010 Topics in Peace and Conflict Studies. (HIS 2520) (P S 2830) Cr. 1-4

Special topics relating to peace and conflict studies. (Y)

### 2020 (PHY 2020) Science, Technology, and War. (HIS 2510) (P S 2440) Cr. 4

May not be used to fulfill natural science group requirement. Modern weapons, nuclear and otherwise, becoming increasingly available and dangerous; people with grievances eager to use them. Science and technology behind weapons development and use; impact of technologies on prospects and results of war and peace. Constraints of career, bureaucracy and society on development, deployment and use of weapons. History of humanity and its tools of war. (W)

### 2050 The Study of Non-Violence. (HIS 2530) (P S 2550) (SOC 2050) Cr. 3

Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. (Y)

### 5000 Dispute Resolution. (CRJ 5994) (P S 5890) (PSY 5710) Cr. 3

Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

### 5010 Internship in Dispute Resolution. Cr. 3

Prereq: PCS 5000. Offered for S and U grades only. Internship in dispute resolution or mediation agency in Detroit area. (T)

### 5100 Advanced Special Topics. Cr. 3-4

Prereq: senior standing. Topics may include: study of negotiating processes, or organizations and processes involved in conflict resolution. (Y)

### 5500 (P S 5740) Ethnicity: The Politics of Conflict and Cooperation. (AFS 5740) 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)

### 5999 Special Readings/Research. Cr. 3

Prereq: consent of instructor. Intensive study with faculty member on peace-related topic; may include study abroad projects. For co-majors and non-majors. (T)

### 6000 Senior Seminar in Peace and Conflict Studies. Cr. 3

Prereq: senior standing; PCS major. Offered for undergraduate credit only. Students work on a research project relevant to concepts studied in the program. (Y)

# URBAN STUDIES

Office: 225 State Hall; 577-0540; Fax: 577-0022  
 Web: <http://www.science.wayne.edu/~gup>

Director: Eugene D. Perle

## Co-Major Program

The Urban Studies Co-Major Program is an undergraduate interdisciplinary course of study leading to a bachelor's degree with a co-major designation. The co-major format enables students to graduate with two fields of major emphasis. The co-major program is flexible enough to serve a wide variety of student needs and interests. 'Urban' includes 'suburban'; the spatial patternings of national urban networks as well as the inner life of individual cities; and broad historical, international comparative, economic or cultural concerns as well as specific practical problems.

**Admission:** A student must have met the entrance requirements of the University (see page 15) to apply for this program. When the Declaration of Major form has been completed at the beginning of the junior year and has been authorized for an approved major, the student may then use the same form to apply for acceptance into the co-major program.

**CO-MAJOR REQUIREMENTS:** Four core courses (fourteen credits) and eighteen credits of urban-related elective courses, of which at least six must be upper division are required. All course work must be completed in accordance with the academic procedures of the University (see pages 15-46) and those of this college (see pages 470-471) and of the college sponsoring the major program taken as a cognate to the urban studies curriculum.

### Core Requirements (Fourteen credits)

credits

U S 2000--(SS) Introduction to Urban Studies  
 (SOC 2500) (GPH 2000) (HIS 2000) (P S 2000) . . . . . 4  
 U S 4510 -- Cities and Reg. (ECO 2800) (GEG 2000) (GPH 2000) . 4

### One of the following:

U S 2992 --(P S 2992) Political Science Internship. . . . . 4  
 U S 6000 -- (CRJ 6000) Internship . . . . . 3  
 U S 6010 --Supervised Field Experience . . . . . 3  
 U S 6050 --(GEG 6520) Independent Field Study (GPH 6520) . . 2-4

### Electives

The University offers several urban-related courses suitable as electives. Students must complete twenty-two credits in urban-related electives. Note that many electives may be used to satisfy major and co-major requirements simultaneously. The following list is not exhaustive:

