

Western State University

GRADUATE BULLETIN

1995-1997



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1995-1997 Academic Calendar

Spring/Summer Term, 1995

Term begins	Wed., May 3, 1995
Final registration	Wed., May 3 - Thurs., May 4
Spring and Spring/Summer Classes begin	Mon., May 8
Last day for filing degree applications	Mon., May 8
Memorial Day recess	Mon., May 29
¹ Day scheduled as Monday for Spring and Spring/Summer Sessions	Fri., June 2
Mail registration for Fall Term	Mon., June 19 - Fri., July 7
Classes end for Spring Session	Fri., June 23
Final Examinations for Spring Session	Mon., June 26 - Tues., June 27
Summer Session begins	Wed., June 28
Independence Day recess	Tues., July 4
¹ Day scheduled as Tuesday for Spring/Summer and Summer Sessions	Fri., July 7
Classes end for Spring/Summer Session	Fri., July 28
Final Examinations for Spring/Summer Session	Mon., July 31 - Thurs., Aug. 3
Classes end for Summer Session	Tues., Aug. 15
Study Day for Summer Session	Wed., Aug. 16
Final Examinations for Summer Session	Thurs., Aug. 17 - Fri., Aug. 18
Spring/Summer Term ends	Mon., Aug. 28, 1995

Fall Term, 1995

² University year appointments begin	Tues., Aug. 22, 1995
Term begins	Tues., Aug. 29
Final registration	Mon., Aug. 28 - Thurs., Aug. 31
Labor Day recess	Mon., Sept. 4
Classes begin	Tues., Sept. 5
Last day for filing degree applications	Tues., Sept. 5
Mail registration for Winter Term	Mon., Oct. 16 - Fri., Nov. 3
¹ Day scheduled as Thursday	Tues., Nov. 21
¹ Day scheduled as Friday	Wed., Nov. 22
Thanksgiving recess	Thurs., Nov. 23 - Sat., Nov. 25
Classes end	Wed., Dec. 13
Study Day	Thurs., Dec. 14
Commencement	Thurs., Dec. 14
Final Examinations	Fri., Dec. 15 - Thurs., Dec. 21
Holiday recess	Mon., Dec. 25, 1995 - Mon., Jan. 1, 1996
Term ends	Sun., Dec. 31, 1995

Winter Term, 1996

Term begins	Mon., Jan. 1, 1996
Final registration	Tues., Jan. 2 - Fri., Jan. 5
Classes begin	Mon., Jan. 8
Last day for filing degree applications	Mon., Jan. 8
Martin Luther King Birthday Observance (no classes)	Mon., Jan. 15
Mail registration for Spring/Summer Term	Mon., Feb. 19 - Fri., March 8
Spring recess	Mon., March 11 - Sat., March 16
Classes end	Mon., April 22
Study Day	Tues., April 23
Final Examinations	Wed., April 24 - Tues., April 30
Term ends	Tues., April 30
Commencement	Tues., May 7
² University year appointments end	Sun., May 19, 1996

Spring/Summer Term, 1996

Term begins	Wed., May 1, 1996
Final registration	Wed., May 1 - 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
¹ Day scheduled as Monday for Spring and Spring/Summer Sessions	Fri., May 31
Mail registration for Fall Term	Mon., June 17 - Fri., July 5
Classes end for Spring Session	Fri., June 21
Examination period for Spring Session	Mon., June 24 - Tues., June 25
Summer Session begins	Wed., June 26
Independence Day recess	Thurs., July 4
¹ Day scheduled as Thursday for Spring/Summer and Summer Sessions	Fri., July 5
Classes end for Spring/Summer Session	Fri., July 26
Final Examinations for Spring/Summer Session	Mon., July 29 - Thurs., Aug. 13
Classes end for Summer Session	Tues., Aug. 13
Study Day for Summer Session	Wed., Aug. 14
Final Examinations for Summer Session	Thurs., Aug. 15 - Fri., Aug. 16
Spring/Summer Term ends	Mon., Aug. 26, 1996

Fall Term, 1996*

² University year appointments begin	Tues., Aug. 20, 1996
Term begins	Tues., Aug. 27
Final registration	Mon., Aug. 26 - Thurs., Aug. 29
Labor Day recess	Mon., Sept. 2
Classes begin	Tues., Sept. 3
Last day for filing degree applications	Tues., Sept. 3
Mail registration for Winter Term	Mon., Oct. 14 - Fri., Nov. 1
¹ Day scheduled as Thursday	Tues., Nov. 26
¹ Day scheduled as Friday	Wed., Nov. 27
Thanksgiving recess	Thurs., Nov. 28 - Sat., Nov. 30
Classes end	Wed., Dec. 11
Study Day	Thurs., Dec. 12
Commencement	Thurs., Dec. 19
Final Examinations	Fri., Dec. 13 - Thurs., Dec. 19
Holiday recess	Wed., Dec. 25, 1996 - Wed., Jan. 1, 1997
Term ends	Tues., Dec. 31, 1996

Winter Term, 1997*

Term begins	Wed., Jan. 1, 1997
Final registration	Thurs., Jan. 2 - Tues., Jan. 7
Classes begin	Thurs., Jan. 9
Last day for filing degree applications	Thurs., Jan. 9
Martin Luther King Birthday Observance (no classes)	Mon., Jan. 20
Mail registration for Spring/Summer Term	Mon., Feb. 17 - Fri., March 7
Spring recess	Mon., March 10 - Sat., March 15
¹ Day scheduled as Monday	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
² University year appointments end	Sun., May 18, 1997

¹ An equal number of class days is needed for some laboratory courses. To make up for class days lost due to the 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.

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Foreword

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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 155,800 living alumni. More than 117,000 of them live in the state and more than 100,000 live in the Detroit 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 pages 458 - 462.)

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
Bioengineering Center
Cancer Institute
Center for Academic Ethics
Center for Automotive Research
Center for Chicano-Boricua Studies
Center for Health Research
Center for International Business Education and Research
Center for Legal Studies
Center for Molecular Medicine and Genetics
Center for Peace and Conflict Studies
Center for Prevention and Control of Interpersonal Violence
Center for the Study of Arts and Public Policy
Center for Urban Studies
Cohn-Haddow Center for Judaic Studies
C. S. Mott Center for Human Growth and Development
Developmental Disabilities Institute
Humanities Center
Institute for Manufacturing Research
Institute of Chemical Toxicology
Institute of Gerontology
Institute of Maternal and Child Health
Labor Studies Center
Merrill-Palmer Institute for Family and Human Development
Michigan Small Business Development Center
Race Relations Institute
Radiation Oncology Center
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 Secondary Schools. In addition, more than forty specific programs and curricula are accredited individually by specialized or professional accrediting agencies. A report is produced annually for the Board of Governors which designates the accrediting agencies of the University's programs; the report is available from the Board of Governors' Office, 4165 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*

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

Vocational Rehabilitation Counseling (graduate only): *Council on Rehabilitation Education, Inc.*

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 Administration/Affairs*

LIBRARY SCIENCE 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*

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

Audiology: *Educational Standards Board of the American Speech-Language Hearing Association*

NURSING

National League for Nursing

PHARMACY and ALLIED HEALTH PROFESSIONS

Pharmacy: *American Council on Pharmaceutical Education*

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

Physical Therapy: *American Physical Therapy Association*

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

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

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.*

SCIENCE

Chemistry: *American Chemical Society*

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

Psychology (Clinical): *American Psychological Association*

Communication Disorders and Sciences (Speech-Language Pathology): *American Speech-Language Hearing Association*

SOCIAL WORK

Council on Social Work Education

URBAN, LABOR and METROPOLITAN AFFAIRS

Urban Planning: *Planning Accreditation Board*

Equality of Opportunity

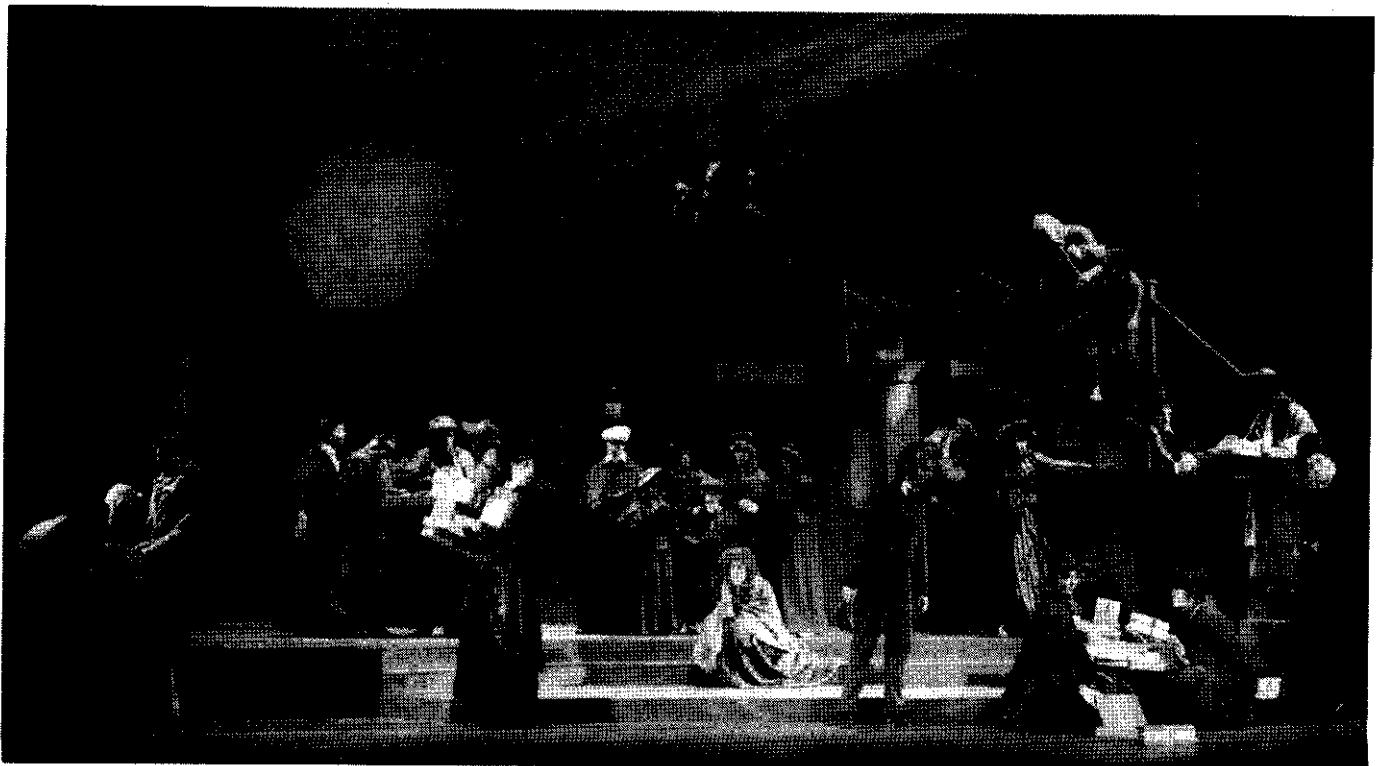
Wayne State University is an equal opportunity/affirmative action institution and is committed to a policy of non-discrimination and equal opportunity in all of its operations, employment opportunities, educational programs and related activities.

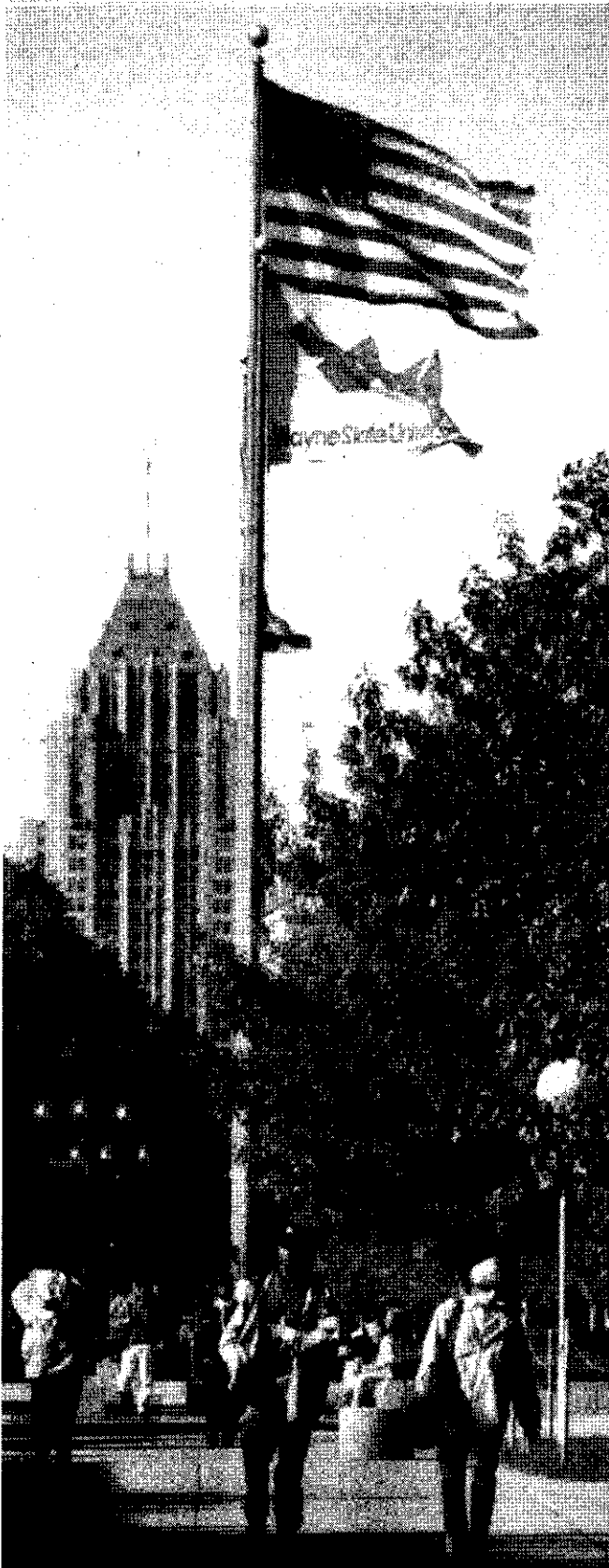
This policy embraces all persons regardless of race, color, sex, national origin, religion, age, sexual orientation, marital status or handicap, and expressly forbids sexual harassment and discrimination in hiring, terms of employment, tenure, promotion, placement and discharge of employees, admission, 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 Assistant Vice President for Neighborhood Relations, Office of Equal Opportunity and Neighborhood Relations, 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 50 for description of services available to disabled students.





Academic Programs and Degrees Symbols and Abbreviations

On the following pages are listed 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. Below are abbreviations for University degrees and certificates; the columns (Roman numerals) in the table indicate degree categories.

BA	Bachelor of Arts
BAS	Bachelor of Applied Studies
BSAHS	Bachelor of Science in Allied Health Sciences
BSET	Bachelor of Science in Engineering Technology
BFA	Bachelor of Fine Arts
BIS	Bachelor of Interdisciplinary Studies
BM	Bachelor of Music
BPA	Bachelor of Public Affairs
BS	Bachelor of Science
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 Doctor
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
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
MSLS	Master of Science in Library and Information Science
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
I	Baccalaureate or First Professional Degree
II	Post-Bachelor or Graduate Certificate
III	Teaching Certificate available in field
IV	Master's Degree
V	Specialist Certificate
VI	Doctoral Degree

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>
School of Business Administration						
Accounting	BA, BS					
Business Administration				MBA		
Business Administration/Law	JD/MBA			JD/MBA		
Finance and Business Economics	BA, BS					
Management and Organization Sciences	BA, BS					
Management Information Systems	BA, BS					
Marketing	BA, BS					
Taxation				MST		
College of Education						
Adult and Continuing Education				MEd		
Art Education	BA, BS		TC	MEd		
Bilingual/Bicultural Education			TC	MEd		
Career and Technical Education	BA, BS		TC	MEd	ESC	EdD, PhD
Counseling				MA, MEd	ESC	EdD, PhD
Curriculum and Instruction						EdD, PhD
Curriculum and Instruction (Elementary)			TC		ESC	
Curriculum and Instruction (Secondary)					ESC	
Elementary Education	BA, BS		TC	MAT, MEd		
English Education (Secondary)	BA, BS		TC	MEd		
Evaluation and Research, Education				MEd		EdD, PhD
Foreign Language Education	BA, BS		TC	MEd		
General Administration and Supervision					ESC	EdD, PhD
General Education					ESC	
Health Education			TC	MEd		
Higher Education						EdD, PhD
History and Philosophy of Education				MEd		EdD, PhD
Instructional Technology				MEd	ESC	EdD, PhD
Leadership, Educational				MEd		
Mathematics Education	BA, BS		TC	MEd	ESC	
Physical Education	BA, BS		TC	MEd		
Physical Education (K-12)			TC			
Pre-School and Parent Education				MEd		
Psychology, Educational				MEd		EdD, PhD
Psychology, School and Community				MA	ESC	
Reading				MEd	ESC	EdD
Recreation and Park Services	BS			MA		
Rehabilitation Counseling and Community Inclusion				MA	ESC	
Science Education	BA, BS		TC	MEd	ESC	
Secondary Education				MAT		
Social Studies Education (Secondary)	BA, BS		TC	MEd		
Sociology, Educational				MEd	ESC	EdD, PhD
Special Education	BA, BS		TC	MEd	ESC	
Speech Education (Secondary)	BA, BS		TC			
Sports Administration				MA		

School/College and Major

I II III IV V VI

College of Engineering

Chemical Engineering	BS			MS		PhD
Civil Engineering	BS			MS		PhD
Computer Engineering				MS		PhD
Electrical Engineering	BS			MS		PhD
Electrical/Electronic Engineering Technology	BSET					
Electromechanical Engineering Technology	BSET					
Electronics and Computer Control Systems				MS		
Engineering Management				MS		
Engineering Technology				MSET		
Hazardous Waste Control		GC				
Hazardous Waste Management				MS		
Industrial Engineering	BS			MS		PhD
Manufacturing Engineering	BS			MS		
Manufacturing/Industrial Engineering Technology	BSET					
Materials Science and Engineering	BS			MS		PhD
Mechanical Engineering	BS			MS		PhD
Mechanical/Industrial Engineering Technology	BSET					
Operations Research				MS		PhD
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	BS		TC			
Design and Merchandising	BA, BS			MA		
Film Studies	BA					
Journalism*	BA					
Museum Practice						PMC
Music	BA, BM		TC	MA, MM		
Public Relations	BA					
Radio-Television-Film*	BA					
Theatre	BFA			MA, MFA		PhD

Graduate School

Alcohol and Drug Abuse Studies	GC					
Archival Administration	GC					
Child and Family Studies	GC					
Developmental Disabilities	GC					
Gerontology	GC					
Infant Mental Health	GC					
Interdisciplinary						PhD
Library and Information Science				MSLS	SPL	
Molecular and Cellular Toxicology				MS		PhD
Molecular Biology and Genetics				MS		PhD

Law School

Corporate and Finance Law				LLM		
Joint JD/MA in History	JD			MA		
Joint JD/MA in Political Science	JD			MA		
Joint JD/MBA	JD			MBA		
Labor Law				LLM		
Law	JD			LLM		
Medical Jurisprudence				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		
Classical Civilization	BA					
Classics*	BA			MA		
College Honors (Co-Major)	BA					
Comparative Literature				MA		
Criminal Justice	BS			MS, MPA		
Economics*	BA			MA		PhD
English*	BA			MA		PhD
Film Studies	BA					
French*	BA			MA		
Geography	BA					
German*	BA			MA		
History*	BA			MA		PhD
History/Law (joint JD/MA)	JD			MA		
International Studies (Co-Major Program)	BA					
Italian*	BA			MA		
Language, Modern Foreign						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			MA		
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		
Service Agency Administration		PBC				

School of Medicine

Anatomy and Cell Biology				MS		PhD, MD/PhD
Audiology				MS		PhD
Basic Medical Science				MS		
Biochemistry				MS		PhD, MD/PhD
Cancer Biology						PhD
Cellular and Clinical Neurobiology						PhD
Community Health Services				MS		
Community Health Services Research and Evaluation		GC				
Immunology and Microbiology				MS		PhD, MD/PhD
Medical Physics						PhD
Medical Research				MS		
Medical Science, Basic				MS		
Medicine	MD					
Pathology						PhD
Pharmacology				MS		PhD, MD/PhD
Physiology				MS		PhD, MD/PhD
Psychiatry				MS		
Radiological Physics				MS		
Rehabilitation Sciences				MS		

School/College and Major

I II III IV V VI

College of Nursing

Adult Primary Care Nursing					MSN	
Adult Psychiatric Mental Health Nursing					MSN	
Advanced Medical-Surgical Nursing					MSN	
Child and Adolescent Psychiatric Nursing					MSN	
Community Health Nursing					MSN	
Neonatal Nurse Practitioner		GC				
Nursing	BSN					PhD
Nursing Administration					MSN	
Nursing Education		GC				
Nursing, Parenting and Families					MSN	
Nursing, Transcultural					MSN	

College of Pharmacy and Allied Health Professions

Allied Health Sciences	BSAHS					
Anesthesia					MS	
Clinical Laboratory Science	BS				MS	
Mortuary Science	BSMS					
Occupational and Environmental Health Sciences					MS	
Occupational Therapy	BS	PBC			MS	
Pathologist Assistant	BS					
Pharmaceutical Sciences					MS	PhD
Pharmacy	BS, PharmD					
Pharmacy, Hospital					MS	
Physical Therapy					MPT	
Radiation Therapy Technology	BS					

College of Science

Biological Sciences*	BA, BS				MS	PhD
Chemistry*	BA, BS				MA, MS	PhD
College Honors (Co-Major)	BA					
Communication Disorders and Sciences	BA				MA	PhD
Computer Science*	BA, BS	PBC			MA, MS	PhD
Dietetics	BS					
Geology	BA, BS				MS	
Information Systems	BA					
Linguistics	BA				MA	
Mathematical Statistics					MA	
Mathematics*	BA, BS				MA, MS	PhD
Mathematics, Applied					MA	
Molecular Biotechnology					MS	
Nutrition and Food Science*	BA, BS				MA, MS	PhD
Physics	BA, BS				MA, MS	PhD
Psychology*	BA, BS				MA	PhD
Psychology: Human Development	BA				MA	
Statistics, Mathematical					MA	

School of Social Work

Social Work	BSW				MSW	
Social Work Practice with Families & Couples		GC				

College of Urban, Labor, and Metropolitan Affairs

Chicano-Boricua Studies (Co-Major Program)	BA					
Dispute Resolution		GC			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

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 to aid the prospective student. Telephone: (313) 577-3577.

College of Lifelong Learning (CLL): Undergraduate admission to degree programs and other programs offered by the College of Lifelong Learning, including the University Studies/Weekend College Program and the Community Education Program, is governed by procedures of that College. See the College of Lifelong Learning section of this bulletin for details, pages 298 - 308 .

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.

The completed application, including official transcripts and any other records necessary for admission consideration, must be in the Office of University Admissions four 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 American College Test (ACT) standard composite score of at least 21 or Scholastic Aptitude Test (SAT) scores of at least 500 Verbal and 440 Mathematics are achieved.

Transfer students who have completed at least thirty transferrable hours of college work (thirty semester credits or forty-five 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 an academic year of credit 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 51.

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, economics, 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 a year of college work (thirty semester credits or forty-five 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 an academic year of credit 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 thirty hours of transferable credit, he/she may elect to take either the **Scholastic Aptitude Test (SAT)** or the **American College Test (ACT)**. Minimum scores on the SAT of at least 450 Verbal and 400 Mathematics, or a composite score on the ACT of at least 21, are 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 equivalency 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 honor 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 sixty or more semester hours of 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.

For information on credit by Special Examination, see page 40.

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 61; *Education* — page 95; *Engineering* — pages 120 – 122; *Engineering Technology* — page 149; *Lifelong Learning* — pages 300, 303; *Nursing* — page 319; *Pharmacy and Allied Health Professions* — pages 333 – 335 and 346; *Social Work* — pages 429 – 430.

Post-Bachelor Admission

Holders of bachelor's degrees from accredited institutions who wish to elect only courses open to undergraduate students (numbered below 700) 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 Admissions or Registrar's Office for other regulations regarding this status.

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 non-English speaking country 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. Arrangements should be made through the Office of University Admissions. 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.

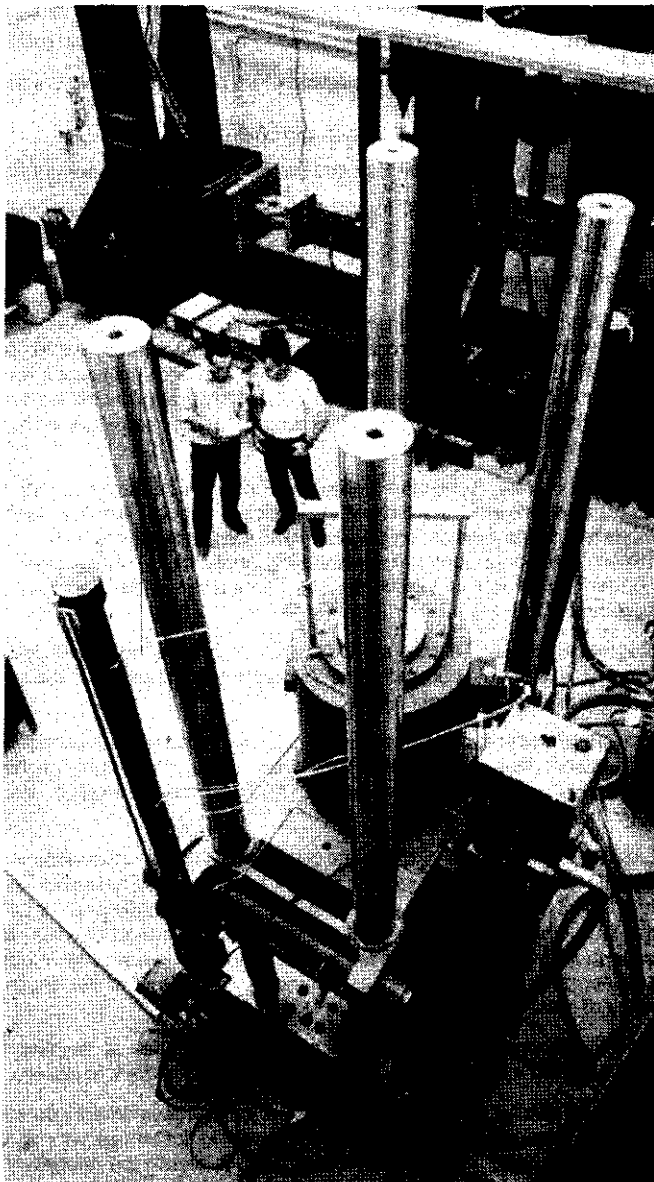
Phoenix Program (Second Start)

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 honor point average (h.p.a.) will be adjusted to reflect the honor 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 \$70.00 Registration Fee plus \$98.00 per credit.
Non-Resident . . \$70.00 Registration Fee plus \$218.00 per credit.

Juniors, Seniors and Post-Bachelors:

Resident \$70.00 Registration Fee plus \$115.00 per credit.
Non-Resident . . \$70.00 Registration Fee plus \$259.00 per credit.

Student Fees

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 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 \$25.00 for the processing of the secondary application.

Registration Fee: There is a \$70.00 non-refundable registration fee, except that students enrolled in the Visitor Program shall pay a \$35.00 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 a \$30.00 non-refundable late registration fee.

Late Payment Fees: A \$25.00 late payment fee is assessed students who do not pay the balance of their term tuition and fee assessments by the end of the first week of classes, or who do not make payment at the time when classes are added after the first week of classes. A second \$25.00 late payment fee is assessed students who have not satisfied their tuition and fee assessments by the end of the eighth week of classes.

Add Processing Fee: A \$10.00 add processing fee is assessed students who increase credit hours after the second week of classes.

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.

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 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.

Duplicate I.D. Fee: There is a fee of fifty cents for a duplicate student identification card.

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

Half-locker, lock, and towel exchange \$13.00
Full locker, lock, and towel exchange 18.00

Bowling Fee: Students electing a course in bowling must pay a \$20.00 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 Cards are accepted for tuition payments only. 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 first two weeks of classes are financially obligated to pay for the courses even if they have not attended any class sessions.

Sponsored Tuition Programs

If a student's employer participates in direct tuition billing as part of an employee benefits program, the student may be eligible to present a Minimum Tuition Deposit Deferral Form in lieu of payment at registration. Contact the Student Accounts Receivable Office for further information: 577-6837.

Mail Registration

Payment of the \$70.00 non-refundable registration fee is required at the time of submission of the Mail Registration Schedule Request form. Students receiving financial assistance may submit a Tuition and Fee Deferral form for the required amount. The balance of term tuition and fee assessment is due at the end of the first week of classes. A \$25.00 Late Payment Fee is assessed any student who has not paid his/her tuition and fee assessment by the end of the first week of classes.

Final Registration

Payment of the \$462.00 registration deposit (which includes the \$70.00 non-refundable registration fee) is required at the time of registration. Students receiving financial assistance may submit a Tuition and Fee Deferral form for the required amount. The balance of term tuition and fee assessment is due at the end of the first week of classes. A \$25.00 Late Payment Fee is assessed any student who has not paid his/her full tuition and fee assessment by the end of the first week of classes.

Late Registration

During the first week of classes, payment of the \$492.00 registration deposit (which includes the non-refundable \$70.00 Registration Fee and the non-refundable \$30.00 Late Registration Fee) is required at

the time of registration. Students receiving financial assistance may submit a Tuition and Fee Deferral form for the required amount. The balance of the term tuition and fee assessment is due at the end of the first week of classes. A \$25.00 Late Payment Fee is assessed any student who has not paid his/her full tuition and fee assessment by the end of the first week of classes.

After the first week of classes, payment of full tuition, the non-refundable \$70.00 Registration Fee and the non-refundable \$30.00 Late Registration Fee is required at the time of registration. Students receiving financial assistance may submit a Tuition and Fee Deferral form for the required amount.

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. The University reserves the right to cancel any course.

Short-Term Courses: Payment of full tuition and the \$70.00 non-refundable Registration Fee is required on the date of registration or no later than the first class meeting date. A \$25.00 Late Payment Fee is assessed any student who has not paid his/her tuition and fee assessment by the due date.

Late Payment Fee: A \$25.00 Late Payment Fee is assessed students enrolled in courses meeting fifteen weeks or more who have a tuition and fee balance after the first week of classes. After the eighth week of classes, an additional \$25.00 Late Payment Fee is assessed.

Holds on Records: 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. (For *Academic Probation Holds on Records*, see page 40.)

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; 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.

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 can be obtained for \$1.00; however they do not bear the University seal or the signature of the Registrar. Unofficial transcripts are normally used for advising purposes.

Transcript tickets can be purchased at the Cashier's Office or at the ticket dispensing machines in the lobby of the Helen Newberry Joy Student Services Center, and on the second floor of the Student Center. The tickets must be submitted with the Transcript Request Form.

A transcript may be requested in person or by mail. The University will not honor telephone requests for transcripts. To request a transcript in person, the student must file a transcript request form and a transcript ticket for the appropriate fee at Student Services and Information Systems, 1 West, Helen Newberry Joy Students Services Center. Requests by mail should be addressed to: Student Services and Information Systems, Attn: Transcripts, 1 West, Helen Newberry Joy Student Services Center, Wayne State University, Detroit, Michigan 48202-3412; 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.

Tuition Cancellation/Refund

Tuition, *not including the \$70.00 Registration Fee*, may be cancelled in accordance with the following schedule when students officially withdraw from classes by submitting a properly-completed Drop/Add form or by sending a certified letter to the Registration and Scheduling Office, 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.

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

Classes meeting fewer than four weeks: 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.

Classes meeting four to eight weeks: 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 nine to fifteen weeks: 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 University *Schedule of Classes* for the appropriate term for specific dates.)

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

Dropping and Adding Courses: Students who drop and add courses simultaneously after the 100% tuition cancellation period are assessed tuition for the credit hours added that are in excess of the credit hours dropped. If the credit hours dropped exceed the credit hours added, the student is not entitled to any tuition cancellation. This practice is referred to as an 'even exchange.'

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 the Registration and Scheduling Office.

Class Ranking

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

Freshman	0 to 29 credits, inclusive
Sophomore	30 to 59 credits, inclusive
Junior	60 to 89 credits, inclusive
Senior	90 credits or above

School of Business Administration

Freshman	0 to 31 credits, inclusive
Sophomore	32 to 63 credits, inclusive
Junior	64 to 95 credits, inclusive
Senior	96 credits or above

College of Education

Freshman	0 to 30 credits, inclusive
Sophomore	31 to 61 credits, inclusive
Junior	62 to 93 credits, inclusive
Senior	94 credits or above

College of Pharmacy and Allied Health Professions — Faculty of Pharmacy: For purposes of Faculty of Pharmacy ranking, in addition to degree credits earned, consideration is also given to particular professional courses still to be completed.

OFFICE of SCHOLARSHIPS and FINANCIAL AID

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

The Office of Scholarships and Financial Aid assists students and parents in meeting their educational expenses. These expenses include tuition, fees, books, supplies, room, board and transportation. The Office administers federal, state and institutional sources, based both on financial need and academic performance. Financial aid counselors are available to assist students by appointment, on a walk-in basis, or by telephone.

Financial need is the difference between the cost of attendance minus the family contribution. The student's financial need is determined by an analysis of the financial statement and a standardized formula known as the Federal Methodology. Special circumstances of the individual applicant are considered on a case-by-case basis.

Undergraduate and graduate students are encouraged to apply for financial assistance by the deadline of May 1. The Free Application for

Federal Student Aid (FAFSA) is required to determine the student's eligibility for financial assistance. Applicants may be required to verify the information provided on the financial statement before aid is awarded.

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 financial aid a student can receive can never exceed the demonstrated financial need, based on analysis of the financial statement. To retain eligibility for aid funds, the student must continue to make satisfactory academic progress toward a degree.

Booklet: Potential applicants should contact the Office of Scholarships and Financial Aid for a more complete listing of available scholarship awards, 'Unlocking the Door to Your Future: Scholarships at Wayne State University.'

Air Force ROTC Scholarships: The Air Force offers financial assistance on a competitive basis to students interested in completing the AFROTC program and entering the Air Force as second lieutenants after graduation. Scholarships are available for periods of two to three and one-half years. Scholarships pay full tuition and fees, a book allowance, and a \$100 per month stipend while in school. Wayne State students receive AFROTC training on the University of Michigan campus. For information, call the AFROTC recruiter at (313) 747-4093.

Fulbright Grants for graduate study abroad are available in some ninety countries in all disciplines. These grants provide for transportation and living expenses for an academic year. Graduating seniors should apply no later than October 15 of the year preceding planned departure. For further information and application forms, contact the Fulbright Program Adviser, Penrith Goff, Department of German and Slavic Languages and Literatures.

Standards of Satisfactory Academic Progress

Federal regulations require institutions eligible to participate in federal financial aid programs to define and enforce satisfactory academic progress standards 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 per cent of the published length of the educational program. (*Note:* For information concerning the 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 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 (credits) each academic year and maintain at least a 2.0 cumulative honor point average (h.p.a.).*

Students with unsatisfactory academic progress must attain a cumulative 2.0 h.p.a. before they regain their eligibility for financial aid. (*Note:* Graduate students, law students, and medical students should consult their academic advisers about the minimum acceptable cumulative h.p.a. for their programs.)

Students cannot receive financial aid retroactively for the academic period in which they re-establish satisfactory academic progress.

Students are ineligible for further financial assistance when the cumulative total number of credit hours (credits) they attempt is equal

to or greater than 150 percent of the *minimum* credits their major requires for graduation. Attempted hours include:

- (1) Earned Hours (Credits): (A–D, Pass (P), Satisfactory (S))
- (2) Not Passed (N), Unsatisfactory (U)
- (3) Repeated Hours (Credits) (R)
- (4) Official Withdrawal (W)
- (5) Failure (E)
- (6) Incomplete (I)
- (7) No Grade Reported (X)
- (8) Deferred Grade (Y)
- (9) Audit (Z)
- (10) Transfer Credit.

Students failing to meet the required academic progress standards may appeal, under special circumstances, for financial aid reinstatement. Students should contact the Office of Scholarships and Financial Aid (OSFA) for appeal forms and procedures. Circumstances OSFA may consider a basis for appeal include death of a relative, illness or injury, or other serious undue hardship.

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 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 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 (577–3378):

University Scholarships and Awards: The University has a wide range of private scholarship 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. The student applicant for private scholarships is also required to submit two letters of recommendation and previous high school and/or college transcripts for award consideration. The application deadline for private University scholarships is April 29.

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 honor 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 address given below when application is to be made elsewhere.) *Application deadline* for all OSFA scholarships is *April 29*. (Different or additional requirements are stated where applicable.)

Aetna Life & Casualty Minority Scholarship: Amount depends on funds available; open to full-time undergraduate minority student maintaining a minimum 3.0 h.p.a. and demonstrating financial need.

Ralph and Grace Ainsworth Scholarship: Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 h.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 h.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.

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

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

Beverly N. Bay Memorial Scholarship: Amount depends on funds available; open to full-time undergraduate student maintaining a minimum 3.0 h.p.a. and demonstrating financial need, and with no parental support for educational expenses.

Board of Governors Scholarship: Amount depends on funds available; open to undergraduate student attending at least part-time, maintaining a minimum 3.0 h.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 h.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 h.p.a.

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

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

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 h.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 h.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.

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

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

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

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

McGregor-Perring Scholarship: Award of \$1000, open to full-time undergraduate student maintaining a minimum 3.0 h.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 h.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 h.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 h.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 h.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 h.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 h.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.

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

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

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

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

Wayne State University Presidential Scholarship 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 3.5 grade point average, SAT score of 870/ACT score of 22; application deadline is February 14. Michigan community college graduates' eligibility: earned Associate Degree with minimum 3.75 honor point average; application deadline is May 1. Contact: University Admissions Office, 3 East, Helen Newberry Joy Student Services Center; 577-3577.

Millcent 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 h.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 h.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 h.p.a. and demonstrating financial need.

Scholarships and Awards Available through the Division of Student Affairs

ATHLETICS, INTRAMURALS, and RECREATION

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

Tom Adams 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.

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.

Vernon K. Gale Memorial Endowed 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.

Vic Hanson Endowed 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.

John Hussey Memorial 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 swimming and diving; candidates recommended by Department of Athletics, Intramurals, and Recreation.

Frederick A. Mulhauser Endowed 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 tennis; candidates recommended by Department of Athletics, Intramurals, and Recreation.

Charlie Primas Scholar-Athlete Award: 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.

Vollbrecht 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 fencing; candidates recommended by Department of Athletics, Intramurals, and Recreation.

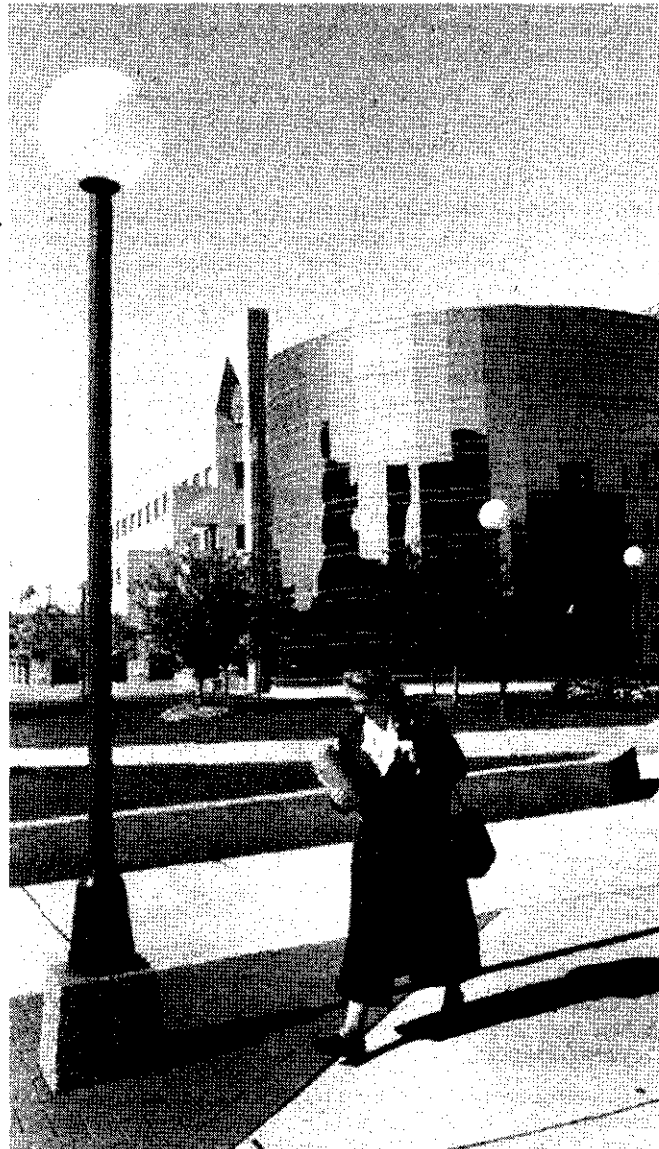
COUNSELING SERVICES

583 Student Center; 577-3398

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 h.p.a. demonstrating financial need. Application deadline is April 30; contact Office of Scholarships and Financial Aid, 3 West, Helen Newberry Joy Student Services Building; 577-3378.

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 honor 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 the Student Services and Information Systems Office 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. (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 entering undergraduate students.

Transfer students who are not covered by the above schedule and who enter 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 in curricular information in this Bulletin, and in each semester's *Schedule of Classes*.

AI — American Society and Institutions	IC — Intermediate Composition Competency
BC — Basic Composition Competency	LS — Life Sciences
CL — Computer Literacy Competency	MC — Mathematics Competency
CT — Critical Thinking Competency	OC — Oral Communication Competency
EP — English Proficiency Requirement	PL — Philosophy and Letters
FC — Foreign Culture	PS — Physical Sciences
GE — General Education	SS — Social Sciences
HS — Historical Studies	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 Building).

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 100) 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 102, 105; GIS 151; 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 239; AGS 352, 491/496; ENG 205, 210, 211, 212, 221, 231, 239, 257, 301, 303, 305; GIS 351; GUH 201; HUM 200.

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 108, (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 below. 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 091); 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 180 OR MAT 201 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 306; GIS 156; SPB 101; 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: ACC 263; B E 101; CSC 100, 101, 105, 110, 112, 114, 211, or

any higher-level CSC course; GST 271; MUA 561; NUR 111; SPC 317; SPJ 202, 321; 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 therefore 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: GER 105; GIS 326; PHI 105; SLA 105; SPC 211; 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.

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 201; CHM 100, 102, 105, 107, 131; GEL 101; GST 242; HON 423; PHY 102, 104, 213, 217, 310.

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 211; BIO 103, 105, 151, 220; GST 202, 231; HON 422; NFS 203; PSY 101, 102.

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 320; GIS 316; GUH 381; HIS 110, 120, 130, 140, 160, 161, 171, 180, 181, 195, 335; HON 425; HUM 310; N E 203, 204; P S 353.

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 342; GSS 151; HIS 103, 105; HON 427; P S 101, 103.

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 221; AGS 348; ANT 210; ECO 100, 201, 202; GPH 110, 200, 313, 320; GSS 271; HIS 200; HON 421; P S 100, 200, 224; SOC 200, 202, 250, 330, 351, 410; U S 200.

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 341; ANT 315, 352, 354, 355; ARM 341, 475; ASN 455, 456; CBS 241, 242; FRE 271, 272; GER 271, 272, 341; GIS 360, 361, 362; GRK 371; HIS 244; HON 426; ITA 271, 272; N E 200, 355; NUR 480; POL 341; RUS 341, 351; SLA 341; SOC 355; UKR 341; or completion of any foreign language sequence through 201 or 211.

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).

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 100, 111, 112; DNC 200, 231; ENG 245, 246; FLM 201, 202; GUH 273; HON 424; HUM 101, 102, 103, 303; MUH 134, 135, 137; THR 101, 103.

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 101, 210, 220; ENG 216, 217, 220, 250, 272, 311, 312, 314; FRE 270; GER 270, 291; GUH 271, 371; HON 210, 420; HUM 210, 211, 220, 222; ITA 270; LIN 272; PHI 101, 102, 103, 104, 110, 210, 211, 232, 350, 355, 370; P S 351, 352; RUS 270, 360, 365; SPA 270.

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 100, The University and its Libraries, 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 100 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.

UGE 100. (GE) The University and its Libraries. Cr. 1

Offered for S and U grades only. Prereq: admission to Wayne State University. Develops student awareness of traditions, goals, and structures of universities and their research libraries, and particularly those at Wayne State University; use of WSU facilities to attain educational and life goals. (T)

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 given at the beginning of the General Education material, 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 103
2. History 204 and 205
3. History 516 and 517
4. Political Science 101
5. Political Science 103
6. Political Science 201 and 202
7. General Social Science (College of Lifelong Learning). Any six of the following courses: GSS 201, 202, 203, 231, 232, 233, 271, 272, 273.