ANT 3110-- Detroit Minorities: Arabs, Hispanics, and African Americans . . . . . 3-4  
 ANT 5060 --Urban Anthropology (SOC 5540) . . . . . 3  
 ECO 5800 --Urban and Regional Economics I (U P 5820). . . . . 4  
 GEG 5650 --Metropolitan Detroit (GPH 5650) . . . . . 4  
 GPH 5700 --Urban Canada (GPH 5700) (U P 5700) . . . . . 4  
 GPH 6150 --Internal Structure of the City (U P 5420) (GPH 6150) . 4  
 GPH 6240 --Industrial Geography (U P 5520) (GPH 6240) . . . . . 4  
 GPH 6280 --Marketing Geography (U P 5620) (GPH 6280). . . . . 4  
 GPH 3130 -- (SS) Introductory Urban Geography . . . . . 4  
 HIS 5300-- Economic History of the United States (HIS 7300). . . . 4  
 HIS 5340 -- History of Ancient Rome (HIS 7340) . . . . . 3  
 HUM 1030 -- (VP) Exploring the Arts in Detroit. . . . . 4  
 N E 3030--Great Cities of the Near East. . . . . 3  
 P S 2240--(SS) Introduction to Urban Politics and Policy. . . . . 4  
 P S 5220 -- Issues in Urban Public Policy & Management . . . . . 4  
 PSY 5580 -- Consumer Psychology . . . . . 3

SOC 2020 -- (SS) Social Problems . . . . . 3  
 SOC 3510 --(SS) The Nature and Impact of Population on Society 3  
 SOC 5400 -- The Family . . . . . 3  
 SOC 5570 -- Race Relations in Urban Society (AFS 5570) . . . . . 3  
 ULM 6650 -- Regional, State and Urban Economic Development:  
 Policy and Administration (P S 6440) (ECO 6650) (U P 6550) . . 3  
 U P 5110 --Urban Planning Process . . . . . 3-4  
 U P 6310 --Housing Development . . . . . 3  
 U P 6510 --Urban and Regional Systems (GPH 6510) (GEG 6510) 4  
 U P 6520 --Transportation and Planning . . . . . 4  
 U P 6650 --Planning and Development Law . . . . . 2-3

Upon the approval of an Urban Studies adviser, the student may also elect courses in philosophy, computer science, statistics, architectural drafting, journalism, or speech pertaining to mass media, or in colleges outside Urban, Labor, and Metropolitan Affairs--depending on the student's overall plan of study. Some urban-related careers require special training in natural sciences and/or advanced mathematics.

## UNDERGRADUATE COURSES

The following courses, numbered 0900-6999, are offered for undergraduate credit. Courses in the following list numbered 5000-6999 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. For interpretation of numbering system, signs and abbreviations, see page 493.

### URBAN STUDIES (U S)

#### 2000 (SS) Introduction to Urban Studies. (GPH 2000) (HIS 2000) (P S 2000) (SOC 2500) Cr. 4

Urban phenomena, past and present, quality and nature of urban life, major concerns of urban areas; perspectives and techniques of various urban-related disciplines. (T)

#### 2992 (P S 2992) Political Science Internship. Cr. 1-4 (Max. 6)

Prereq: consent of undergraduate adviser. Open only to political science majors or minors, urban studies co-majors, or students with twelve credits or more in political science. Offered for S and U grades only. Internship in a public or quasi-public organization, agency, civic or voluntary group, or campaign organization. Collateral reading, written work, arranged conferences with faculty supervisor. (T)

#### 3530 (U P 3530) Urban and Regional Planning. (GPH 3530) Cr. 3

Introduction to urban and regional planning concepts, including zoning, growth management and economic development. Emphasis on metropolitan Detroit. (Y)

#### 4510 Cities and Regions. (GPH 4510) Cr. 4

Processes of urbanization and metropolitanization in both the western and non-western worlds. (W)

#### 6000 (CRJ 6000) Internship. Cr. 1-8 (Max. 8)

Undergraduate credit only. Comprehensive internship program involving various criminal justice agencies. Placement may be made in court, corrections, police, juvenile justice, and other agencies at the state, county and local levels; opportunities include agency procedure and policy, patrol, case analysis, report writing and research. (T)

#### 6050 (GEG 6520) Independent Field Study. (GPH 6520) Cr. 2-4 (Max. 4)

Prereq: U S 4010 and consent of instructor. Observation and interpretation of data in the field. Preparation, use and evaluation of classroom units in K-12; for pre-college teachers taking course for credit towards an advanced degree. Class preparations prior to travel; for K-12 teachers, classroom unit use and evaluation. (Y)



## URBAN, LABOR, and METROPOLITAN AFFAIRS -- INTERDEPARTMENTAL (ULM)

### **3070 Michigan Politics. (P S 3070) Cr. 4**

History and overview of Michigan politics: structure, process, current issues. (B)

### **3250 (P S 3250) Detroit Politics: Continuity and Change in City and Suburbs. (HIS 3240) Cr. 4**

Detroit area political systems and processes, historical, economic, and social influences on local politics. Traditions, changes, and future challenges in Detroit and metropolitan area. (B)