**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 108 (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 150 or MAT 180; 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 091); 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 150, MAT 180, or MAT 201.

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 108 and/or Mathematics 091.

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 305. 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)

Competency	High School Courses	SAT or ACT score	AP score	CLEP Exam name: score	WSU Qualifying Exam	WSU Proficiency Exam
<hr/>						
A. Written Communication						
1. Basic Composition (BC)	N.A.	N.A.	3, 4, or 5	Eng. Comp: 500	Placement out of ENG 102	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 hours
4. College/School/Dept. Requirement Writing Intensive Course (WI)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<hr/>						
B. Mathematics Proficiency (MC)	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
<hr/>						
C. Oral Communication (OC)	2 semesters	N.A.	N.A.	N.A.	N.A.	Exam to be passed before 60 hours unless requirement previously fulfilled by other means
<hr/>						
D. Computer Literacy (CL)	1 semester	N.A.	3, 4, or 5	Computers and Data Processing: 50	N.A.	Same as for Oral Communication, above
<hr/>						
E. Critical or Analytic Thinking (CT)	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
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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.

Group Requirement	Advanced Placement Program			College-Level Examination Program		
	AP Test	AP Score	Credits Awarded	CLEP Test S = Subject Exam G = General Exam	CLEP Score	Credits Awarded
Natural Science:						
Physical Science (PS)	Chemistry	3, 4, or 5	4-8	General Chemistry (S)	50	4
	Physics (Basic)	3, 4, or 5	4-8	Natural Science (G)	490	4
	Physics (E & M)	4 or 5	4-8			
	Physics (Mechanics)	4 or 5	4-8			
Life Science (LS)	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
Historical Studies (HS)	European History*	3, 4, or 5	3-7	Western Civ. I (S)	50	3
				Western Civ. II (S)	50	3
				Social Sci. & History (G)	490	4
American Institutions (AI)	American History*	3, 4, or 5	3-7	American Hist. I (S)	50	3
	American Government*	3, 4, or 5	3-4	American Hist. II (S)	50	3
				American Govt. (S)	50	3
Basic Social Science (SS)	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	4
Foreign Culture (FC)	French Language	3, 4, or 5	4-8			
	German Language	3, 4, or 5	4-7			
	Spanish Language	3, 4, or 5	4-8			
	Comparative Politics*	3, 4, or 5	3			
Humanities:						
Visual and Performing Arts (VP)	Art History	3, 4, or 5	3	Humanities (G)	490	3
	Music History	3, 4, or 5	2-3			
Philosophy and Letters (PL)	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	3

* 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 342 — (AI) The American Constitution and the Judicial System Cr. 4
 GSS 151 — (AI) American Political Development Cr. 4
 HIS 103 — (AI) History of American Political Institutions Cr. 4
 HIS 105 — (AI) American Civilization Since World War II Cr. 3-4
 HON 427 — (AI) Seminar in American Society and Institutions Cr. 3 (Max. 9)
 P S 101 — (AI) American Government Cr. 4
 P S 103 — (AI) The American Governmental System Cr. 3

Basic Composition Competency (BC)

ENG 102 — (BC) Introductory College Writing Cr. 4
 ENG 105 — (BC) Freshman Honors: English I Cr. 4
 GIS 151 — (BC) Written Communication Skills Cr. 4 (Max. 8)

Computer Literacy Competency (CL)

ACC 263 — (CL) Introduction to Business Computing Cr. 2
 B E 101 — (CL) Introduction to Computers in Engineering Cr. 3
 CSC 100 — (CL) Introduction to Computer Science Cr. 3
 CSC 101 — (CL) Fundamentals of Computer Science Cr. 3
 CSC 105 — (CL) Introduction to C and Unix Cr. 2
 CSC 110 — (CL) Problem Solving and Programming Cr. 4
 CSC 112 — (CL) Introduction to FORTRAN Cr. 3
 CSC 114 — (CL) Introduction to COBOL Cr. 3
 CSC 211 — (CL) Introduction to Data Structures and Abstraction Cr. 4
 GST 271 — (CL) Computers and Society Cr. 4
 MUA — (CL) Introduction to Music Technology Cr. 3
 NUR 111 — (CL) Introduction to Computers and Technology for Health Care Professionals Cr. 2
 SPC 317 — (CL) Fundamentals of Public Relations Cr. 3
 SPJ 202 — Using Computers in Journalism Cr. 1
 SPJ 321 — (CL) News Editing Cr. 4

Critical Thinking Competency (CT)

GER 105 — (CT) Critical Thinking: Issues in German and Slavic Culture (SLA 105) Cr. 3
 GIS 326 — (CT) Methods of Search and Critical Thinking Cr. 4
 PHI 105 — (CT) Critical Thinking Cr. 3
 SLA 105 — (GER 105) (CT) Critical Thinking: Issues in German and Slavic Culture Cr. 3
 SPC 211 — (CT) Argumentation and Debate Cr. 3

English Proficiency (EP)

ENG 108 — (EP) Writing Workshop Cr. 2

*** Foreign Culture (FC)**

AFS 361 — (FC) (GIS 361) Interdisciplinary Perspectives on Foreign Culture: The Africans Cr. 4
 ANT 315 — (FC) Anthropology of Business Cr. 3
 ANT 352 — (FC) Stability and Change in Contemporary Africa Cr. 3
 ANT 354 — (FC) Cultures and Societies of Latin America Cr. 3
 ANT 355 — (FC) Arab Society in Transition. (N E 355) (SOC 355) Cr. 3
 ARB 201 — (FC) Intermediate Arabic I Cr. 4
 ARM 201 — (FC) Intermediate Armenian Cr. 4
 ARM 341 — (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (GER 341) (POL 341) (RUS 341) (UKR 341) Cr. 3
 ARM 475 — (FC) Survey of Armenian Culture and Literature: The Modern Period Cr. 3
 ASN 455 — (FC) Japanese Culture and Society I Cr. 4
 ASN 456 — (FC) Japanese Culture and Society II Cr. 4
 CBS 241 — (FC) History of Mexico. (HIS 244) Cr. 3
 CBS 242 — (FC) History of Puerto Rico and Cuba Cr. 3
 FRE 201 — (FC) Intermediate French Cr. 4

FRE 271 — (FC) Introduction to French Civilization Cr. 3
 FRE 272 — (FC) Contemporary French Cr. 3
 GER 201 — (FC) Intermediate German Cr. 4
 GER 271 — (FC) Survey of Germanic Culture I Cr. 3
 GER 272 — (FC) Survey of Germanic Culture II Cr. 3
 GER 341 — (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 341) (POL 341) (RUS 341) (UKR 341) Cr. 3
 GIS 360 — (FC) Interdisciplinary Perspectives on Foreign Culture: The Arabs Cr. 3
 GIS 361 — (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans (AFS 361) Cr. 4
 GIS 362 — (FC) Interdisciplinary Perspectives on Foreign Culture: The Chinese Cr. 3
 GRK 201 — (FC) Classical Greek Prose Cr. 4
 GRK 211 — (FC) Intermediate Modern Greek Cr. 4
 GRK 371 — (FC) Modern Greek Literature and Culture Cr. 4
 HEB 201 — (FC) Intermediate Hebrew I Cr. 4
 HIS 244 — (CBS 241) (FC) History of Mexico Cr. 3
 HON 426 — (FC) Seminar in Foreign Culture Cr. 3 (Max. 9)
 ITA 201 — (FC) Intermediate Italian Cr. 4
 ITA 271 — (FC) Italian Culture and Civilization I Cr. 3
 ITA 272 — (FC) Italian Culture and Civilization II Cr. 3
 JPN 201 — (FC) Intermediate Japanese Cr. 4
 LAT 201 — (FC) Latin Literature Cr. 4
 N E 200 — (FC) Introduction to Islamic Civilization of the Near East Cr. 3
 N E 355 — (ANT 355) (FC) Arab Society in Transition. (SOC 355) Cr. 3
 NUR 480 — (FC) Transcultural Health Through the Life Cycle Cr. 3
 POL 201 — (FC) Intermediate Polish Cr. 4
 POL 341 — (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 341) (GER 341) (RUS 341) (UKR 341) Cr. 3
 RUS 201 — (FC) Intermediate Russian Cr. 4
 RUS 341 — (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 341) (GER 341) (POL 341) (UKR 341) Cr. 3
 RUS 351 — (FC) Study of Russian Culture Cr. 3
 SLA 341 — (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 341) (GER 341) (POL 341) (RUS 341) (UKR 341) Cr. 3
 SOC 355 — (ANT 355) (FC) Arab Society in Transition. (N E 355) Cr. 3
 SPA 201 — (FC) Intermediate Spanish Cr. 4
 SWA 201 — (FC) Intermediate Swahili Cr. 4
 UKR 201 — (FC) Intermediate Ukrainian Cr. 4
 UKR 341 — (SLA 341) (FC) New Soil, Old Roots: The Immigrant Experience. (ARM 341) (GER 341) (POL 341) (RUS 341) Cr. 3

*** Historical Studies (HS)**

ANT 320 — (HS) Prehistoric and Early Historic Civilizations Cr. 3
 GIS 316 — (HS) World War I as a Turning Point: Historical Perspectives Cr. 4
 GUH 381 — (HS) Approaches to the Study of History Cr. 3-4
 HIS 110 — (HS) The Ancient World Cr. 3-4
 HIS 120 — (HS) The Medieval World Cr. 3-4
 HIS 130 — (HS) Europe and the World: 1500-1945 Cr. 3-4
 HIS 140 — (HS) The World Since 1945 Cr. 3-4
 HIS 160 — (HS) African Civilizations to 1800 Cr. 3-4
 HIS 161 — (HS) African Civilizations Since 1800 Cr. 3-4
 HIS 171 — (HS) East Asian Civilization Since 1840 Cr. 3
 HIS 180 — (N E 203) (HS) The Age of Islamic Empires: 600-1600 Cr. 3
 HIS 181 — (N E 204) (HS) The Modern Middle East Cr. 3
 HIS 195 — (HS) Society and the Economic Transition Cr. 3
 HIS 335 — (HS) Revolution in the Modern World: 1750 to the Present 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.

* *Historical Studies (HS) (cont'd)*

- HON 425 — (HS) Seminar in Historical Studies. Cr. 3 (Max. 9)
HUM 310 — (HS) Historical Epochs in Contrast. Cr. 3
N E 203 — (HS) The Age of Islamic Empires: 600 – 1600 (HIS 180) Cr. 3.
N E 204 — (HS) The Modern Middle East (HIS 181). Cr. 3.
P S 353 — (HS) Community-Building in the History of Western Political Thought. Cr. 4

Intermediate Composition Competency (IC)

- AFS 239 — (ENG 239) (IC) Introduction to African-American Literature: Literature and Writing. Cr. 4
AGS 352 — (IC) Readings in Popular Culture: A Writing Course. Cr. 4
AGS 491 — (IC) Senior Essay Seminar I. Cr. 4
ENG 205 — (IC) Freshman Honors: English II. Cr. 4
ENG 210 — (IC) Introduction to Poetry: Literature and Writing. Cr. 3
ENG 211 — (IC) Introduction to Drama: Literature and Writing. Cr. 3
ENG 212 — (IC) Introduction to Fiction: Literature and Writing. Cr. 4
ENG 221 — (IC) Great English Novels: Literature and Writing. Cr. 3
ENG 231 — (IC) Major American Books: Literature and Writing. Cr. 3
ENG 239 — (IC) Introduction to African-American Literature: Literature and Writing. (AFS 239) Cr. 4
ENG 257 — (IC) Literature By and About Women: Literature and Writing. Cr. 3
ENG 301 — (IC) Intermediate Writing. Cr. 3
ENG 303 — (IC) Writing the Research Paper. Cr. 3
ENG 305 — (IC) Technical Communication I: Report Writing. Cr. 3
GIS 351 — (IC) Intermediate Reading and Writing. Cr. 4
GUH 201 — (IC) Cultural Identity and the American Experience: Writers' Responses. Cr. 4
HUM 200 — (IC) Reading and Writing About the Arts. Cr. 3

* *Life Sciences (LS)*

- ANT 211 — (LS) Introduction to Physical Anthropology. Cr. 3
BIO 103 — (LS) Environmental Biology. Cr. 3-4
BIO 105 — (LS) An Introduction to Life. Cr. 3-4
BIO 151 — (LS) Basic Biology I. Cr. 3-4
BIO 220 — (LS) Introductory Microbiology. Cr. 4
GST 202 — (LS) Changing Life on Earth. Cr. 3-4
GST 231 — (LS) Living in the Environment. Cr. 4
HON 422 — (LS) Seminar in Life Science. Cr. 3
NFS 203 — (LS) Introductory Nutrition. Cr. 3-4
PSY 101 — (LS) Introductory Psychology. Cr. 4
PSY 102 — (LS) Elements of Psychology. Cr. 3

Mathematics Competency (MC)

- MAT 091 — (MC) Basic Concepts in Mathematics. Cr. 3

Oral Communication Competency (OC)

- ENG 306 — (OC) Technical Communication II: Writing and Speaking. Cr. 3
GIS 156 — (OC) Dimensions of Oral Communication. Cr. 4 (Max. 8)
SPB 101 — (OC) Oral Communication: Basic Speech. Cr. 2-3

* *Philosophy and Letters (PL)*

- CLA 101 — (PL) Classical Civilization. Cr. 3-4
CLA 210 — (PL) Honors Classical Origins of Western Thought. (HON 210) Cr. 3
CLA 220 — (PL) Introduction to Greek Tragedy. Cr. 3-4
ENG 216 — (PL) European Literature I: Classical through Renaissance. Cr. 3
ENG 217 — (PL) European Literature II: Renaissance to Modern. Cr. 3
ENG 220 — (PL) Shakespeare. Cr. 3
ENG 250 — (PL) The English Bible as Literature. Cr. 4
ENG 272 — (PL) Basic Concepts in Linguistics. (LIN 272) Cr. 3
ENG 311 — (PL) English Literature to 1700. Cr. 3
ENG 312 — (PL) English Literature after 1700. Cr. 3
ENG 314 — (PL) Survey of American Literature. Cr. 3

FRE 270 — (GER 270) (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (ITA 270) (RUS 270) Cr. 3-4

GER 270 — (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (FRE 270) (ITA 270) (RUS 270) Cr. 3-4

GER 291 — (PL) Understanding the Fairy Tale Cr. 3.

GUH 271 — (PL) Art and Aesthetics: Literature and Philosophy. Cr. 4

GUH 371 — (PL) Significant Issues in Cultural Studies. Cr. 3-4

HON 210 — (CLA 210) (PL) Honors Classical Origins of Western Thought. Cr. 3

HON 420 — (PL) Seminar in Philosophy and Letters. Cr. 3 (Max. 9)

HUM 210 — (PL) Humanities and Western Tradition I: Antiquity to the Renaissance. Cr. 4

HUM 211 — (PL) Humanities and the Western Tradition II: Renaissance to the Present. Cr. 4

HUM 220 — (PL) Sophomore Honors Colloquium in Humanities. Cr. 4 (Max. 9)

HUM 222 — (PL) Constructs of Human Experience: Histories, Novels, Philosophies. Cr. 3-4

ITA 270 — (GER 270) (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (FRE 270) (RUS 270) Cr. 3-4

LIN 272 — (ENG 272) (PL) Basic Concepts in Linguistics. Cr. 3

PHI 101 — (PL) Introduction to Philosophical Systems. Cr. 3-4

PHI 102 — (PL) Honors Introduction to Philosophical Systems. Cr. 3-4

PHI 103 — (PL) Introduction to Philosophical Problems. Cr. 3-4

PHI 104 — (PL) Honors Introduction to Philosophical Problems. Cr. 3-4

PHI 110 — (PL) Contemporary Moral Issues. Cr. 3 (Max. 9)

PHI 210 — (PL) Ancient and Medieval Philosophy. Cr. 3

PHI 211 — (PL) Seventeenth and Eighteenth Century Philosophy. Cr. 3

PHI 232 — (PL) Introduction to Ethics. Cr. 3-4

PHI 350 — (PL) Theory of Knowledge. Cr. 3

PHI 355 — (PL) Metaphysics. Cr. 3

PHI 370 — (PL) Philosophy of Art. Cr. 3

P S 351 — (PL) Law, Authority and Rebellion. Cr. 4

P S 352 — (PL) Justice. Cr. 4

RUS 270 — (GER 270) (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270) (FRE 270) (ITA 270) Cr. 3-4

RUS 360 — (PL) Nineteenth Century Russian Literature in English. Cr. 3

RUS 365 — (PL) Twentieth Century Russian Literature in English. Cr. 3

SPA 270 — (GER 270) (PL) Anguish and Commitment: European Existentialist Literature. (FRE 270) (ITA 270) (RUS 270) Cr. 3-4

* *Physical Sciences (PS)*

- AST 201 — (PS) Descriptive Astronomy. Cr. 4-5
CHM 100 — (PS) Chemistry and Your World. Cr. 3-4
CHM 102 — (PS) General Chemistry I. Cr. 4
CHM 105 — (PS) Introductory Principles of Chemistry. Cr. 6
CHM 107 — (PS) Principles of Chemistry I. Cr. 4
CHM 131 — (PS) Chemical Principles and Analysis I. Cr. 5
GEL 101 — (PS) Geology: The Science of the Earth. Cr. 4
GST 242 — (PS) Atoms and Stars: A Historical Introduction to Astronomy, Physics and the Process of Scientific Discovery. Cr. 4
HON 423 — (PS) Seminar in Physical Science. Cr. 3
PHY 102 — (PS) Conceptual Physics: The Basic Science. Cr. 3-4
PHY 104 — (PS) Einstein, Relativity and Quanta: A Conceptual Introduction. Cr. 3-4
PHY 213 — (PS) General Physics. Cr. 4
PHY 217 — (PS) General Physics. Cr. 4-5
PHY 310 — (PS) The Sounds of Music. Cr. 4

* *Social Sciences (SS)*

- AFS 221 — (SS) Black Social and Political Thought. Cr. 4
AGS 348 — (SS) Theoretical and Practical Analysis of Work Organizations. Cr. 4
ANT 210 — (SS) Introduction to Anthropology. Cr. 3-4

(SS: continued on next page)

* 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.

* *Social Sciences (SS) (cont'd.)*

- ECO 100 — (SS) Survey of Economics. Cr. 4
ECO 201 — (SS) Principles of Microeconomics. Cr. 3-4
ECO 202 — (SS) Principles of Macroeconomics. Cr. 3-4
GPH 110 — (SS) World Regional Patterns. Cr. 4-5
GPH 200 — (U S 200) (SS) Introduction to Urban Studies. (HIS 200) (SOC 250) (P S 200)
Cr. 4
GPH 313 — (SS) Introductory Urban Geography. Cr. 4
GPH 320 — (SS) Europe. Cr. 3
GSS 271 — (SS) Selected Perspectives on Ethnicity. Cr. 4
HIS 200 — (U S 200) (SS) Introduction to Urban Studies. (SOC 250) (P S 200) (GPH 200)
Cr. 4
HON 421 — (SS) Seminar in Social Sciences. Cr. 3
P S 100 — (SS) Introduction to Political Science. Cr. 3
P S 200 — (U S 200) (SS) Introduction to Urban Studies. (HIS 200) (SOC 250) (GPH 200)
Cr. 4
P S 224 — (SS) Introduction to Urban Politics and Policy. Cr. 4
SOC 200 — (SS) Understanding Human Society. Cr. 3
SOC 202 — (SS) Social Problems. Cr. 3
SOC 250 — (U S 200) (SS) Introduction to Urban Studies. (HIS 200) (P S 200) (GPH 200)
Cr. 4
SOC 330 — (SS) Social Institutions and Social Structure. Cr. 4
SOC 351 — (SS) The Nature and Impact of Population on Society. Cr. 3
SOC 410 — (SS) Social Psychology. Cr. 4
U S 200 — (SS) Introduction to Urban Studies. (HIS 200) (SOC 250) (P S 200) (GPH 200)
Cr. 4

* *Visual and Performing Arts (VP)*

- A H 100 — (VP) Introduction to Art. Cr. 4
A H 111 — (VP) Paleolithic through Gothic Art Survey. Cr. 3
A H 112 — (VP) Renaissance through Modern Art Survey. Cr. 3-4
DNC 200 — (VP) Introduction to Dance. Cr. 4
DNC 231 — (VP) Historical Perspectives of Dance. Cr. 3
ENG 245 — (FLM 201) (VP) Introduction to Film. Cr. 4
ENG 246 — (FLM 202) (VP) History of Film. Cr. 3
FLM 201 — (VP) Introduction to Film. (ENG 245) Cr. 4
FLM 202 — (VP) History of Film. (ENG 246) Cr. 3
GUH 273 — (VP) Meaning in the Visual and Performing Arts. Cr. 3
HON 424 — (VP) Seminar in Visual and Performing Arts. Cr. 3 (Max. 9)
HUM 101 — (VP) Introduction to Art and Music in Western Civilization. Cr. 4
HUM 102 — (VP) Experiencing the Arts. Cr. 3-4
HUM 103 — (VP) Exploring the Arts in Detroit. Cr. 4
HUM 303 — (VP) Music - Theatre - Cinema: Imitation, Adaptation, Transformation. Cr. 3
MUH 134 — (VP) Music Appreciation: World Music. Cr. 3
MUH 135 — (VP) Music Appreciation: Popular Music from the Renaissance to the Present.
Cr. 3
MUH 137 — (VP) Music Appreciation: Beginnings to the Present. Cr. 3
THR 101 — (VP) Introduction to the Theatre. Cr. 3
THR 103 — (VP) Black Theatre: An Introduction. Cr. 3

Writing Intensive Competency (WI)

- ACS 593 — (WI) Writing Intensive Course in Applied Arts. Cr. 0
AGS 486 — (WI) Senior Seminar II. Cr. 4
AGS 492 — (WI) Senior Capstone Essay/Project. Cr. 4
AGS 496 — (WI) Senior Essay Seminar II. Cr. 4
A H 509 — (WI) Theory and Methods of Art Historical Research. Cr. 4
A H 593 — (WI) Writing Intensive Course in Fine Arts. Cr. 0

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- ANT 593 — (WI) Writing Intensive Course in Anthropology. Cr. 0
BIO 593 — (WI) Writing Intensive Course in Biological Sciences. Cr. 0
C E 422 — (WI) Environmental Engineering. Cr. 3
CHE 420 — (WI) Chemical Process Engineering III: Economics and Design. Cr. 3
CHM 555 — (WI) Physical Chemistry Laboratory. Cr. 2
CLA 593 — (WI) Writing Intensive Course in Classical Civilization. Cr. 0
CLS 593 — (WI) Writing Intensive Course in Clinical Laboratory Science. Cr. 0
CRJ 593 — (WI) Writing Intensive Course in Criminal Justice. Cr. 0
CSC 496 — (WI) Frontiers of Computing. Cr. 2
DNC 593 — (WI) Writing Intensive Course in Dance. Cr. 0
ECE 460 — (WI) Microcomputer Interface Design. Cr. 4
ECO 593 — (WI) Writing Intensive Course in Economics. Cr. 0
ENG 593 — (WI) Writing Intensive Course in English. Cr. 0
E T 499 — (WI) Senior Project. Cr. 3
FLM 593 — (WI) Writing Intensive Course in Film Studies. Cr. 0
FRE 510 — (WI) Advanced Speaking and Writing. Cr. 4
GEL 593 — (WI) Writing Intensive Course in Geology. Cr. 0
GER 593 — (WI) Writing Intensive Course in German. Cr. 0
GPH 302 — (WI) Spatial Organization: Concepts and Techniques. Cr. 3
GRK 593 — (WI) Writing Intensive Course in Greek. Cr. 0
HIS 593 — (WI) Writing Intensive Course in History. Cr. 0
HUM 593 — (WI) Writing Intensive Course in Humanities. Cr. 0
I E 431 — (WI) Production Control. Cr. 4
ITA 593 — (WI) Writing Intensive Course in Italian. Cr. 0
LAT 593 — (WI) Writing Intensive Course in Latin. Cr. 0
LBS 470 — (WI) Senior Seminar. Cr. 3 (Max. 6)
LIN 593 — (WI) Writing Intensive Course in Linguistics. Cr. 0
MAT 593 — (WI) Writing Intensive Course in Mathematics. Cr. 0
M E 450 — (WI) Mechanical Engineering Design II. Cr. 5
MKT 433 — (WI) Business Communication. Cr. 3
M S 430 — (WI) Introduction to the Study of Disease. Cr. 2
M S 535 — (WI) Applied Grief Counseling: Aftercare. Cr. 3
MSE 450 — (WI) Materials Selection and Design. Cr. 3
MUH 593 — (WI) Writing Intensive Course in Music. Cr. 0
N E 593 — (WI) Writing Intensive Course in Near Eastern and Asian Studies. Cr. 0
NFS 685 — (WI) Seminar. Cr. 2-4 (Max. 6)
NUR 412 — (WI) Community Focused Nursing Practice. Cr. 6
OT 593 — (WI) Writing Intensive Seminar in Occupational Therapy. Cr. 0
P E 355 — (WI) Motor Learning and Control. Cr. 3
PHI 593 — (WI) Writing Intensive Course in Philosophy. Cr. 0
PHY 560 — (WI) Electricity and Magnetism I. Cr. 4
PHY 685 — (WI) Modern Physics Laboratory I. Cr. 2
POL 593 — (WI) Writing Intensive Course in Polish. Cr. 0
PPR 312 — (WI) Pharmacy Jurisprudence. Cr. 2
PPR 421 — (WI) Pharmacy Management. Cr. 4
PPR 500 — (WI) Drug Literature Evaluation. Cr. 2
PPR 512 — (WI) Hospital Pharmacy Externship. Cr. 4-7
P S 593 — (WI) Writing Intensive Course in Political Science. Cr. 0
PSY 593 — (WI) Writing Intensive Course in Psychology. Cr. 0
P T 470 — (WI) Research Practicum. Cr. 2
RDG 443 — (WI) Teaching Reading in Subject Matter Areas. Cr. 3
R P 463 — (WI) Philosophy of Recreation and Park Services. Cr. 3
R T 436 — (WI) Clinical Practicum V. Cr. 4
RUS 593 — (WI) Writing Intensive Course in Russian. Cr. 0
SOC 420 — (WI) Methods of Social Research. Cr. 3
SPA 510 — (WI) Advanced Composition. Cr. 3
SPC 593 — (WI) Writing Intensive Course in Speech Communication. Cr. 0
SPJ 593 — (WI) Writing Intensive Course in Journalism. Cr. 0
SPR 593 — (WI) Writing Intensive Course in Radio/Television. Cr. 0
S W 497 — (WI) Integrative Seminar in Social Work. Cr. 2
THR 593 — (WI) Writing Intensive Course in Theatre. Cr. 0

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 a college/department Honors Program shall have both designations on the transcript and the diploma. Only a single senior essay shall be required of such students. 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 curriculum, or their program adviser regarding 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.

Admission: Students with excellent academic records are eligible and may apply for admission to the University's Honors Program. In considering nominees/applicants for the program, considerable emphasis is 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 admission standards prevail:

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

Matriculated students who have completed a minimum of fifteen credits of college work with a cumulative honor point average of 3.3 are eligible to apply for admission to the program. Normally, no student shall be admitted to the University Honors Curriculum who has fewer than forty-five credits remaining in undergraduate study at Wayne State University.

Presidential Scholars: Students awarded Presidential scholarships are eligible for admission to the University Honors Program upon entrance to Wayne State University.

Students whose cumulative honor point average is at least 3.0, but who are not formally in the Honors Program, are eligible to elect honors courses to enrich their educational experience.

Program Requirements: The program requires a minimum of thirty credits in honors-designated course work of which at least three credits must be in an independent research project, essay, or thesis. Students in this program *must* satisfy the General Education Requirements, but the approved General Education courses may 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 and by the University Honors Council.

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

- a) to pursue a program consistent with the objectives of the Honors Program, as judged by the University Honors Council;
- b) to maintain a cumulative honor point average greater than or equal to 3.0.

A student whose cumulative honor point average is below 3.0 and is, for that reason, dropped from the honors program, may reapply for Honors admission when his/her cumulative h.p.a. is 3.0 or higher.

Graduation: For graduation, students must have a minimum overall honor point average of 3.3 and must complete a minimum of thirty credits in honors-designated course work (including at least three credits in an independent research project, essay or thesis), with a minimum cumulative honor point average of 3.0. 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 may also have curricula leading to graduation with 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 recognition is sought. A minimum honor point average of 3.3 is required for enrollment in college/department programs; however, colleges/departments may establish a higher honor point average for admission.

Program Requirements: College or department Honors Curricula require at least fifteen credits in honors-designated course work, of which at least three credits must be in an independent research project, essay, or thesis in the student's college/department. Students must also 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 departmental Honors Program, a student normally shall be expected to maintain a cumulative honor point average greater than or equal to 3.0; however, colleges/departments may establish a higher h.p.a. for retention in their programs.

Graduation: For graduation, students must have a minimum honor point average of 3.3; but college or departmental Honors Programs may establish a higher h.p.a. Normally, the honor point average of honors graduates should be among the top twenty-five per cent of the seniors in a particular college. Graduates of college/department Honors Programs will be so recognized on the transcript and diploma.

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 Affairs.

Academic Advising

University Advising Center

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

The University Advising Center provides undergraduate 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 provided by the University Advising Center 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.

Curriculum Advising helps students identify the various options and curricula they may employ to achieve particular academic and/or career goals.

Academic Deficiency Advising: Students whose honor point average falls below 2.0 and who are placed on academic probation are required to discuss their situation with an academic adviser. Advisers counsel probationary students in order that they may 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 professional schools as requested by the student.

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 and meet individually with an adviser in their school or college.

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 PROCEDURES

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.

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 indicate, at the time of registration for the course(s), 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. During in-person registration, a Permit to Schedule form must be approved by the Dean of the college or school in which the student is enrolled and be submitted to the Registration and Scheduling Office;
3. A student is not permitted to take quizzes and examinations in audited courses;
4. A student normally may not 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 Request to Drop/Add Form indicating the requested change.

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

Dual Enrollment

With the Graduate School: Highly qualified undergraduate students may, under special circumstances, take a 700-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.

During in-person registration, the completed Senior Rule/Dual Enrollment Form must be submitted to the Registration and Scheduling Office. During Mail Registration, the student should make sure that the approval process has been completed and that the approval form is on file in the Graduate School office.

With Undergraduate Schools: Graduate students may take undergraduate-level courses to be posted on an undergraduate transcript. (This is often done to satisfy prerequisites not required in a major field.) Fees are assessed by the student's primary college or school; therefore, the student registering for graduate and undergraduate courses will be assessed graduate fees for all courses.

During in-person registration, the completed Senior Rule/Dual Enrollment Form must be submitted to the Registration and Scheduling Office. During Mail Registration, the student should make sure that the approval process has been completed and that the approval form is on file in the Graduate School office.

Under the Senior Rule: A student in his/her senior year, who has a 3.0 upper division honor point average and who desires to earn a limited number of graduate credits, may receive, in his/her final semester, a temporary admission for one semester only 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 45.

With the University of Michigan: A student enrolled at either Wayne State University or the University of Michigan may elect a course or courses in the other institution if the course fits his/her program but is not available in his/her home institution. The student must have written approval of the department chairperson in his/her major area 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 the Office of the Registrar and pay the appropriate tuition at their home institution.

Repeating Courses

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

After registering to repeat a course, a Repeat Form must be filed in the Records Office, 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 student in post-bachelor status repeats a course originally taken in post-bachelor status, then rules 1, 2 and 3, cited above, shall apply. If a post-bachelor status student repeats a course originally taken under regular undergraduate status, the repetition will in no way modify the earlier attempt. The second election, however, will be averaged in the honor point base only if the previous grade was a D. No credits or honor points will be given if the previous grade was A, B, or C.

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 Director of Student Services of the School of Business Administration.

College of Pharmacy and Allied Health Professions—Faculty of Allied Health: No course may be repeated without the 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 700), 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.

MAIL REGISTRATION:

1. Any student who wishes to register by mail must submit a completed Mail Registration Schedule Request form with a non-refundable \$70.00 check or money order to the Registration and Scheduling Office by the date indicated in the *Schedule of Classes* for the term desired. Students receiving financial assistance through the Office of Scholarships and Financial Aid may submit Tuition Deposit Deferral forms for the required amount with their Schedule Request forms.

2. The Registration and Scheduling Office sends Mail Registration Schedule Request forms, *Schedules of Classes*, and pre-addressed return envelopes to newly admitted and continuing students (excluding new freshmen for the Fall Term) about one month prior to the due date for mail registration. Students not enrolled at Wayne State for the preceding term are not mailed Schedule Request forms and may obtain their forms from the Registration and Scheduling Office, the Student Resource and Assistance Center, the University Advising Center, or their College office.

Exception for Fall Term: Students enrolled during the preceding Winter and/or Spring/Summer Terms will be sent the Mail Registration materials indicated above.

Registration mailings are sent to the address on record. Students should report any change in address to Student Records, 1 West, Helen Newberry Joy Student Services Center.

3. New freshmen and incoming transfer students should attend the 'WS&U' Freshman Orientation on the date specified for their major/curriculum if they wish to register by mail. The Orientation Program is conducted by the University Advising Center.

4. The instructions included on the Mail Registration Schedule Request forms indicate how the forms are to be completed and submitted. Students should pay particular attention to these instructions since incomplete or erroneously completed forms cannot be processed. Students whose forms are not processed will be notified and must register during the Final Registration Period.

5. Students with Holds on their records are notified on their Mail Registration Request forms of the Holds that exist when the forms were printed. Approximately ten days after the mail registration due date, the applicable students are notified by letter of Holds which must be cleared if their mail registrations are to be processed.

6. Official Student Schedules and Identification Cards, signifying completion of registration for the term, are mailed to students approximately one month prior to the beginning of classes. Students who do not receive their Official Student Schedules and ID Cards must register during the Final Registration Period.

7. Students who receive their Official Student Schedules and ID Cards may adjust their schedules before and during Final Registration. The *Schedule of Classes* indicates the date(s) on which registered students may change their schedules.

8. Students must pay the balance of their term tuition on or before the last day of the first week of classes in order to avoid a late payment charge. Students adding courses after the first week of classes must pay the tuition at the time the courses are being added in order to avoid a late payment fee.

FINAL REGISTRATION:

1. Final Registration is conducted during the week preceding the first day of classes for the term. Students should consult the *Schedule of Classes* for specific dates and times for final registration.

2. Students enrolled in the preceding term who do not register by mail for the current term are sent their Status Forms about two weeks prior to final registration. The Status Forms list any Holds that must be cleared prior to registering. Students who misplace or do not receive their Status Forms may obtain a duplicate during the Final Registration period from Student Records, Helen Newberry Joy Student Services Center.

3. Students who are newly admitted to an academic program for the term are not issued Status Forms and should obtain Authorization to Register Letters from the University Admissions Office.

4. Students registering during the Final Registration Period must:

a) pay the registration deposit, which is the tuition for four undergraduate lower-division credits at the resident rate, plus the non-refundable \$750.00 registration fee (or submit a Tuition Deposit Deferral form);

b) have their Status Forms or Authorization to Register letters;

c) complete their Final/Late Registration Schedule Request forms;

d) obtain releases for any Holds indicated on their Status Forms or Authorization to Register letters; and

e) present the above documents at the registration processing station and receive confirmation of their registration.

5. Final Registration is conducted in the Student Center. Representatives from the Cashier's Office, Accounts Receivable Office, and the Office of Scholarships and Financial Aid are located on the lower level of the Student Center. Academic Advising is available in the Student Academic Help Center located in the Hilberry Lounges on the second floor.

6. Final Registration is completed in the Ballroom on the second floor of the Student Center where computer terminal operators validate course/section selections. As the last step of Final Registration, students are issued ID Cards and Transaction Verification Reports listing the courses/sections in which they are registered.

7. Students must pay the balance of their tuition on or before the last day of the first week of classes in order to avoid a late payment charge. Students adding courses after the first week of classes must pay the tuition at the time the courses are being added in order to avoid a late payment fee.

LATE REGISTRATION:

1. Students registering during the Late Registration must follow the procedure for Final Registration, *except*:

a) during the first week of classes students must pay the registration deposit, which is the tuition for four undergraduate lower-division credits at the resident rate, plus the non-refundable \$70.00 Registration Fee and the non-refundable \$30.00 Late Registration Fee, prior to registering;

b) after the first week of classes, students must pay their full tuition, the non-refundable \$70.00 Registration Fee and the non-refundable \$30.00 Late Registration Fee, at the Cashier's Office.

NOTE: Students receiving Financial Aid may submit Tuition Deposit Deferral Forms for the required amount to satisfy the above payment requirement.

2. Status Cards for continuing students are available at Records, 1 West, Helen Newberry Joy Student Services Center. Authorization to Register Cards for newly admitted students are available from the admitting office; the University Admissions Office is located in the Helen Newberry Joy Student Services Center.

3. Students with Holds indicated on their Status or Authorization to Register forms must obtain the appropriate releases before completing their registration.

4. Final/Late Registration Schedule Request forms must be completed and required signatures obtained. See the *Schedule of Classes* for courses which require departmental approval stamps. In addition, instructors' signatures are required beginning the second week of classes.

5. During the first week of classes, Late Registration is completed in the Ballroom on the second floor of the Student Center. After computer terminal operators validate course/section selections, the student is given an ID card, a Transaction Verification Report listing the courses/sections in which he/she is registered, and Class Admittance Slips for each course/section. The Class Admittance Slips are to be presented to the instructors of the courses/sections indicated.

6. Students registered late who were not required to satisfy their full tuition payment at the time of registration must pay the balance of their tuition on or before the last day of the first week of classes in order to avoid a late payment charge. Students adding courses after the first week of classes must immediately pay the tuition for the courses being added in order to avoid a late payment fee.

Drop/Add — Adjusting Your Schedule

Registered students may drop and/or add classes on the date(s) indicated in the *Schedule of Classes*. Drop/Add Forms are available in the academic departments, the Registration and Scheduling Office, the Student Resource and Assistance Center, and the University Advising Center.

Observe the instructions for Drop/Add processing printed on the form, and 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 the Registration and Scheduling Office, 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 fifteen-week courses before the conclusion of the first two weeks of classes are entitled to tuition cancellation, and the courses dropped do not appear on the students' academic records.

5. Students who officially drop fifteen-week courses after the second week of classes 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. Instructors' signatures are required for courses being added after the first week of classes. Students are not permitted to add courses after the fourth week of the term.

7. Students who add courses after the second week of the term and increase the number of credit hours scheduled are assessed a \$10.00 Add Processing Fee. The tuition for the increased credits and the \$10.00 Processing Fee are due at the time of processing.

8. Students are required to have instructors' signatures for drops processed after the fourth week of the term and the students' deans' signatures after the twelfth week of the term.

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

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 honor 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 honor point average (h.p.a.) falls below 2.00 will be placed on 'Academic Probation.' An 'Academic Probation' hold shall be 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.

The statement 'Academic Probation' shall be printed on the grade report and the student record the first term in which the cumulative h.p.a. falls below 2.00. Thereafter, the statement 'Probation Continued' shall appear on the grade report and record until the student attains 'Regular Status.' 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 h.p.a. of at least 2.00 shall be excluded from the University. 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.

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. In addition, the Board of Governors adopted a Student Due Process Policy. This latter document provides uniform procedures for all schools and colleges. Copies of these documents are available to students and faculty in the offices of the deans of each college and the Office of the Vice President for Student Affairs.

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.

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 Appeals 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 Provostial 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. Provostial 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 will be postponed until the date that the Provost issues a decision regarding the underlying Request for Provostial 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 grades and marks is sent to each registered student after the close of each semester. Final grades are recorded under the following system:

A Excellent	4 honor points per credit hour
B Good	3 honor points per credit hour
C Fair	2 honor points per credit hour
D Poor but passing	1 honor point per credit hour
F Failure	0 honor points per credit hour

M *Marginal Pass* in designated courses such as field work, practicums and internships (NOT used in calculation of honor point average).

P and N *Passed or Not Passed*. These grades are not considered in calculation of the honor point average. Courses completed with grade of 'P' may count toward a degree.

S and U *Satisfactory and Unsatisfactory* performance in non-degree courses and in certain designated courses such as field work, practicums and internships. 'S' and 'U' grades are not considered in calculation of the honor point average.

Marks

I Incomplete	See below for explanation of this mark.
R Repeated	See page 38 for explanation of this mark. (this mark applies to undergraduate students only)
W Official Withdrawal	See below for explanation of this mark.
X No grade reported	See below for explanation of this mark.
Y Deferred	See below for explanation of this mark.
Z Auditor	See below for explanation of this mark.

The mark of I—*Incomplete*, is given to an undergraduate or a graduate student who has not completed all of the course work as planned for the course and when there is, in the judgment of the instructor, a *reasonable* probability that the student can complete the course *successfully without attending regular class sessions*. The responsibility for completing all course work rests entirely with the student. A final grade is recorded when the student completes the appropriate course work as arranged with the instructor, or, in the absence of the instructor, the department chairperson. (The mark of 'I' shall not be changed to a grade of 'F' unless, after receiving the 'I,' the student's subsequent work is of such quality that the overall average for the course is below passing.)

The course work must be completed by the student within one calendar year. 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 to Student Records that another calendar year has been granted for the removal of the Incomplete.

The mark of 'I' is inappropriate if, in the instructor's judgment, it will be necessary for the student regularly to attend subsequent sessions of the class. 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 is considered to be a 'W,' and the student will be assessed tuition and applicable fees for the second registration.

The mark of W—*Official Withdrawal*, is given when the student has dropped the course in accordance with University policy. See Drop/Add, above, page 40.

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 a course planned to continue beyond the semester (i.e., essay, thesis, dissertation and certain courses taken in sequence).

The mark of Z—*Auditor*, is given when the student has formally registered for the course for audit. The student's Academic Dean or the Dean's designee must provide written authorization to the student at the time of registration.

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. Except as noted below, 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 this program 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 honor 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.

Honor Point Average

The honor point average (h.p.a.) is the numerical index of the student's scholastic average. Points are assigned to each letter grade (see University Grading System, page 33) for each hour of credit. To compute your honor point average, multiply the honor 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 honor points (3 x 4), and a grade of 'C' in a class carrying 4 credits would be assigned 8 honor points (4 x 2). In this example, the honor point average is: 20 (total honor points) divided by 7 (total credits attempted) = 2.85 h.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 honor point average computation.

At the undergraduate level, courses repeated are computed in the honor point average according to the procedure given on page 38 on 'Repeating Courses'.

Law School: This honor 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.

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.

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.

Graduation with Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative honor 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 honor point average in their colleges, with the following approximate distribution:

Summa Cum Laude Top five per cent
Magna Cum Laude Next five per cent
Cum Laude Next ten per cent

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

Based on the honor point average distributions of the previous year's senior class, the honor 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 honor 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 honor point average on all work completed prior to the semester of graduation will be used.)

Application for Degree or Certificate

Each candidate for a degree or certificate must file an *Application for Degree* in the Student Services and Information Systems Office, 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.

GRADUATE SCHOOL

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 University Admissions Office, 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 honor 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 honor 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 honor 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 honor point average entitles him/her to qualified status only.

Qualified Admission

In most departments (see below for variants), qualified admission may be authorized if an applicant's honor 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. The University Admissions Office may also make recommendations concerning the appropriateness for transfer of previously completed graduate work.

All baccalaureate graduates of unaccredited institutions must present a 3.00 (B) or better upper-division honor point average to be considered for graduate admission. If admitted, all such students will be assigned a qualified status unless exempted by the University Admissions Office. 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 honor 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 University Admissions Office, 3.5 Helen Newberry Joy Student Services Building (313-577-3596), 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.

Term	Classes Begin	Date
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 University Admissions Office 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 University Admissions Office 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 University Admissions Office.

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 University Admissions Office 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. Guest students are required to pay the non-refundable graduate application fee EACH TIME THEY APPLY.

Senior Rule Admission: In their last undergraduate semester, Wayne State students with a 3.0 upper division honor 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 University Admissions Office 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 500-699 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 University Admissions Office. 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, the processing fee, 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 University Admissions Office.

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 for the services rendered. 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 University Admissions Office 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 700) 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 University Admissions Office or Registrar's Office for other regulations regarding this status.

Post-Baccalaureate Programs in Biology, Chemistry, Economics, Mathematics, and Physics

The Post-Baccalaureate Program in the College of Liberal Arts is a new and unique program for minority and disadvantaged students of high potential who intend to pursue doctoral study in one of the following departments: Biology, Chemistry, Economics, Mathematics and Physics. The Program is based on the assumption that there are students with the innate intellectual ability required to complete Ph.D. studies, but that, because of compromising education, psychosocial or economic factors, their prior academic performance or their performance on standardized exams fails to reflect their abilities. The Program is primarily designed for students with these characteristics who are members of racial or ethnic groups that have traditionally experienced discrimination.