### **5999 Special Topics. Cr. 1-4 (Max. 8)**

Prereq: junior, senior, or graduate standing. (Y)

### **6100 Class, Race, and Politics in America. (AFS 6100) (HIS 5110) (P S 6050) (SOC 7330) (U P 7030) Cr. 3**

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

### **6150 Political Economy of the Urban Ghetto. (ECO 6810) (SOC 6850) (U P 6670) Cr. 3**

Prereq: graduate standing; upper division undergraduates by consent of instructor. Examination of the economic, social and political transformation of U.S. cities; particular attention to the formation, dynamics, economics and social sub-systems of urban ghettos and their relationship to broader contexts. (B)

### **6210 Regional, State, and Urban Economic Development: Policy and Administration. (ECO 6650) (P S 6440) (U P 6550) Cr. 3**

Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

### **6350 Sociology of Urban Health. (SOC 6750) Cr. 3**

Prereq: graduate standing; undergraduates by consent of instructor. Review of theories and research on health status and health care delivery issues in urban communities. (Y)

### **6400 (U P 6350) Housing Policy and Programs. Cr. 3**

Governmental housing policies and programs at the Federal, state and local levels. Role of community-based organizations in housing activities. (Y)

### **6600 (S W 6500) Social Work and the Law. Cr. 2**

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)

### **6680 Neighborhood Decline and Revitalization. (U P 6680) Cr. 3**

Examination of reasons for neighborhood change and how plans and policies can be specified and implemented for neighborhood improvement. (B)

### **6999 Special Topics. Cr. 3**

Open only to graduate students. (I)



# ADDITIONAL ACADEMIC PROGRAMS

# ACADEMIC SUCCESS CENTER

Office: 2100 Undergraduate Library; 577-3165; Fax: 577-9372

Executive Director: John A. Crusoe, M.B.A.

Office: 652 Student Center

Susan L. Neste, Ph.D., *Director*

Victoria Cliett, M.A.

Anita Green, M.P.A.

Nikka Hellman, M.A.

Helen Weeks, M.A.

Academic Success Center offers non-credit courses to help students ensure successful education outcomes, develop skills for University and career life, and avoid commonly-encountered difficulties.

## UNDERGRADUATE COURSES

*For interpretation of numbering system and signs, see page 493 .*

### READING EFFICIENCY (R E)

#### **0990 Learning Theory and Study Skills. Cr. 0**

Offered for S and U grades only. No degree credit. Application of learning and memory theory for developing basic reading skills and effective study habits. Memory improvement, time scheduling, note-taking methods, textbook chapter reading and test-taking techniques. (T)

#### **0991 Individualized Study Skills Laboratory Cr. 0**

Offered for S and U grades only. No degree credit. Individualized course in reading and study skills offered on an arranged basis. Preparation for professional school exams (e.g., GRE, MCAT); supplementary mathematics and writing skills programs also available. (T)

#### **0994 Vocabulary Enrichment. Cr. 0**

Offered for S and U grades only. No degree credit. Exploration of a variety of methods for improving and expanding both general and specialized vocabulary according to individual student's needs. (T)

#### **0995 Analytical Reading for Textbook Study Cr. 0**

Offered for S and U grades only. No degree credit. An analytical, developmental reading method designed to increase reading comprehension; focuses on critical thinking skills required for textbook study-reading. (T)

#### **0996 Speed Reading. Cr. 0**

Offered for S and U grades only. No degree credit. Strategies practiced to overcome common reading problems that inhibit efficient reading speed. Skills developed to enable students to use flexibility in choosing a reading rate that corresponds to their purpose. (T)

#### **0998 Pre-Medical Study Skills. Cr. 0**

Prereq: consent of instructor. Offered for S and U grades only. No degree credit. Time management, comprehension skills, scientific terminology, medical note-taking, test-taking skills, analytical reading, critical thinking and problem-solving. (Y)

## UNIVERSITY COUNSELING SERVICES (UCS)

### **0991 Designing Your Future. Cr. 0**

Prereq: coregistration in at least one credit course. Offered for S and U grades only. No degree credit. Concepts of work and career; development of knowledge of world of work and related self-knowledge; exploration of educational and career options; decision-making strategy; establishment of personal career goals and career plan. (I)

# ROTC PROGRAM

## Aerospace Studies

The Air Force Officer Education Program at the University of Michigan provides Wayne State University students opportunity to earn a commission as a second lieutenant in the U.S. Air Force through the Air Force Reserve Officer Training Corps (AFROTC). Four-year and two-year programs are offered, and aerospace studies classes are conducted on the University of Michigan campus; registration is managed by the AFROTC. Interested students should contact AFROTC at (734) 764-2403 or visit Room 154 at North Hall on the Ann Arbor campus. Students who enroll as cadets in the Air Force Officer Education Program, successfully complete the program, and receive a university degree are commissioned as second lieutenants in the United States Air Force.