In order to be considered for admission into the Program, students should hold the Bachelor's degree (or expect to receive it before their first term in the Program commences), and must have a grade point average not lower than 2.5 on a 4.0 scale. Applicants should have as strong a foundation as possible in the field in which they apply. Ordinarily, an applicant will have majored in that field in college. A strong background in mathematics and quantitative courses is also recommended.

During the Post-baccalaureate year, students enhance their preparation for regular graduate work through a coordinated program of courses in their disciplines, study skills development, and personal counseling (both group and individual). If they successfully complete the year with a grade of 'B' or better, they are admitted to the Ph.D. program in their field. Full support (tuition, a 12-month stipend of approximately \$8,500, and medical benefits) is provided during the Post-baccalaureate year and continued for up to five years of graduate training.

For additional information please contact Tessie Sharp, 4137 Faculty Administration Building, Wayne State University, Detroit, Michigan 48202.

International Students

Students from other countries must contact the University Admissions Office, 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; for which

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 in an English speaking country where English is the medium of instruction.
- 2) Present a Michigan English Language Assessment Battery (MELAB) score of at least 85. Departments may require a higher standard.
- 3) Present a Test of English as a Foreign Language (TOEFL) score of at least 550. Departments may request enforcement of a higher minimum TOEFL score where previous experience and demands of the discipline warrant it.

Exceptions to the above may be made only by the Graduate Dean based upon recommendation from the English Language Institute and/or the applicant's academic adviser.

For further information on the English Proficiency policy, please consult the University Admissions Office.



University Centers and Institutes

The following three University Centers have programs pertaining to undergraduate study. For a complete list of Centers and Institutes, see the Wayne State University Graduate Bulletin.

Center for Chicano-Boricua Studies

3324 Faculty/Administration Building

The Center for Chicano-Boricua Studies is a multi-service unit engaged in teaching, research, and service.

Teaching: The Center's academic component consists of the freshman year program, and the Chicano-Boricua Studies (CBS) Co-Major program. The freshman program extends equal educational opportunity to Latino high school students in the Detroit metropolitan area and offers a curriculum which is socially and intellectually directed to the Latino experience in the United States. The CBS Co-Major program is designed particularly for students who plan to work with Latino communities.

Research: The Center's research effort is in education and the social sciences as they relate to Spanish origin groups in the United States.

Service: The Center serves both the University and the Latino community. Center personnel sit on various local and state committees, task forces and commissions concerned with the Spanish-speaking community.

Center for Peace and Conflict Studies

2320 Faculty/Administration Building

The Center for Peace and Conflict Studies provides programs devoted to the resolution of conflict in all contexts, from the local community to the international system. Under the direction of an interdisciplinary executive committee, projects are developed that contribute to the exploration of the social and political problems of our time. The Center serves as the base for an undergraduate co-major in peace and conflict studies.

Detroit Council for World Affairs: The Council is the community arm of the Center for Peace and Conflict Studies and presents activities for adults on crucial world issues and domestic and international conflict. The Council serves as a link between the University and the community in the greater Detroit metropolitan area. Members of the public may join the Council to participate in Center and Council activities.

Center for Urban Studies

3054 Faculty/Administration Building

The Center for Urban Studies is an interdisciplinary research, training and service organization focusing on contemporary society. The Center's major activities are: (1) research and evaluation in a number of areas related to urban issues, and (2) to act as a resource agency for University and community groups. The Center sponsors seven ongoing programs: (1) the City/University Consortium (C/UC), a jointly funded project of the City of Detroit and Wayne State designed to work on practical problems and needs within requesting municipal departments; (2) the Economic Development Center (EDC), which conducts research on economic, community and commercial development problems; (3) the Michigan Metropolitan Information Center (MIMIC), a unit which researches demographic, social and economic issues and is an important source of U.S. census information for local businesses; (4) Survey and Evaluation Services (SES), which specializes in survey and evaluation research design and data collection and analysis; (5) the Technology Transfer Center (TTC), which provides manufacturers, entrepreneurs and inventors with access to the technical problem-solving resources of Michigan's leading universities; (6) the Urban Families Program (UFP), a unit which serves as a forum for professionals concerned with family and children's issues, and administers demonstration and model programs; subsidiary to the UFP is the Detroit Family Project, which offers a variety of parent education programs through City of Detroit

health clinics; and (7) the Urban Transportation Institute, which is concerned with transportation planning and engineering, including public transportation, traffic engineering and safety, and transit operations and finance. The Center also offers student internships, graduate assistantships, and experienced consultation on research projects.



UNIVERSITY STUDENT SERVICES

Office of the Vice President for Student Affairs

470 Student Center; 577-1992

Among the major duties of the Office of the Vice President for Student Affairs 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 student enrollment services, 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.

The Division administers the University's undergraduate recruitment, and, through a variety of specialized programs and services, assists students in the successful pursuit of their educational objectives. The Division assists the student who may be educationally underprepared through a highly structured retention program utilizing the various academic components within the University. 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. The Division also supervises the Office of the University Ombudsperson. 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 is committed to the quality process and promotes the continual improvement of services provided to students and others.

Office of University Admissions

3 East, Helen Newberry Joy Student Services Center; 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.

Office of the Registrar

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

The Office of the Registrar supports the instructional mission of the University and, to a lesser extent, the mission of research and professional service. The Office coordinates, supplements and facilitates the activities of the faculty responsible for the implementation of the instructional process; administrative services are provided as well to the Vice President of Student Affairs, the Assistant Vice President for Enrollment Services and related offices.

The Office consists of three separate units: Student Records, Registration and Scheduling, and Student Services and Information Systems. Student Records is responsible for maintaining students' academic permanent records, student grades and enrollment certifications. The Registration and Scheduling unit is responsible for processing students' registrations and Drop/Add Forms, the accurate assessment of tuition and fees, preparation of the Schedules of

Classes and Final Examination Schedules, assigning of classrooms and the determination of students' residency statuses for purposes of computing tuition. The Student Services and Information Systems unit is responsible for graduation processing, issuing transcripts, the development and implementation of the office's systems and procedures, and preparation and dissemination of student enrollment reports in response to internal and external requests for enrollment data.

Office of Scholarships and Financial Aid

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

The Office of Scholarships and Financial Aid helps students and parents meet the major educational expenses of tuition, fees, books, supplies, room, board and transportation. As steward for private, University, state and federal student funds, the Office is held to strict rules of accountability in the interpretation of University and outside guidelines for awarding loans, grants, scholarships and employment.

Applicants for aid should file their applications by May 1 for the following academic year. For additional information, see page 21; and telephone: 577-3378.

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 and resolve probationary issues. In addition, the Center maintains a Study Abroad Resource Center, operates the orientation program, houses pre-medical credential files, and publishes the student handbook. For further information, see page 37.

University Counseling and Placement Services

652 Student Center; (313) 577-1141; Fax: (313) 577-0617

University Counseling and Placement Services helps students promote individual development in ways which will maximize benefits from the 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 in enhancing their basic academic skills, study efficiency, and/or special needs associated with their handicaps. Individual assistance and non-credit courses in college and career orientation, reading efficiency, and study skills are offered.

To meet the diverse needs of students, there are four service areas within Counseling and Placement Services: Career and Personal Development; Placement; Academic Development; and Testing, Evaluation and Research. The following services are provided:

CAREER and PERSONAL DEVELOPMENT

573 Student Center; (313) 577-3398; Fax: 577-0617

Life/Career Development Laboratory, 567 Student Center, 577-3241 The Laboratory is a 'stop-in' service which offers interactive computer career guidance programs, a variety of occupational information resources, referrals to alumni/mentor contacts and to volunteer career experiences, and individual consultations. *UCS 091, Design Your Future*, is a non-credit career development course which affords students the opportunity to explore the world of work and careers while gaining skills in decision making and establishing personal career goals.

Career and Personal Counseling Services, 573 Student Center, 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, 573 Student Center 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 Center, 573 Student Center, 577-4103: This Center offers services for students, staff, faculty, and community persons and is open to men as well as women. Information and referral services include subjects such as: 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 Center, 573 Student Center, 577-4103: The Minorities Resource Center 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 Office also publishes the biannual *Minorities Resource Directory*.

Re-Entry to Education Program, 573 Student Center, 577-4103: 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.

Summer Academy, 573 Student Center, 577-2006: This program helps "at-risk" students make a successful transition from high school to college. Students also participate in personal development and survival skills activities, tutoring, and employment opportunities related to their chosen career objectives.

PLACEMENT SERVICES

1001 (First Floor) Faculty/Administration Building; (313) 577-3390; Fax: 577-4995

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 to 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 placement office to find College Work-Study job openings. Placement assistance is provided in matching students' 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 or 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, attract 120 varied employers and over 2,000 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 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 Resource Center: The Center contains general information on over 1,000 employing organizations. The material is classified and shelved according to primary products or services rendered. Books on job-hunting, interviewing, resume writing, and government employment, and directories of associations are also available. A collection of videotapes containing information about various organizations, interviewing techniques and career-related information is available for viewing. Computerized national job banks with routinely updated employment vacancies are available.

Additional Services: Annual surveys of Wayne State graduates are conducted to determine the kinds of jobs and salaries obtained by former students and the satisfaction they feel about their jobs. Computerized national job listings are available for student use. This service allows students to browse nationwide job openings. A speakers' bureau is available to community, faculty and student groups, giving information on employment, resumes and interviewing techniques.

ACADEMIC DEVELOPMENT

598 Student Center; (313) 577-3165; Fax: 577-0617

Reading and Study Skills Learning Center, 598 Student Center, 577-3165: This Lab helps students develop the learning process skills necessary to achieve realistic educational goals. Students may enroll in free, structured courses such as R E 090, Learning Theory and Study Skills, or R E 095, 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, and they are delivered via multi-media instructional modes. The Lab also offers programs coordinated with academic departments, preparation for examinations required for entrance to graduate and professional schools, and programs for specially-targeted student populations.

Supplemental Instruction, 595 Student Center; 577-3426; and Tutorial Program, 598 Student Center; 577-4045: Two types of

tutoring are available through Academic Development to assist students in their course work. Supplemental Instruction (SI) and the individual Tutorial Program provide trained and experienced SI leaders and peer tutors to assist students. SI provides an experienced student (SI Leader) to organize and facilitate group study sessions, primarily in first-year introductory courses. The individualized Tutorial Program is based on priority availability to selected student populations. A *Tutorial Resource Guide* is available to all students, which highlights the tutorial services throughout the campus.

Handicapper Educational Services: 583 Student Center, 577-1851: 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 person 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.

TESTING, EVALUATION and RESEARCH 698 Student Center; (313) 577-3400; Fax: 577-0617

Testing Services: 698 Student Center, 577-3400: Testing and Evaluation Services provides psychometric services to faculty, students, staff, and the general community, in the areas of selection, proficiency, certification, licensing, and registration examinations on the international, national, local, and institutional level. On the international level, supervised test administration services (proctoring/third party interviews) are provided for collegiate and industrial clients. On the national level, testing is provided for all major secure testing programs: for example, the Medical College Admission Test (MCAT), the Graduate Management Admission Test (GMAT), the Law School Admission Test (LSAT), and the Miller Analogies Test (MAT). On the institutional level, testing is provided for entrance examinations, freshman tests (placement/qualifying examinations for course selection), General Education Competency Requirements, and tests required by professional associations and graduate schools.

Other services available to faculty, academic personnel, graduate students, and profit and non-profit agencies include consultation on the construction, scoring, and item analysis of course and departmental examinations, the construction and analysis of survey instruments, the construction and analysis of student course evaluations, and Optically Mark Read (OMR) data entry service.

Course Evaluation Office, 684 Student Center, 577-0469: Each semester, this Office processes returns from the Student Evaluation of Teaching project. Individual evaluation reports to faculty members are prepared here. Cumulative reports to heads of academic units are also available.

International Services Office

5460 Cass Avenue, Second Floor; 577-3422

The University has one of the largest and most diversified international constituencies in the United States. The International Services Office provides individual counseling, campus and community programming and special services meeting the needs of the students, scholars, and employees from outside the United States.

Non-Immigrant Visa Students: The Immigration and Naturalization Service (INS) regulations require that all students on temporary visas pursue their studies on a full-time basis at the institution they have been authorized to attend. International students on F-1 status must attend the school which issued the I-20 used to enter the United States for at least one semester before transferring to Wayne State University, or must file for Restoration of Status through the International Services Office. Undergraduate students (including those with Post-Bachelor's Degree Status) must successfully complete at least twelve credits each semester (excluding an approved annual vacation). Graduate students must successfully complete at least eight credits each semester (excluding an approved

annual vacation). See an International Services Office counselor for details on complying with this and other INS requirements.

The University is required by INS regulations to file reports in cases of non-compliance.

Scholars and Employees from Abroad: Scholars and employees from abroad are often involved in University programs to enable the exchange of specialized knowledge and/or temporarily meet specialized staffing needs. The International Services Office provides centralized support services necessary to enable and assure the employability of such non-U.S. citizens within U.S. government regulations. All international employees must complete Form I-9, 'Employment Eligibility Verification,' at the International Services Office before commencing employment at Wayne State University.

International Activities: A free International Coffee Hour, held in the Student Center Building every Wednesday from 11:30 a.m. to 1:30 p.m., provides opportunity for dialogue with and among all internationals at the University. Host families, field trips, mandatory orientation, International Fair, holiday programs, and special services to foreign spouses are also coordinated through the International Services Office.

Health Insurance: It is University policy that all non-immigrant International Students and Exchange Visitors are required to participate in the University's mandatory health insurance program as a condition of their enrollment in, or their program sponsorship by, Wayne State University. Enrollment in the health insurance program is made through this Office.

Military and Veterans Affairs

5460 Cass Avenue, Second Floor; 577-3374

Veterans and eligible dependents have an excellent resource in this office. A counselor will be glad to discuss individual educational goals and problems. All veterans must contact this office before registration time in order to be certified for their educational benefits.

Departmental Review Statement: As of February 15, 1992, the criteria used to approve veterans' benefits were reviewed by the Department of Veterans Affairs (VA) Central Office Education Service Staff, Washington, D.C. Based on this review, it was determined the additional State Approving Agency criteria regarding (1) cumulative grade point average, (2) last date of attendance, and (3) withdrawal (official and unofficial), exceeded the requirements of Veterans Administration law and regulations. (For a specific application of these findings, see 'Changes in Enrollment,' below.)

Standards of Academic Progress: The minimum academic level for continued benefit eligibility is a cumulative honor point average of 2.0 for undergraduate students, and 3.0 for graduate students. Students with a cumulative h.p.a. below these minima for two consecutive semesters will be placed on probation. Failure to raise the cumulative honor point average to the acceptable minimum will result in termination of V.A. benefits. Information on reinstatement policies and requests should be directed to the Office of Military and Veterans Affairs.

Changes in Enrollment (Drop/Add): If a student changes his/her enrollment during a semester (drops or adds a course), the student must immediately notify the Coordinator of the Wayne State Office of Military and Veterans Affairs (577-3374). The student who changes course enrollment must request the Office Coordinator to notify the appropriate Veterans Affairs regional office of the change. Failure to promptly notify the V.A. of enrollment changes may subject the student to liability for benefits overpayment.

V.A. Vocational Rehabilitation: Vocational rehabilitation programs help service-disabled veterans to select, prepare for, and secure work that is in line with the veteran's personal goals, interests, abilities and physical capacities.

V.A. Tutorial Assistance: Tutorial assistance is available to help defray tutoring costs for eligible persons. Veterans must be enrolled on a

half-time basis. Currently, tutorial benefits are paid up to a maximum monthly benefit of \$100. The maximum total benefit is \$1200. There is no entitlement charged for the first \$600.

V.A. Work-Study Jobs: Part-time student assistant positions are available in the Office of Military and Veterans Affairs. To be eligible, a student/veteran must be enrolled at least seventy-five per cent of full time. Students who qualify may work up to 250 hours per contract and not more than thirty hours per week. Payments are made at the Federal minimum wage.

Special Student Services Programs (TRIO)

1 East, Helen Newberry Joy Student Services Center; 577-5050

The primary function of this department is to create, establish and coordinate various programs within the University which focus on the needs of low-income, potential first generation college students; and to combine the expertise of the faculty, the student body and the community in order to afford these students a realistic chance to pursue academic excellence in post-secondary education.

This department administers the TRIO programs, whose purposes are to identify qualified individuals from low-income families who are potential first generation college students, to prepare these students for post-secondary education, and to provide special supportive services for them while they pursue programs of study. In addition to the TRIO programs, this department administers the Martin Luther King, Jr.—Cesar Chavez—Rosa Parks College Day Program.

The TRIO programs funded at Wayne State University are:

The Educational Opportunity Center (EOC), 1 East, Helen Newberry Joy Student Services Center, 577-5050, provides information and assistance concerning admission to post-secondary education and application for financial aid to first generation college students, nineteen years of age and older, who reside in the target area and wish to pursue a program of post-secondary education.

The Higher Education Opportunities Committee (HEOC) Talent Search Program, 1 East, Helen Newberry Joy Student Services Center, 577-5050, provides information and assistance concerning admission to post-secondary education and applying for financial aid to potential first-generation college students, twelve to eighteen years of age, who reside in the target area or attend designated Detroit high schools and wish to pursue a program of post-secondary education.

Student Support Services (Project 350), 1 East, Helen Newberry Joy Student Services Center, 577-5050, provides a program of college orientation, instruction, tutoring, academic advising, and counseling support to students accepted for admission to Wayne State University who are first generation college students from educationally and/or economically disadvantaged backgrounds.

Upward Bound, 701 West Warren, 577-1943, provides a program of instruction, academic and career guidance, personal counseling, and residential life to high school students in the tenth grade who are potential first-generation college students and who attend designated Detroit high schools.

Veterans' Educational Opportunity Program (VEOP), 3127 East Canfield, 571-9500, provides a program of instruction, academic and career guidance, personal counseling, and post-secondary placement to veterans who have served in the Armed Forces since December 31, 1955.

The Martin Luther King, Jr.—Cesar Chavez—Rosa Parks College Day Program, 345 Manoogian Hall, 577-3085, provides educational and motivational experiences designed to encourage Detroit Public Schools students enrolled in grades seven through eleven to complete high school and pursue a program of postsecondary education.

Student Center and Program Activities

Director: 341 Student Center; 577-3482

Assistant Directors: 351 Student Center; 577-3444

The Student Center and Program Activities Office is charged with facilities management and program development of the Student Center. Additionally, this office has the stewardship for co- and extra-curricular programs by working in consultation with the Student Council and several advisory boards to insure a broad spectrum of opportunities for student participation in educational, social, recreational, cultural, political and leadership activities.

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:

Food Service: The Student Center provides a selection of food service options for the campus community. Students, faculty, and staff can dine at 'Little Caesar's,' 'Coffee Beanery,' 'Friar Tuck's/Taco Bell Express,' or 'Baskin-Robbins' on the first floor, or at the 'Burger King' on the lower level. Additional food options are provided by the 'Barnes and Nibble' convenience shop and numerous vending machines located in the Center.

Postal Contract Station: 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.

Recreation Room: Recreation facilities are located on the lower level. Billiards, snooker, 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: Located in 211 Student Center, the Service Center provides the following services for a fee: typewriter rental, duplicating service, postal contract station, SMART and DOT bus tickets, laminating and dri-mounting services, 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.

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: Rooms 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: 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.

Program Activities

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, Holiday Bazaar, leadership training, WSU Diplomats Club, and Project Volunteer.

Student Resource and Assistance Center: 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; Share-a-Ride Board; 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 sponsors informational and entertainment programs such as Hallo-Wayne, The Dating Game, Winter Carnival, Health Day, Spring Travel Fair, and Study Abroad Open House.

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 Superboard Cinema, a free film series on alternate Tuesdays; the Wayne Underground Music Series, on alternate Wednesdays; and Multiformity: An Entertainment Series, on Thursdays.

Athletics, Intramurals and Recreation

Matthaei Facility: 126 Matthaei Building; 577-4295

Intramural Sports: 137 Matthaei Building; 577-4278

Intercollegiate Athletics: 101 Matthaei Building; 577-4280

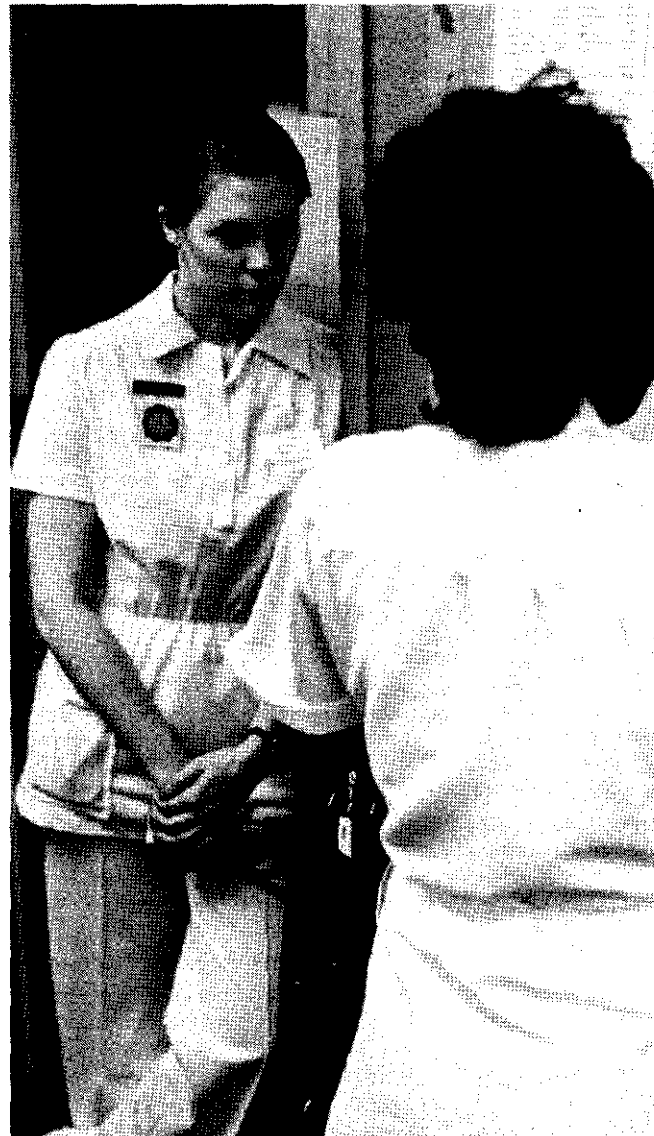
The Department of Athletics, Intramurals and Recreation welcomes faculty and staff to make use of the recreational opportunities in sports and physical activities available on campus. The Matthaei Complex is located on the west end of campus, and offers a myriad of drop-in activity areas that include courts and fields for basketball, football, jogging, racquetball, soccer, softball, 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 during the fall and winter semesters from 7:00 a.m. to 9:30 p.m., Monday through Friday; and 12:00 noon to 5:00 p.m. on Saturdays. During the spring/summer semester the Building is open from 7:00 a.m. to 7:00 p.m., Monday through Friday. A facility schedule is available monthly. Hours of operation are subject to change, and not all areas of the complex will be available due to scheduled classes, intramural activities and varsity athletics. Lock and towel services are available at a reduced rate for faculty and staff. For additional facility information or schedules, visit the Facility Office, 126 Matthaei Building; or call: 577-4295.

Intramural activities are also available for faculty, staff, and University students. Activities offered include basketball, touch football, racquetball, soccer, softball, tennis, volleyball, and wallyball. For sign-up information or schedules, visit the Intramural Office, 127 Matthaei Building; or call: 577-4278.

The University sponsors thirteen NCAA Division II intercollegiate teams. There are six men's sports—baseball, basketball, fencing, football, golf and tennis; five women's sports—basketball, fencing, softball, tennis, and volleyball; and two co-ed sports—cross-country and swimming. The nickname of Wayne State's intercollegiate teams is 'Tartars;' according to the American College Dictionary, a 'tartar' is a savage, intractable person, one who proves unexpectedly troublesome or powerful. Wayne State's football team is a member of the Midwest Intercollegiate Football Conference, comprised of twelve teams in Michigan, Ohio, Indiana and Illinois. Except for men's and women's fencing, which are non-affiliated, all of Wayne State's other intercollegiate teams participate in the Great Lakes Intercollegiate

Athletic Conference (GLIAC). Members of the GLIAC are: Ashland University, Ferris State University, Gannon University, Grand Valley State University, Hillsdale College, Lake Superior State University, Mercyhurst College, Michigan Technological University, Northern Michigan University, Northwood University, Saginaw Valley State University, Oakland University, and Wayne State. Faculty and staff are admitted at a reduced admission rate for regularly-scheduled basketball, fencing, football, swimming, and volleyball contests by presenting their University ID card. Admission is free for all other intercollegiate contests. Ticket and schedule information is available at the Athletic Office, 101 Matthaei Building; or call: 577-4280.



ADDITIONAL UNIVERSITY SERVICES

Computing Resources and Services — Computing & Information Technology Division

5925 Woodward Avenue; 577-4762

Computing & Information Technology's mission is to support and enhance the academic and administrative activities of Wayne State University, and to enable the University to be a major force in revitalizing the Detroit metropolitan area. To fulfill its mission, C&IT provides computing, information processing, and communications resources to satisfy the needs of students, faculty and staff, and offers comprehensive support services to help them use technology effectively and creatively. C&IT also makes its resources and services available to individuals and organizations striving to improve the quality of life in the metropolitan area.

C&IT is dedicated to actively seeking input from its customers, understanding their needs and challenges, and working with them to implement appropriate solutions. In its leadership role, C&IT is committed to creating and nurturing the vital information technology environment required for Wayne State University to achieve its vision of excellence in teaching, national prominence in research, and success in revitalizing and redeveloping the community it serves.

Central Resources on Mainframe Computers: C&IT's University Computing Center operates a number of mainframe computers and operating systems:

— MTS (the Michigan Terminal System) runs in a domain on an Amdahl 5890/300E (System A), with 68 MB of memory (main and expanded), 15 Input/Output (I/O) channels, 16.7 gigabytes of disk storage, and eight tape drives (for academic computing);

— VM/CMS (IBM's Virtual Machine/Conversational Monitor System), which includes PROFS, runs on another Amdahl 5890/300E (System B), with 256 MB of memory (main and expanded), 16 I/O channels, 26 gigabytes of disk storage, and eight tape drives (for administrative computing);

— MVS/ESA (IBM's Multiple Virtual Storage/Enterprise System Architecture), which includes the CICS, TSO/E, and TP systems, runs in a domain on the Amdahl 5890/300E (System A), with 182 MB of memory (main and expanded), 16 I/O channels, 125 gigabytes of disk storage, and eight tape drives (for WSU administrative information systems);

— MVS/ESA also runs on an IBM 9121-411, with 128 MB of memory (main and expanded), 12 I/O channels, 97 gigabytes of disk storage, and eight tape drives (for use by the University Libraries).

A full range of software for academic and administrative use — utilities, programming languages and compilers, statistical and mathematical libraries, database management systems, and graphics and text/word processing programs — extends the capabilities of these mainframe computer operating systems.

Central output devices at C&IT include: three mainframe laser page printers, two high-speed line printers, and a large-scale color graphics plotter (on MTS only).

Central Mainframe Computing Projects: University departments or units can establish mainframe computing projects for their employees through C&IT's Business Services Office (313-577-4642). Departments are not charged for using non-consumable resources on mainframe computers, such as computing (CPU) time or disk storage, but are charged for the use of consumable resources (such as paper and mail labels). WSU Designated Fund, Auxiliary Fund, and Grant Fund users are charged for using all resources.

Any WSU undergraduate or graduate student can obtain a mainframe computer account on the Michigan Terminal System (MTS) at a

special rate; the cost of computing is substantially discounted and the first \$10 of computing time is free. Students can open an MTS computer account at either of C&IT's general-purpose Computer Labs. Both the computer account and MTS ID remain active until the student leaves Wayne State University.

Online Help and Documentation: Faculty, staff, and students who use the VM/CMS, PROFS, or MTS mainframe computer systems have comprehensive online help available — providing the information and instructions needed to issue commands, run programs, send electronic mail, and edit or print files and e-mail. Contact C&IT's Consulting Office (577-4778) for assistance accessing these online help facilities. User manuals for computer systems, software applications, programming languages, and facilities are referenced in most online help files and are available for use in all C&IT Computer Labs.

Networking and Communications: WSUnet, the University's wide-area data communications network, connects most campus buildings, linking about 6,000 microcomputers and terminals to: central computing resources at Wayne State; the MichNet regional network operated by Merit Network, Inc.; and national and international networks, such as BITNET and the Internet.

WSUnet is a multi-protocol internet that serves both academic and administrative departments at Wayne State University. It interconnects local area networks, microcomputers, line-by-line terminals, workstations, minicomputers, and mainframe computers in Wayne, Oakland and Macomb Counties using TCP/IP, IBM SNA, Novell IPX/SPX, and AppleTalk networking protocols.

Local, dial-in access to WSUnet is provided by Wayne State through MichNet, which also provides regional dial-in access. By dialing a MichNet access telephone number, faculty, staff, and students using microcomputers with communications software can access WSUnet with a modem. Popular communications software choices are MacKermit, PC Kermit, Pro-Comm Plus, and the Point-to-Point Protocol (PPP), some of which are public domain or shareware and can be obtained free-of-charge from C&IT's Consulting Office. WSUnet can also be accessed on Wayne State's campus through direct network connections.

MichNet Dial-In Authorization Accounts: Dial-in access to MichNet requires an authorization account from Wayne State. Currently, faculty, staff, and students who have an MTS ID can use that signon as their authorization ID. To obtain a MichNet authorization account from Wayne State, contact C&IT's Business Services Office (577-4642).

Consulting Services: C&IT provides a number of different consulting services:

General Consulting Office, 67 Science and Engineering Library, 577-4778: assists WSU faculty, staff, and students with using microcomputer productivity software; with microcomputer hardware, operating system, and network problems; with mainframe computer systems (MTS, VM/CMS, PROFS) and applications software; and with accessing and using the internet with a microcomputer. This office also distributes anti-viral software for microcomputers, microcomputer communications software for accessing WSUnet and the Internet, and information about microcomputer discount purchase plans for departmental or individual WSU faculty or staff purchases.

Research Support Lab, 10 Education Building, 577-5804: provides help with research design and implementation and with selecting and using specialized software to prepare research data for analysis; recommends and provides assistance with mainframe computer or workstation-based quantitative and qualitative analysis programs; and provides assistance with reporting or publishing research results and integrating word processing, graphics, and statistical analyses into final documents.

Administrative Ad Hoc Reporting (FOCUS Consulting) 577-0669: provides help to staff developing or printing reports from FOCUS databases of information from WSU administrative information systems such as the Human Resource System and Financial Accounting System.

Network Operations Center, 577-4746: helps faculty, staff, and students access the MichNet regional network operated by Merit, Inc., or WSUnet, the University's campus-wide data communications network; and provides information on the status of MichNet or WSUnet.

Telecommunications Help Desk, 577-1977: answers employee questions about telephone types or features assigned to a telephone line; provides assistance with activating features; and also provides instructional materials on all types of telephone sets.

Directory of Volunteer Consultants: lists names, departments and telephone numbers of Wayne State faculty and staff who are willing to help others use a variety of computers, operating systems, and software on both mainframe and microcomputers. An electronic version is in development.

General-Purpose Computer Labs: Two general-purpose computer labs on the main campus may be used by Wayne State students, employees, and members of the University's Alumni Association. Located on the lower levels of the Science and Engineering Library (577-5805) and the Student Center Building (577-5485), these computer labs are operated by C&IT's Planning and Support Services (PaSS) Department. Apple Macintosh and DOS/Windows microcomputers, with PostScript, ink-jet, and dot-matrix printers, and a full range of general-productivity software for word processing, file management, financial analysis, and data communications are available in these labs, in addition to user manuals that can be checked out for reference. C&IT does not charge for using the computers, software, or ink-jet and dot-matrix printers at any of our computer labs, but there is a nominal charge for laser printing. Several workstations are also configured to handle file conversion between Macintosh and DOS/Windows computers.

Research Support Laboratory: The Research Support Laboratory (RSL) is a fully-equipped computer lab where WSU graduate students, faculty, and staff can obtain comprehensive support (from one-to-one consulting to group seminars/workshops) on the use of computer technology at any phase of the research process: design, implementation, analysis, or presentation. Located in 10 Education Building (577-5620), the RSL contains: networked IBM and Apple Macintosh microcomputers; a variety of statistical, qualitative analysis, spreadsheet, database, word processing, graphics, presentation, and desktop publishing software that is fully supported by the RSL staff; a library of documentation for available software; and a collection of research-oriented textbooks. Laser printing (for a nominal fee), a scanner, six-color plotter, film recorder, CD-ROM, and videodisc technology are also available. The Research Support Lab and its microcomputers can be reserved for a seminar, workshop or class free of charge, by calling 577-4740.

Multimedia Computer Classroom: WSU faculty and staff can give hands-on computer training or group presentations in a multimedia computer classroom equipped with a ceiling-mounted, remote-controlled color video projector that displays images from a Macintosh or DOS/Windows computer, a VCR, or a CD-ROM onto a large screen. A remote-controlled 35mm slide projector and a videodisc player also are available. A classroom local area network connects fifteen Macintosh Quadra 660AV and fifteen Gateway 2000 4DX-33 machines, both with CD-ROM drives, to a shared file server and shared printers. These networked microcomputers can access Wayne State's central mainframe computers and external networks and the same general-purpose and specialized software available in the computer lab. C&IT's multimedia classroom is located in a fully enclosed section of our general-purpose computer lab in the Science and Engineering Library, and can be reserved free of charge by calling 577-6714 two weeks in advance.

Workshops: C&IT's employees teach free, non-credit workshops on computer applications, systems, and utilities supported by C&IT. Subjects include Wayne State's data communication networks, computer operating systems, electronic mail, and Internet applications. All workshops are scheduled by arrangement, based on waiting lists and on availability of staff. WSU students and employees may place their name on a waiting list maintained by C&IT. University

departments also can custom-tailor a special-request workshop to their specific training needs. Contact the C&IT workshop coordinator at 577-4620 to request a workshop or to place your name on a waiting list. Most workshops are half-day (three-hour) sessions. In addition, the Research Support Laboratory conducts seminars that pertain to research computing. Call 577-5620 to place your name on a waiting list for a research-oriented seminar.

Campus-Wide News and Information Service: An electronic Campus-Wide News and Information Service (CWIS) provides a wide range of information about Wayne State University from a growing number of schools, colleges, divisions, and departments, including the University Libraries. WSU's CWIS is available twenty-four hours a day to anyone who can access Wayne State's data communications network from a computer, terminal, or the public computer kiosk on campus, or with a microcomputer using a modem.

Wayne State's CWIS uses Gopher software, an information search and retrieval tool that presents menus or folders of documents, other menus/folders, pictures, and search options for finding key words. Menus or folders can be browsed at leisure or marked for quick access. Files can easily be saved and printed. In addition to containing information about Wayne State, the CWIS provides a link to over 2,000 university information systems and commercial services on the Internet.

Faculty, staff, and students can access WSU's CWIS in a number of ways on and off campus (call 577-4778 for assistance):

- from a microcomputer connected to Wayne State's backbone (TCP/IP) network, using Gopher client software and IP listening software (Winsock for DOS or MacTCP);
- from a microcomputer with a modem, using Gopher microcomputer client software and Point-to-Point Protocol communications software;
- from a microcomputer with a modem, dialing in to MichNet and connecting to the gopher.wayne.edu host address; and
- from VM/CMS or PROFS, by entering the GOPHER command.

Online News & Information Facilities: The News and Information Facility on VM/CMS and PROFS and the *NEWS program on MTS are the primary ways that C&IT announces changes to computing resources and services, including hours of operation. These online news facilities also contain information about conferences on computing and information technology topics. Logon/signon messages on VM/CMS, PROFS, and MTS notify mainframe computer users when systems are unavailable and when news items that describe changes in C&IT services or resources are posted.

Information Technology Newsletter: Published bimonthly, C&IT's *Information Technology Newsletter* is distributed to full-time faculty, staff, and graduate assistants at Wayne State, and to over 550 users of C&IT's computing resources from government, education, health care, business and industry. It also is available electronically on the University's Campus-Wide Information Service (see CWIS, above). WSU students can obtain a copy of the *Information Technology Newsletter* at many computer labs and buildings on campus and in the Student Resource and Assistance Center in the Student Center Building.

Television Transmission Services: University Television transmits the *College Cable Channel*, which provides distance education services for Wayne State and several other colleges and universities; programs, schedules, and transmits *The Working Channel*, a joint community channel between Wayne State University and WTVS/Channel 56; coordinates reception of satellite teleconferences on Wayne State's campus; and produces and broadcasts satellite teleconferences from WSU's campus.

Video Production Services: University Television produces complete broadcast quality videos (studio and on-site), from initial planning through production and editing — for training, demonstration, and program marketing, as well as academic and research applications; coordinates the procurement of special outside video services as needed; produces computer-generated video graphics, both static and animated; videotapes on-campus events and

produces simple talk shows for broadcast on the University's local TV channel; and produces Wayne State University teleconferences for local, state and nationwide broadcast.

Organization: WSU's Division of Computing & Information Technology (C&IT) is administered by an Executive Vice President who reports directly to the University's President. The major functions of C&IT's departments are as follows:

Administration and Finance manages the administrative, financial, budgetary, personnel, and general business functions of the C&IT division, ensuring that departmental processes, acquisitions, and methods are consistent with both C&IT and University policies.

The *Management Information Support Center (M.I.S.C.)* develops, supports, and maintains Wayne State's administrative information systems, such as the Financial Accounting System and Human Resource System, in coordination with the University departments that use them.

Planning and Support Services (PaSS) operates WSU's campus network, provides support services to help the University community use WSU's diverse computing resources, and participates in planning for effective applications of computing technology.

The *University Computing Center (UCC)* operates, supports, secures, and provides access to the University's central computing resources and facility and to central University data for both administrative and academic computing.

University Telecommunications provides telecommunications services to the University community, including Wayne State University's telephone system and installs all voice, data, and video transport facilities.

University Television provides TV and satellite broadcast services and TV and video production services (studio and field); and consults on distance and continuing education and video networking and technology in the classroom.

C&IT Telephone Numbers of General Interest:

General C&IT Information	577-4762
Office of the Executive Vice President	577-4722
Business Services Office:	
WSU students	577-2067
WSU faculty & staff	577-4642
Computer Classroom (Multimedia)	577-6714
Computer Labs:	
General Purpose—Science & Eng'g. Library ..	577-5805
General Purpose—Student Center Building ...	577-5485
Research Support Laboratory	577-5620
Consulting Services:	
General Purpose Consulting Office	577-4778
Research Consulting	577-5804
Network Operations Center	577-4746
Telecommunications Help Desk	577-1977
Administrative Ad Hoc Reporting (FOCUS) ...	577-0669
Distribution (of mainframe—printed output)	577-4755
Information Security	577-3203
Management Information Support Center (MISC)	577-1950
Network Operations Center (NOC)	577-4746
Operations Services	577-4746
Planning and Support Services (PaSS)	577-5515
Research Support Laboratory (RSL)	577-5620
Telephone Office	577-1978
Telephone Repair	577-2218
University Computing Center (UCC)	577-0153
University Telecommunications	577-4728
University Television	577-2603
Workshop Information	577-4620

Health Insurance

Students may choose to purchase hospitalization insurance for a reasonable fee. The policy provides stipulated amounts for hospitalization, surgery and emergency room fees. Forms to purchase this insurance are available by contacting the International Services Office, Second Floor, 5460 Cass Avenue; 577-3422.

Primary Care Nursing Service

4K, 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. Counseling services are also available. 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.

Housing Office

700 Merrick; 577-2116

This office administers on-campus housing by the University and provides information about these units to interested students, faculty and staff.

Wayne State Housing offers a variety of apartment dwellings for individuals and families wanting a twelve-month lease.

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 and permit families with children. Only graduate students, faculty and staff may live in the DeRoy Apartments.

The Chatsworth Towers is an elegant, older building particularly popular with faculty and staff. Most Chatsworth units are air conditioned. Families with children are welcome. Eligibility is restricted to graduate students, faculty, and staff.

Katherine Faville Hall is an older building with accommodations which are rented furnished or unfurnished. Families with children are welcome.

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 Santa Fe and Sherbrooke Apartments are older buildings rented unfurnished. Families with children are welcome.

Further information and application forms are available upon request at the Housing Office.

Office of the University Ombudsperson

470 Student Center; 577-3487; Fax 577-0640

Ombudsperson: Terrance L. Brown

The Office of the University Ombudsperson exists to assist students, faculty and staff in solving University-related problems. It 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 Office of the University Ombudsperson investigates appeals and complaints and exercises independent judgment. 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 help improve the quality of University service by calling attention to problems they experience.

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.

Crime Prevention (577-6060; 9:00 a.m. – 4:00 p.m., M – F): The Department of Public Safety provides a range of crime prevention services available to any University department wishing to improve its physical security and/or its employees' general security awareness. Examples of services provided are security surveys, Operation Identification, personal and property safety programs for student and employee groups, an engraver loan program to mark property, and alarm system installation assistance and review.

The University has an Equipment Security Policy which requires that an appropriate locking system be attached to all portable property valued at \$500 or more. The Equipment Rental Pool manager should be contacted regarding this service.

UNIVERSITY LIBRARIES

The University Libraries are housed in six separate units, five of which are free-standing buildings. As of 1994, the library system reported holdings of 2,834,000 volumes, 24,600 current journal subscriptions, and 3,346,000 microforms, in addition to numerous films, filmstrips, maps, sound recordings, and videocassettes.

The library system includes the Arthur Neef Law Library, the Federal-Mogul Library Annex, the Purdy/Kresge Library complex, the Science and Engineering Library, the Vera Parshall Shiffman Medical Library, and the Learning Resource Center. Plans for a new Undergraduate Library Center have been made, with occupancy expected in 1997. Except for items in special collections and in the library annex, the University collections are housed in open stacks. Further details about these libraries are given below.

Wayne State University is the host institution for DALNET, the Detroit Area Library Network. Through terminals in the libraries, users can access records for over 7,800,000 volumes representing the majority of holdings in the area's educational institutions, including the Detroit Public Library, whose main branch is located near Wayne State. In addition, the University Libraries belong to the Michigan Research Libraries Triangle, a partnership with the Michigan State University and University of Michigan libraries. Students may request expedited interlibrary loans from these libraries that together have over nineteen million books and 122,000 journal subscriptions.

All University Libraries offer reference and information services, interlibrary loan, computer searching, photocopying, and library and information literacy programs. The libraries are making use of the latest computer technologies to provide state-of-the-art access to instructional and research materials.

Arthur Neef Law Library

Telephone: 577-3925

The Law Library is located in the Law School building at the north end of the University campus. The collection of over 500,000 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. government 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.

Purdy/Kresge Library

Telephone: 577-4042

The Purdy/Kresge Library, containing the graduate and undergraduate collections for the humanities, social sciences, business, and education, serves the College of Liberal Arts, the College of Education, the College of Urban, Labor, and Metropolitan Affairs, the School of Business Administration, the School of Social Work, the Institute of Gerontology, and the Library and Information Science Program. The Purdy/Kresge Library is the largest of the University's libraries.

The Purdy/Kresge Library contains approximately 1.5 million books, 13,000 current journals, extensive microform collections, and the largest government document collection on campus. In addition, the Media Library, located within the Purdy/Kresge Library, provides direct service to students at the Media Desk, including: ordering and previewing 16mm film and videotapes, providing access to the non-journal microfilm and microfiche collections, and duplicating tape and video formats. Media Services provides photographic services, graphic design services, classroom support services, and film rentals.

The Purdy Library also houses the Folklore Ethnic Archive as well as the offices of the Dean of Libraries and Library Science. Orientation tours of the collection and facilities are available for classes or other interested groups.

Science and Engineering Library

Telephone: 577-4066

The Science and Engineering Library, established in 1944 as a separate library, serves the College of Engineering, the College of Nursing, and the Departments of Biology, Chemistry, Physics, Mathematics, Computer Science, Food and Nutrition Science, and Geology in the College of Science. In addition, the Library works closely with local businesses to meet their information needs.

The Library contains over 500,000 volumes and currently receives over 3,000 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 Hooker Historical Collection, and the Dubprenell Electrochemistry Collection. The Library also houses the Central Technical Services Department of the University Libraries.

Vera Parshall Shiffman Medical Library and Learning Resources Center

Telephone: 577-1088

The Shiffman Medical Library, located in the Detroit Medical Center, supports the educational, research, and clinical programs of the School of Medicine and the College of Pharmacy and Allied Health Professions.

The Library has over 290,000 volumes, 2,996 journal subscriptions, and a variety of electronic media and databases. The Shiffman Medical Library is an active participant in the National Network of Libraries of Medicine and draws on its resources to provide access to the nation's biomedical information. The Shiffman Medical Library's Learning Resources Center at Shapero Hall serves the curricular and instructional information needs of the College of Pharmacy and Allied Health Professions.