Admission to introductory-level courses in this program is open to anyone, but admission to junior-level standing is open only to students having matriculate status in a four-year degree program at one of the resident sponsoring institutions.

*Career Opportunities:* Men and women can serve in a wide range of flying duties as aircrew members or in technical fields such as meteorology, research and development, communications and electronics, engineering, transportation, logistics, and intelligence, as well as in numerous managerial and training fields such as administrative services, accounting and finance, personnel, manpower management, education and training, investigation, and information services. Advanced education or technical training for these career areas may be obtained on active duty at Air Force expense.

*Four-Year and Two-Year Programs:* The four-year program consists of eight terms (sixteen credits) of course work. The first four terms (freshman and sophomore years) comprise the General Military Course (GMC). During the summer following this sequence, each student is required to attend a four-week summer training session. After completing field training, students enroll in the last four terms (junior and senior years) of AFROTC called the Professional Officer Course (POC).

The two-year program is for junior-level college students or graduate students who have not participated in the GMC but want to enter the POC. These students must attend a six-week field training session prior to entering the POC. Application for the two-year program *must be made prior to* December 1st for students entering the POC in the fall term as juniors.

*Financial Benefits and Scholarships:* All students enrolled in the POC, whether or not on scholarship, receive a monthly stipend of \$150.00 for each month of the academic school year. Uniforms, AFROTC books, and equipment are furnished free of charge. Pay and a travel allowance are provided to attend field training. AFROTC provides scholarships on a competitive basis for periods of two to three and one-half years. These scholarships provide tuition, laboratory fees, a book allowance, and the monthly \$150.00 stipend. Room and board are not furnished.

*Obligation to the Air Force:* After graduation and commissioning, graduates are called to active duty in the Air Force. The period of service is four years for non-aircrew members, six years for navigators, and ten years for pilots. Obligations for aircrew members begin following graduation from aircrew training. A contractual obligation is incurred for non-scholarship students when they enter the POC. Scholarship students incur an obligation in their sophomore year.

*Flight Activities:* Mentally and physically qualified cadets who receive a pilot training slot receive four hours of flight and aircraft familiarization training. This training usually takes place between the freshman and sophomore years.

*Course of Study:* Students enroll in one course of Aerospace Studies (ASC) during each term of participation in the program. In addition to the lecture, there is a mandatory one and one-half hour Leadership Laboratory with each of the eight terms, for those students who are eligible for the commissioning program.



# SIGNS and ABBREVIATIONS INDEX













# SIGNS and ABBREVIATIONS

## SUBJECT AREA CODES

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## COURSE NUMBERING SYSTEMS

### For the College of Education

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5000-6999 — Undergraduate or graduate credit.

### For the Faculty of Pharmacy

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3000-3999 — First Professional Year Courses.

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5000-5999 — Third Professional Year Courses.

6000-6999 — Undergraduate/Graduate Courses.

### For all other Schools and Colleges

0000-0999 — No degree credit; graded S and U.

*School of Business Administration:* Elementary courses auxiliary to the usual academic program.

*College of Engineering:* Orientation courses.

1000-1999 — Primarily freshman courses; open to all undergraduates.

2000-2999 — Primarily freshman and sophomore courses; open to all undergraduates who have completed course prerequisites.

*School of Business Administration:* Primarily junior college courses.

*College of Engineering:* Lower division courses; open to all undergraduates.

3000-4999 — Junior and senior courses; undergraduate credit. (Ordinarily freshmen and sophomores will not be permitted to register for these courses.)

*College of Engineering:* Upper division courses.

5000-6999 — Junior and senior courses; undergraduate and graduate credit.

## 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).

*Course Activity:* The following abbreviations used in some Courses of Instruction sections indicate the basic instructional mode (or modes) of certain courses. The number following the abbreviation indicates the number of clock hours per week assigned to that mode:

CLN — Clinic

DSC — Discussion

FLD — Field

IND — Individual

LAB — Laboratory

LCT — Lecture

OTH — Other

QUZ — Quiz

SMR — Seminar

STD — Studio

T V — Television

**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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