Undergraduate Library Center

The new Undergraduate Library Center, expected to be completed in 1997, will be the gateway for undergraduate students to the University Library System's collection as well as to worldwide information resources beyond the campus. It will house the Center for Teaching and Learning and will provide study space, course reserves, a 24-hour computer study center, and a hands-on lab for learning to use computerized library resources.

University Archives

Walter P. Reuther Library; 577-4024

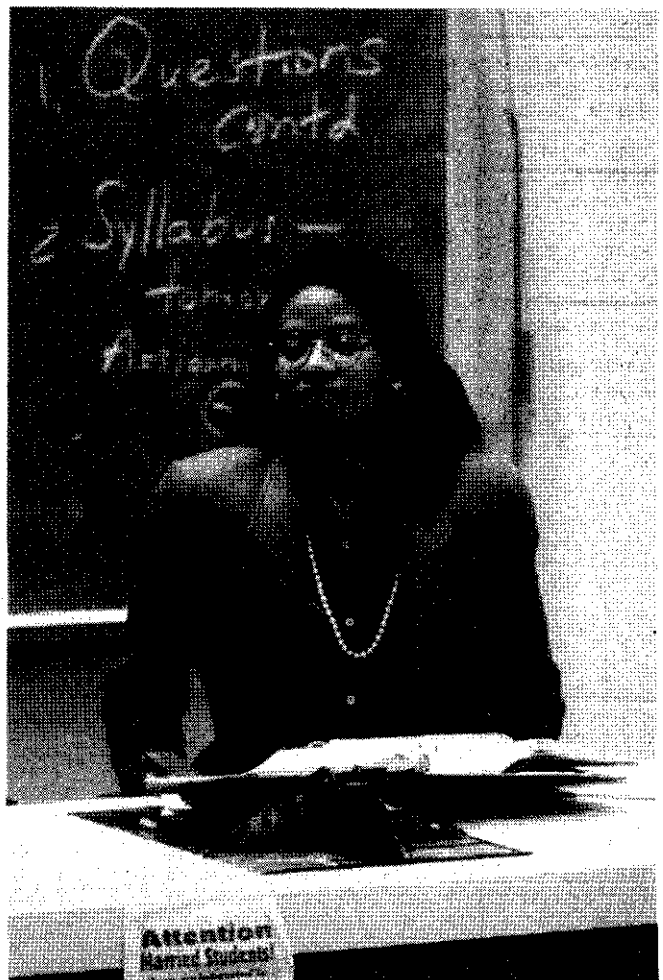
The University Archives, College of Urban, Labor and Metropolitan Affairs, was established in 1958 to collect, preserve, organize and make available to qualified researchers those University records which have research value. The Archives also collects the records of student organizations, professional 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 Havelings*, *Gabriel's Horn* and *Short Circuit*.

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 have 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.



SCHOOL OF BUSINESS ADMINISTRATION

DEAN: William H. Volz

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.

This School has a tradition of instructional programs exemplifying high standards for both faculty and students as is acknowledged by the accreditation of the American Assembly of Collegiate Schools of Business for both the baccalaureate and master's degree programs. The School provides relevant, comprehensive business education through programs that serve recent high school graduates as well as 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.

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, finance, management, management information systems, 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.

Degree Programs

BACHELOR OF SCIENCE in Business Administration with majors in

Accounting
Finance and Business Economics
Management and Organization Sciences
Management Information Systems
Marketing

BACHELOR OF ARTS in Business Administration with majors in

all of the Bachelor of Science concentrations cited above

**MASTER OF BUSINESS ADMINISTRATION*

**MASTER OF SCIENCE IN TAXATION*

* For specific requirements, consult the Wayne State University Graduate Bulletin.

DIRECTORY OF THE SCHOOL

Dean	226 Prentis Building; 577-4501
Associate Dean of Academic Affairs	226 Prentis Building; 577-4503
Associate Dean for Research and Director of the Bureau of Business Research	100 Rands House; 577-4547
Assistant Dean of Student Affairs	103 Prentis Building; 577-4510
Assistant Dean of Administrative Affairs	105M Prentis Building; 577-4502
Director, Computing and Information Services	6 Prentis Building; 577-4546
Assistant Dean of Professional Development	240 Rands House; 577-4448
Director, Management Center	240 Rands House; 577-4449
Director, W.S.U. Small Business Development Center	2727 Second Avenue; 577-4850
Director, Small Business Institute	218 Prentis Building; 577-4517
Director, Center for International Business Education and Research (CIBER)	100 Rands House; 577-4547
Director, Office of Student Services	103 Prentis Building; 577-4510
Director, Alumni Affairs	105M Prentis Building; 577-4502
Student Senate Office	209B Prentis Building; 577-4783
Department of Accounting	200 Rands House; 577-4530
Department of Finance and Business Economics	328 Prentis Building; 577-4520
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
Director of Communications	577-4503
Director of Development	226 Prentis Building; 577-4500

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 honor 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 honor 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 honor point average of less than 2.5 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 h.p.a.) must be earned in ALL specific course requirements.

Accounting

- ACC 301 (3 cr.) Elementary Financial Accounting Theory
Prereq: MAT 150; ECO 101,102; coreq: ACC 263.
- ACC 302 (3 cr.) Elementary Managerial Accounting Theory
Prereq: ACC 301 and ALL ACC 301 prerequisites.

Business Computing

- ACC 263 (2 cr.) (CL) Introduction to Business Computing
Prereq: none.

or

Pass the Computer Literacy Competency Examination.

Business Law

- ACC 351 (3 cr.) Business Law I
Prereq: sophomore standing.

Economics

- ECO 201 (3 cr.) (SS) Principles of Microeconomics

and

- ECO 202 (3 cr.) (SS) Principles of Macroeconomics
Note: Either ECO 201 or 202 will satisfy the basic Social Science Group Requirement.

English

- ENG 102 (4 cr.) (BC) Introductory College Writing
Prereq: placement through English Qualifying Examination or ENG 101.

and

- ENG 301 (3 cr.) (IC) Intermediate Writing
Prereq: ENG 102 or equiv.

and

Pass the English Proficiency Examination in Composition. NOTE: Students must successfully pass this examination prior to the completion of 60 semester credits..

Mathematics

- MAT 150 (3 cr.) Finite Mathematics for the Social & Management Sciences
Prereq: Qualifying Examination.

or

- MAT 180 (4 cr.) Elementary Functions
Prereq: Qualifying Examination.
Note: Required as a prerequisite for most advanced computer science courses.

and

Pass the Mathematics Proficiency Examination.

Philosophy

- PHI 105 (3 cr.) (CT) Critical Thinking
Prereq: none.

or

Pass the Critical Thinking Competency Examination.

Psychology

- PSY 101 (4 cr.) (LS) Introductory Psychology
Note: PSY 101 will satisfy the requirement for a Natural Science lab and the Life Science Group Requirement.

or

- PSY 102 (3 cr.) (LS) Elements of Psychology
Prereq: none.

Speech

SPB 101 (2 cr.) (OC) Oral Communication: Basic Speech
Prereq: none.

or

Pass the Oral Communication Competency Examination.

Statistics

FBE 330 (3 cr.) Quantitative Methods I: Probability & Statistical Inference
(recommended) Prereq: MAT 150 or higher or equiv.

or

ECO 410 (3 cr.) Economics and Business Statistics
(alternate) Prereq: ECO 201 and 202; MAT 150 or 180 or equiv.

General Education Requirements

Students must also satisfy University General Education 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 seventy-six 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 25). In reviewing that material, students should note that MKT 433 satisfies the Writing-Intensive major course requirement for business administration curricula; ACC 263 or passing the Computer Literacy Competency Examination satisfies the Computer Literacy requirement; PSY 101 (4 credits) is recommended for satisfaction of the Life Science group requirement; and ECO 201 or 202 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 150 or MAT 180 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.**

ACC 463	Business Information Systems
FBE 423	Financial Markets, Institutions and Securities
FBE 429	Business Finance
FBE 440	Quantitative Methods II: Statistical Methods.
	Must be satisfactorily completed in the first sixteen credits after admission to the School of Business Administration.
MGT 451	Organizational Structure
MGT 452	Managing Organizational Behavior
MGT 460	Production Operations Management
MGT 489	Social and Political Influences on Business
MGT 689	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 430	Marketing Management
MKT 433	(WI) Business Communication.
	Prereq: successful completion of English Proficiency Examination in Composition and all other pre-business administration requirements.
MKT 435	Marketing Analysis and Decision Making

— Major Requirements

Majors and specializations are offered through the School's four academic departments: Accounting, Finance and Business Economics, Management and Organization Sciences, and Marketing. The accounting major requires nine courses (a minimum of twenty-six credits); majors in Finance, Management, Management Information Systems 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 689, Business Policy.

Students should refer to the respective departmental section (pages 57-65) 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*. Elective credits for students admitted to the School of Business Administration are taken as indicated by the School of Business Administration; the number of elective credits that each student is required to take may vary depending on the major or specialization selected and the course

options taken by the student to satisfy various requirements. 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 fifty-two semester credits of non-business course work, including any pre-business requirements that are considered non-business. If the requirement of fifty-two 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 300 level (junior-senior) or higher in the College of Liberal Arts, 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 300 level, except CSC 100 and CSC 101, may be used to satisfy non-business elective course requirements;

2. Upper-division courses in the Department of Economics (300 level or higher) and Physical Education or ROTC credits *may not* be used to satisfy this requirement.

FREE ELECTIVES: If upon the completion of the pre-business, core, major and non-business requirements, a student has not completed 128 credits (the minimum to graduate), he/she will be required to complete certain free electives. Free electives may be selected from courses offered in the School of Business Administration, the College of Liberal Arts, the College of Science, the College of Engineering, or the College of Fine, Performing and Communication Arts, subject to the same conditions and exceptions noted for non-business electives (see above).

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 61.

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 128 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 eight courses, totaling twenty-three credits. Students must also complete prerequisite courses with a minimum grade of 'C' (2.0 h.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 honor point average of 2.5.

PREREQUISITE COURSES

Principles of Microeconomics	ECO 201
Principles of Macroeconomics	ECO 202
Finite Mathematics for the Social and Management Sciences	MAT 190
or	
Elementary Functions	MAT 180
(LS) Introductory Psychology	PSY 101
or	
(LS) Elements of Psychology	PSY 102

REQUIRED COURSES

(CL) Introduction to Business Computing	ACC 263
Elementary Financial Accounting Theory	ACC 301
Elementary Managerial Accounting Theory	ACC 302
Business Law I	ACC 351
Quantitative Methods I	FBE 330
Business Finance	FBE 429
Organizational Structure	MGT 451
Marketing Management	MKT 430

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, 103 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, 103 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 128 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 honor 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 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, 103 Prentis, for further information.

English Proficiency Examination

The English Proficiency Examination in Composition is a pre-business administration 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 101 or 108. A maximum of four credits toward a degree in business administration is granted for English 102, 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 29, 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 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, 103 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 honor 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 43.

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 the Dean, or in the Office of Student Services, 103 Prentis Building.

Non-grade-related grievances should be brought directly to the appropriate departmental chairperson or to the Office of the Dean. Additionally, the University Ombudsperson (see page 55) 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 honor point average or less than 2.0 honor 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 honor point average within the next twelve credits completed, or a 2.0 major honor 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 Director of the Undergraduate Program.) 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.

Repeating Courses

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

After registering to repeat a course, a Repeat Form must be filed in the Records Office, 1 West, Helen Newberry Joy Student Services Center.

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

No course in which a student has received a passing grade or mark may be repeated without the prior written approval of the Director of Student Services 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 Director 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 40 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 Student Services Office, 103 Prentis.

Gerald Alvin / Donald Gorton Honorary Student Scholarship: Provided by the Department of Accounting to recognize outstanding students pursuing an accounting major.

Richard H. Austin Excellence in Accounting Scholarship: Award of variable amount established to recognize potential abilities and academic achievements of minority accounting students. Fall semester deadline; contact Department of Accounting.

Stanton P. Bockneck Memorial Scholarship: Awarded for the first time in 1988, these awards (\$500 and \$1000) are designated for students demonstrating high academic achievement in accounting. Fall semester deadline; contact Department of Accounting.

Lawrence and Charlynn Braun Endowed Scholarship: Established to recognize students who have displayed excellence in 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. Fall semester deadline; contact Department of Marketing.

Comerica Incorporated Minority Scholarship: Established to recognize the academic achievement of junior and senior minority students.

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.

Detroit Treasury and Management Scholarship: Award of \$500 open to academically-gifted business administration students of junior rank who are majoring in finance. Winter semester deadline; contact the School Student Services Office, 103 Prentis.

Farmer's Insurance Group of Companies Scholarship: Designated for students interested in insurance careers. Award of \$500 – \$2000 open to majors in insurance, mathematics, business administration, personnel, or other areas related to the insurance industry. Fall semester deadline; contact the School Student Services Office, 103 Prentis.

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. Fall semester deadline; contact Department of Accounting.

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. Fall semester deadline; contact the School Student Services Office, 103 Prentis.

Golden State Minority Foundation Scholarship: Annual award of \$1000 open to minority business administration students demonstrating high academic achievement, with a minimum 3.0 h.p.a. January deadline; contact the School Student Services Office, 103 Prentis.

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. Fall semester deadline; contact Department of Marketing.

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.

George R. Husband Scholarship: Awarded to accounting majors demonstrating high academic achievement, maintaining a minimum 3.0 h.p.a. Fall semester deadline; contact Department of Accounting.

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.

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 Student Services Office, 103 Prentis.

KPMG/Peat Marwick—Wayne State Alumni Scholarship: Funded solely by Wayne State Alumni with Peat Marwick Main and Company, this award of \$400 is designated for accounting majors demonstrating high academic achievement. Fall semester deadline; contact Department of Accounting.

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 h.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.

Michigan Consolidated / Leon Atchison Scholarship: Awarded to outstanding scholars in the School of Business Administration.

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. Fall semester deadline; contact the School Student Services Office, 103 Prentis.

Pre-Business Scholarship: Established through the Office of Student Services, this award of \$500 recognizes a high achiever in the pre-business curriculum who shows strong potential for success in the

School of Business Administration. Contact the School Student Services Office, 103 Prentis.

Price Waterhouse Minority Scholarship: Award of \$500 open to any minority student majoring in accounting. Fall semester deadline; contact Department of Accounting.

Aubrey C. Roberts Memorial Scholarship: Award of \$500 – \$100 open to accounting majors demonstrating high overall scholarship and outstanding academic achievement in accounting subjects. Contact Department of Accounting.

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.

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. Fall semester deadline; contact Department of Marketing.

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.

Dean's Award for Outstanding Service: Award of \$500 – \$1000 made in recognition of outstanding student service to the School of Business Administration. For information, contact the School Student Services Office, 103 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 honor point average.

Women in Business Scholarship: Award of \$500 made annually to a member of Women in Business who has displayed service, dedication, and scholarship. Contact School Office of Student Services, 103 Prentis.

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 seven 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.

Bureau of Business Research

The Bureau of Business Research supports faculty research, collects and disseminates business and economic information, facilitates the procurement of grants and sponsored research, and provides professional services to the community. The Director of the Bureau can be reached at 577-4842.

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 A. 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 microcomputer laboratories with a total of 135 Macintosh and IBM compatible work stations. Four serve as microcomputer 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 microcomputer laboratories are open to business administration students six days per week, providing students with access during both the day and evening.

Additional microcomputer facilities at other main campus and extension center locations are also available to students.

Professional Development Division

The Professional Development Division (PDD) is the non-credit instructional component of the School of Business Administration. The PDD's primary mission is to meet the education and training needs of the greater business community by offering a variety of seminars, workshops, and other special programs.

Within the Professional Development Division is *The Management Center*, through which numerous programs are offered to the corporate community. It offers in-house programs at corporate locations as well as on campus and at other locations in the Detroit metropolitan area. The Director of The Management Center is Mr. Rod Beaulieu: 577-4449.

The PDD also regularly conducts a series of programs focusing on the starting and operating of a small business. Additionally, a wide range of instructional programs of a professional nature are made available to the community.

Professional Development Division programs focus on problem solving, organizational productivity, informational updating, and skill development. Programs are tailored to specific audiences, with instructors chosen from the academic, consulting, and business communities who have experience and expertise in the field. The Assistant Dean of the Professional Development Division is Dr. Raymond Genick: 577-4353.

W.S.U. Small Business Development Center

In the fall of 1983, the Wayne State University School of Business Administration was selected by the United States Small Business Administration as the 'lead institution' for the federally-sponsored Small Business Development Center (SBDC) in the State of Michigan. The statewide SBDC network, now comprised of some forty-three subcenters, is designed to provide comprehensive management and technical assistance to the small business community.

The Wayne State SBDC also serves as the coordinating agent for present and proposed small business assistance programs throughout the metropolitan Detroit area. It is the focal point for linking together resources of federal, state, and local governments with the resources of the University and the private sector.

General assistance is provided to small business owners/operators through training and counseling programs offered through the W.S.U. SBDC. Training is offered through classroom courses, major conferences, and informal workshops. Both short- and long-term counseling cover a wide variety of relevant subject areas including capital acquisition, skills assessment, legal information, and economic and business data analysis.

The Wayne State University SBDC (subcenter) is headed by Dr. Raymond M. Genick: 577-4850.

Small Business Institute

The Small Business Institute (SBI) began in 1972 in cooperation with the U. S. Small Business Administration to offer business counseling to area entrepreneurs and small business owners/managers. Selected seniors and graduate students are invited to participate in this program in conjunction with their course work, including directed studies in the School. Retail, wholesale, manufacturing and service firms provide students with an opportunity to reduce theory to practice across a variety of business and administration issues.

With over 1000 counseling cases completed to date, the School's SBI is one of the largest institutes in the United States. The SBI plays an important role in fulfilling the School's service mission and in providing a unique educational opportunity for selected students. For information, contact Dr. John G. Maurer, Director, Small Business Institute: 577-4517 and 577-4515.

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.

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.

The Financial Management Association 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 MIS field through various activities, including speakers and corporate tours. The organization welcomes members from all majors.

The MBA Association was established in 1981. 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.

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 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

Chairperson: Alan Reinstein

Professors

Charles R. Allberry (Emeritus), Gerald Alvin (Emeritus), Raymond J. Murphy (Emeritus), Alan Reinstein, William H. Volz

Associate Professors

B. Anthony Billings, Donald E. Gorton (Emeritus), Albert D. Spalding, Jr., Myles S. Stern, James F. Wallis (Emeritus)

Assistant Professors

Fouad K. AlNajjar, J. Stanley Fuhrmann (Visiting), Deborah Jones, Klara Nelson, Effy Oz, Arik Ragowsky, Jack D. Schroeder, William Vetter

Senior Lecturers

Susan D. Garr, David C. May

Lecturers

Dana Bracco, Sandra Colvin, Melvin Houston, Margaret A. Merriman, Sandra G. Penn, Audrey Taylor, Russell Whitfield

Degree Programs

BACHELOR OF ARTS in Business Administration
with a major in accounting

BACHELOR OF SCIENCE in Business Administration
with a major in accounting

BACHELOR OF ARTS in Business Administration
with a major in management information systems

BACHELOR OF SCIENCE in Business Administration
with a major in management information systems

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 61.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 62-63, 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 15-43 and 61-66 respectively.

— With a Major in Accounting

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 696, to assess students' knowledge of the discipline. Students who concentrate in accounting must complete the following courses:

ACC 510	Advanced Accounting Theory I
ACC 511	Advanced Accounting Theory II
ACC 513	Accounting Systems Design and Control
ACC 514	Auditing
ACC 516	Cost Accounting
ACC 517	Taxes on Income
ACC 518	Governmental and Not-for-Profit Accounting
ACC 519	Business Law II
ACC 696	Advanced Accounting Theory III

— With a Major in Management Information Systems

Management Information Systems (MIS) 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, ACC 697, to assess students' knowledge of the discipline. Students specializing in MIS frequently pursue career positions as communications analysts, data base administrators, and information systems managers.

ACC 582	Systems Analysis and Design
ACC 592	Database Systems
ACC 593	Data Communications and Networks
ACC 594	Software Tools for Business Applications
ACC 697	Information Systems Policy and Management
Elective	Students can select specialized topics in MIS (e.g., Expert Systems, Decision Support Systems, Computer Aided Design) or an advanced programming course from the Computer Science Department.

Plus ONE of the following:

CSC 105	Introduction to C and UNIX (Since CSC 105 is a two-credit course, students may need to elect an additional credit.)
CSC 112	Introduction to Fortran
CSC 114	Introduction to Cobol
CSC 200	Introduction to C++
CSC 211	Introduction to Data Structures and Abstracts
ACC 490	Directed Study

ACCOUNTING COURSES (ACC)

The following courses, numbered 090-599 and 610-699, are offered for undergraduate credit. Courses numbered 600-609 and 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. For interpretation of numbering system, signs and abbreviations, see page 461. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 400 and above.

263. (CL) Introduction to Business Computing. Cr. 2

Material fee as indicated in *Schedule of Classes*. Introduction to management information systems, programming, data base management, spread sheets, word processing, telecommunications, and graphics. (T)

301. Elementary Financial Accounting Theory. Cr. 3

Prereq: bachelor's degree; or sophomore standing, ECO 201 and ECO 202, MAT 150; coreq: ACC 263. Introduction to financial accounting principles; preparation and interpretation of balance sheets and income statements. (T)

302. Elementary Managerial Accounting Theory. Cr. 3

Prereq: bachelor's degree and ACC 301; or 301, sophomore standing, ECO 201, ECO 202, MAT 150. Introduction to manufacturing and managerial accounting, analysis of cash flow and financial statements. Basic concepts of business data processing systems. (T)

351. 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)

450. (MGT 450) Business Administration Co-op Assignment. (FBE 450)(MKT 450). 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)

463. Business Information Systems. Cr. 3

Prereq: ACC 301, 302, 263 or equiv., MAT 150; coreq: MGT 451. Student computer account required. Offered for undergraduate credit only. Material fee as indicated in *Schedule of Classes*. Concepts and techniques of design, use and control of computer-based systems for business data processing, office automation, information reporting, and decision-making. (T)

490. Directed Study in Accounting. Cr. 1-3(Max. 6)

Prereq: 2.75 cumulative h.p.a. to be eligible; written approval on proposal form prior to registration; consent of chairperson of student's major department. 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)

510. Advanced Accounting Theory I. Cr. 3

Prereq: ACC 302. Conceptual foundations of accounting principles. Analysis of various accounting theories concerning asset valuation. (T)

511. Advanced Accounting Theory II. Cr. 3

Prereq: ACC 510. Interpretation of equities in corporation assets and measurement of income. (T)

513. Accounting Systems Design and Control. Cr. 3

Prereq: ACC 511, 463, and 263 or equiv. Student computer account required. Principles of design, control, and evaluation of computer-based systems for processing accounting information. Techniques for data base design and information systems auditing. (T)

514. Auditing. Cr. 3

Prereq: ACC 511, FBE 440. Principles and procedures of auditing; professional standards and responsibilities of the certified public accountant. (T)

516. Cost Accounting. Cr. 3

Prereq: ACC 302. Theory and practice of cost accumulation and analysis to facilitate managerial decisions and cost control systems. (T)

517. Taxes on Income. Cr. 3

Prereq: ACC 302 or 601. Theory of taxes on income and practical application of related laws and regulations. (T)

518. Governmental and Not-for-Profit Accounting. Cr. 2

Prereq: ACC 302 or 601. Accounting principles and procedures applied to fund accounting of government units and not-for-profit organizations. (T)

519. Business Law II. Cr. 3

Prereq: ACC 351 and sophomore standing. Law of agency, corporations, partnerships and negotiable instruments. Professional liability. (T)

582. Systems Analysis and Design. Cr. 3

Prereq: ACC 463. 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)

592. Data Base Systems. Cr. 3

Prereq: ACC 463. Material fee as indicated in *Schedule of Classes*. Effective use of data base management systems for processing management information; design and administration of systems. (Y)

593. Data Communications and Networks. Cr. 3

Prereq: ACC 582. Data communication concepts and terminology, communication system design approaches, data communications standards, data communications software and hardware, network architecture, distributed management information systems. (Y)

594. Software Tools for Business Applications. Cr. 3

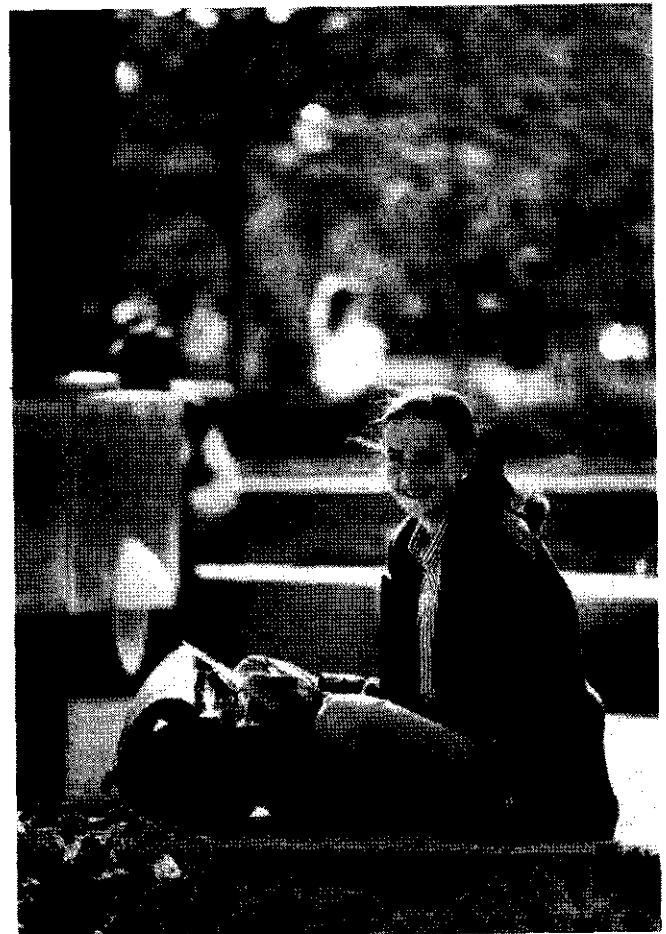
Prereq: ACC 582. Application of software to business information processing and decision-making. Alternative programming languages, non-procedural languages and application generators, customizing application packages. Role of the end-user. (Y)

696. Advanced Accounting Theory III. Cr. 3

Prereq: ACC 511. 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)

697. Information Systems Policy and Management. Cr. 3

Prereq: ACC 592 or 593. Must be elected in final sixteen credits of MIS curriculum. Within overall structure of the systems approach, this capstone course integrates the managerial, technical, and strategic planning and control concepts, and techniques necessary for the management of information systems. (Y)



FINANCE and BUSINESS ECONOMICS

Office: 328 Prentis Building; 577-4520

Interim Chairperson: Toni M. Somers

Professors

James L. Hamilton, Milton H. Spencer (Emeritus)

Associate Professors

Mark E. Bayless, Robert C. Bushnell, Walter J. Chamberlin (Emeritus),
Barbara Price, Kelly R. Price, Toni M. Somers, David R. Verway, Frank L.
Voorheis

Assistant Professors

Richard A. Ajayi, Timothy W. Butler, Johannes G. Denecamp, Margaret A.
Monroe-Smoller, Mbodja Mougoue, John D. Wagster

Senior Lecturer

Sadhana Alangar

Lecturer

Jack R. Kuzminski

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 61.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 62-63, 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 15-43 and 61-66 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 696 is a capstone course that assesses students' knowledge of corporation finance. Students should complete core courses FBE 429 and FBE 440 before beginning the following major requirements:

ACC 510	Advanced Accounting Theory I
FBE 521	Security Analysis and Valuation
FBE 527	Advanced Business Finance
FBE 696	Corporate Financial Strategies

Plus two of the following:

FBE 522	Portfolio Management
FBE 532	Principles of International Business Finance
FBE 533	Bank Management
FBE 535	Real Estate Finance
FBE 537	Risk Management
FBE 697	Derivative Securities and Portfolio Management
ACC 511	Advanced Accounting Theory II

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 697 is a capstone course that assesses students' knowledge of financial markets and investments. Students should complete core courses FBE 429 and FBE 440 before beginning the following major requirements:

ACC 510	Advanced Accounting Theory I
FBE 521	Security Analysis and Valuation
FBE 522	Portfolio Management
FBE 697	Derivative Securities and Portfolio Management

Plus two of the following:

FBE 527	Advanced Business Finance
FBE 532	Principles of International Business Finance
FBE 533	Bank Management
FBE 535	Real Estate Finance
FBE 537	Risk Management
ACC 511	Advanced Accounting Theory II

FINANCE and BUSINESS ECONOMICS COURSES (FBE)

The following courses, numbered 090-599 and 610-699, are offered for undergraduate credit. Courses numbered 600-609 and 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. For interpretation of numbering system, signs and abbreviations, see page 461. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 400 and above.

305. 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)

330. Quantitative Methods I: Probability and Statistical Inferences. Cr. 3

Prereq: MAT 150 or higher or equiv. No business or free elective credit. Repeat of ECO 410, STA 102, 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)

423. Financial Markets, Institutions and Securities. Cr. 3

Prereq: ECO 201; ACC 302 recommended. 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)

429. Business Finance. Cr. 3

Prereq: ECO 201, ACC 302 and FBE 330 or ECO 410 or equiv. Principles of financial administration, with applications to problems of financial analysis, control, and planning by firms under changing economic conditions. (T)

440. Quantitative Methods II: Statistical Methods. Cr. 3

Prereq: FBE 330 or ECO 410 or equiv. Must be satisfactorily completed in first sixteen credits after admission to the School of Business Administration. 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)

450. (MGT 450) Business Administration Co-op Assignment. (ACC 450) (MKT 450). 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)

490. Directed Study in Finance and Business Economics. Cr. 1-3(Max. 6)

Prereq: 2.75 cumulative honor point average 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)

521. Security Analysis and Valuation. Cr. 3

Prereq: FBE 429 or former 529, 440 or former 540; coreq: ACC 510. 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)

522. Portfolio Management. Cr. 3

Prereq: FBE 521 or former 621. Principles of portfolio construction and administration applicable to various institutions including banks, insurance companies, mutual funds, and pension trusts. (T)

527. Advanced Business Finance. Cr. 3

Prereq: FBE 521 or former 621. Risk analysis, working capital management, capital budgeting and valuation theories. Role of financial management in maximizing value of the firm. (F,W)

532. Principles of International Business Finance. Cr. 3

Prereq: FBE 429. 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)

533. Bank Management. Cr. 3

Prereq: FBE 429. 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)

535. Real Estate Finance. Cr. 3

Prereq: FBE 429. 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)

537. Risk Management. Cr. 3

Prereq: FBE 429. 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)

693. Corporate Financial Strategies. Cr. 3

Prereq: FBE 527 or former 627. 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)

696. Corporate Financial Strategies. Cr. 3

Prereq: FBE 527 or former 627. 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)

697. Derivative Securities and Portfolio Management. Cr. 3

Prereq: FBE 522 or former 622. 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)

MANAGEMENT and ORGANIZATION SCIENCES

Office: 328 Prentis Building; 577-4515

Chairperson: Joseph B. Stulberg

Professors

Bruce E. DeSpelder (Emeritus), Victor C. Doherty, James E. Martin, John G. Maurer, Richard O. Osborn

Associate Professors

Yitzhak Fried, Edward Harris (Emeritus), K.S. Krishnan, Thomas J. Naughton, Harvey Nussbaum, Donald H. Palmer (Emeritus), Irving Paster (Emeritus), Fred P. Unruh (Emeritus), Alice Schnoor (Emeritus), Joseph B. Stulberg, Harish L. Verma

Assistant Professors

Karen A. Bantel, Catherine Kirchmeyer, Peter E. Mudrack, Sabine Reddy

Lecturer

James A. Robinson

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 61.

Degree Requirements: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 62-63, 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 15-43 and 61-66, respectively.

Management Core

The management major prepares individuals to compete in a technology-intensive manufacturing or service economy. The required courses have students analyze the governing themes of organizational design, organization learning, technology management, team projects, managing diversity, total 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 relations, and entrepreneurship will complete the following core courses, and then select from the designated courses in the area of specialization listed below.

MGT 551	Advanced Organizational Theory: Designing and Managing in a Global, Technical Environment
MGT 553	Advanced Organizational Behavior: Managing Complexity and Change
MGT 695	Seminar in Management

SPECIALIZATIONS

Bachelor's degrees in management are offered in the following four specializations: General Management, 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. The three courses listed below provide a solid base for professional practice or graduate study. Students complete the following:

MGT 561	Management Decision Making
MGT 568	Operations Strategy in a Global Environment
MGT 570	Human Resource Management

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 565	The Entrepreneur and Venture Creation
MGT 566	Managing Technology-Based Small Firms
MGT 567	Entrepreneurship/Small Business Field Studies

Related courses from other business disciplines that are recommended for students in this specialization include:

ACC 519	Business Law II
FBE 537	Risk Management
MKT 545	Consumer Behavior

Students intending to pursue this specialization should contact Professor John G. Maurer (577-4517 or 577-4515) prior to enrolling in any major classes.

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:

MGT 568	Operations Strategy in a Global Environment
MGT 596	Managing Operations in a Competitive Environment

Plus one of the following:

ACC 516	Cost Accounting
MKT 560	Transportation and Distribution Management
MKT 562	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 570	Human Resource Management
MGT 574	Collective Bargaining
MGT 577	Advanced Human Resource Management
MGT 578	Designing Compensation and Reward Systems

MANAGEMENT COURSES (MGT)

The following courses, numbered 090–599 and 610–699, are offered for undergraduate credit. Courses numbered 600–609 and 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. For interpretation of numbering system, signs and abbreviations, see page 461. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 400 and above.

450. Business Administration Co-op Assignment. (ACC 450)(FBE 450)(MKT 450). 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)

451. Organizational Structure. Cr. 3

Prereq: PSY 101 or PSY 102. 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)

452. Managing Organizational Behavior. Cr. 3

Prereq: PSY 101 or PSY 102. 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)

460. Production Operations Management. Cr. 3

Prereq: ACC 263 or equiv., FBE 330 or ECO 410, and MGT 451. No graduate credit. 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)

489. Social and Political Influences on Business. Cr. 3

Prereq: MGT 451 or consent of instructor. 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)

490. Directed Study in Management. Cr. 1–3(Max. 6)

Prereq: 2.75 cumulative h.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)

551. Advanced Organizational Theory: Designing and Managing in a Global Technical Environment. Cr. 3

Prereq: MGT 451. Analysis of strategic pressures on the organization's operating arrangements; principles of structured organizational change; alliance patterns; managing through technology innovations. (F,W)

553. Advanced Organizational Behavior: Complexity and Change. Cr. 3

Prereq: MGT 452. Analysis and application of organizational behavior concepts relevant to management in technologically-intensive global economy. Topics include: managing workplace diversity; leading and managing organizational change; developing and evaluating individual and group performance. (F,W)

561. Management Decision Making. Cr. 3

Prereq: FBE 330 or ECO 410, and MGT 451 and MGT 452 or consent of instructor. Analysis of managerial decision processes and the nature of decisions. Examination of conditions under which decisions are made. Factors affecting decision problems. The role of quantitative methods in the analysis of decision problems. (Y)

565. The Entrepreneur and Venture Creation. Cr. 3

Prereq: ACC 301, FBE 429, MGT 451, MKT 435. 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)

566. Managing Technology-Based Small Forms. Cr. 3

Prereq: ACC 301, FBE 429, MGT 451, MKT 430. 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)

567. Entrepreneurship/Small Business Field Studies. Cr. 3

Prereq: MGT 565, 566, senior standing; or senior standing, consent of instructor. Students assigned to act as consultants to entrepreneurs or to small business owner/managers in Detroit metropolitan area. Class meetings focus on the consultative and problem-solving processes. (Y)

568. Operations Strategy in a Global Environment. Cr. 3

Prereq: MGT 460 or consent of instructor. Analysis of problems in production operations management. Application of quantitative models to the solution of these problems. Topics covered are decision analysis, aggregate systems, inventory control, material requirements planning and PERT and CPM; emphasis on competing in a global marketplace. (Y)

570. Human Resource Management. Cr. 3

Prereq: MGT 451 and 452 or consent of instructor. 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)

574. Collective Bargaining. Cr. 3

Prereq: MGT 451 and 452, or consent of instructor. A basic course in labor relations examining the development of union-management relationships; the philosophy and practice of collective bargaining. A bargaining situation is normally used. (T)

577. Advanced Human Resource Management. Cr. 3

Prereq: MGT 570 or consent of instructor. 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)

578. Designing Compensation and Award Systems. Cr. 3

Prereq: nine credits in personnel and industrial relations. Investigation of principles of design and implementation of employee compensation and reward systems; two-tier wage systems, merit pay, pension benefits. (Y)

596. Management Operations in a Competitive Environment. Cr. 3

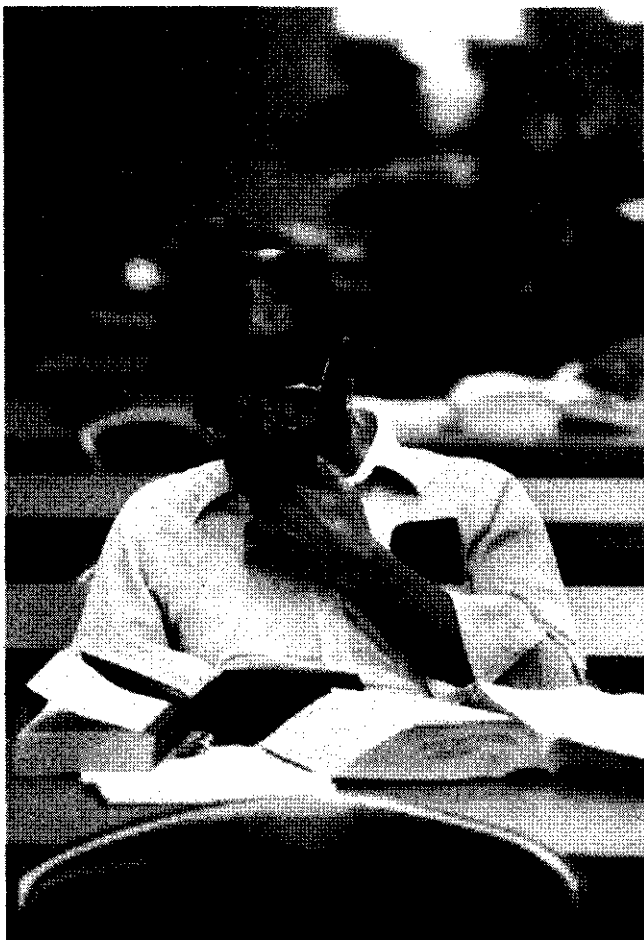
Prereq: MGT 460, FBE 440 or consent of instructor. Analysis of problems in production operations management and their solutions. Topics include quality control, statistical control models, aggregate scheduling and facility layout planning within context of continuous improvement philosophies. (Y)

689. Business Policy. Cr. 3

To be taken after completion of core curriculum and as one of the last five courses toward bachelor's degree. 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)

695. Seminar in Management. Cr. 3

Prereq: MGT 551 and 552, or consent of instructor. Capstone seminar for major. Analysis of principles guiding management decision-making systems, business technology, negotiation processes, team-building assignments, and project management initiatives. Interactive managerial skill development. (Y)



MARKETING

Office: 300 Prentis Building; 577-4525

Interim Chairperson: Jeffrey J. Stoltman

Professors

Ishmael P. Akaah, Hugh M. Cannon (Adcraft Club/Simons—Michelson Professor in Advertising), H. Webster Johnson (Emeritus), J. Patrick Kelly (Kmart Chair in Marketing), Edward A. Riordan, Attila Yaprak

Associate Professors

John D. Beard, Mary S. Irwin (Emerita), George C. Jackson, Leon R. Klein (Emeritus), James T. Low, John J. Rath (Emeritus), Jone M. Rymer, Louis L. Stern (Emeritus), Jeffrey J. Stoltman, David L. Williams

Assistant Professors

Francis J. Brown (Emeritus), Alice Herge (Emerita), M. Christine Lewis, John C. Taylor

Senior Lecturer

Richard C. Becherer

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'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 61.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 128 credits including satisfaction of the degree requirements stated on pages 62-63, as well as the marketing 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 15-43 and 61-66 respectively.

Marketing Core

The specializations in marketing are designed for students planning careers in advertising, public relations, research, retailing, sales management and logistics management. The major provides the concepts and methods by which managers identify and solve the marketing problems and opportunities of either business or non-business organizations through market target, product, price, distribution and promotion decisions.

The major program in marketing employs a capstone course, MKT 696, to assess students' knowledge of the discipline.

Students who major in marketing will complete the first two of the following three courses, then select courses from their designated area of specialization, and then take MKT 696:

- MKT 541 Marketing Research and Analysis
- MKT 545 Consumer Behavior
- MKT 696 Marketing Policy

SPECIALIZATIONS

Bachelor's degrees in marketing are offered in the following three specializations: Advertising/Public Relations, Business Logistics, and Sales Management.

Advertising/Public Relations

This specialization is complementary to careers in a wide variety of businesses, institutions, agencies, or other organizations. It prepares students to assume responsibilities for the development, coordination, and implementation of advertisement and promotion of goods, services, issues, ideas, and people.

MKT 549	Principles of Advertising
MKT 552	Public Relations of Business
One course from a Departmental list (MKT 550 and/or 551 recommended)	

Business Logistics

This specialization focuses on the determination and selection of the most efficient and appropriate marketing intermediaries, including wholesalers and retailers, who move products from producers to consumers. It also emphasizes the study of managing the movement of products within firms as well as through marketing channels.

MKT 560	Transportation and Distribution Management
MKT 562	Business Logistics Management
MKT 563	Advanced Business Logistics Management

Sales Management

Successful sales managers are responsible for the overall organization of sales personnel. Students preparing for careers in this field become skilled in the management activities of selecting, training, motivating, supervising, evaluating and controlling an effective sales force. They also learn and apply effective market forecasting techniques and procedures.

MKT 546	Sales Management
MKT 548	Market Forecasting
One course from a Departmental list	

MARKETING COURSES (MKT)

The following courses, numbered 090-599 and 610-699, are offered for undergraduate credit. Courses numbered 600-609 and 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. For interpretation of numbering system, signs and abbreviations, see page 461. Students must be admitted to the School of Business Administration or receive permission from an adviser in the School to enroll in courses numbered 400 and above.

235. Foundations of Business and Entrepreneurship. Cr. 3
Introduction to the role of business in our economic system, with emphasis on entrepreneurship. Students are familiarized with business concepts and processes, and with the unique characteristics of entrepreneurial business. Tasks, requirements, and challenges of starting and operating a business. (F,W)

430. Marketing Management. Cr. 3
Prereq: ECO 201. Planning the marketing program within social, economic and legal environments. Market segmentation and behavior, market systems and strategy, international marketing. (T)

433. (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. Material fee as indicated in *Schedule of Classes*. Fundamental principles and skills of business communication, both written and oral. Systematic procedures for designing and preparing professional documents (especially reports) and oral presentations. (T)

435. Marketing Analysis and Decision Making. Cr. 3
Prereq: MKT 430 and FBE 440. Application of marketing principles in the analysis of problems in the areas of marketing objectives, and product, price, promotion and distribution strategy. (T)

450. (MGT 450) Business Administration Co-op Assignment. (ACC 450)(FBE 450). 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)

490. Directed Study in Marketing. Cr. 1-3(Max. 6)
Prereq: 2.75 cumulative h.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)

541. Marketing Research and Analysis. Cr. 3
Prereq: MKT 430, FBE 440. 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)

545. Consumer Behavior. Cr. 3
Prereq: MKT 430. Concepts and theories to explain consumer and organizational buyer behavior. Application of this understanding to marketing management and public policy decision making. (T)

546. Sales Management. Cr. 3
Prereq: MKT 430. Organization and direction of a sales organization including selection, training, compensation, supervision, motivation, budgets, quotas, territories, and sales analysis. (T)

547. Business Marketing. Cr. 3
Prereq: MKT 430 or consent of instructor. The industrial buying process, value and vendor analysis, market analysis, industrial channels and media; problems of leasing, financing, reciprocity and technical service. (Y)

548. Market Forecasting. Cr. 3
Prereq: MKT 430, FBE 440. Management of the market forecasting operation and selected forecasting techniques and procedures. Uses of forecasting in budgeting, product line decisions, sales activity, promotional mix, inventories, consumer demand, pricing and channel decisions. Simple and advanced time-series, Box-Jenkins, adaptive models and regression models. Managerial decision making in developing the firm's forecasting system. (F,W)

549. Principles of Advertising. Cr. 3
Prereq: MKT 430. 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)

550. Advertising Copy. Cr. 3
Prereq: MKT 549 or consent of instructor. 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)

551. Advertising Media Planning. Cr. 3
Prereq: MKT 549 or consent of instructor. 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)

552. 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 analyses of methods employed in establishing sound public relations programs. (T)

560. Transportation and Distribution Management. Cr. 3

Prereq: MKT 430. 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)

562. Business Logistics Management. Cr. 3

Prereq: FBE 440, MKT 430. Achieving efficient physical flow of goods to fulfill production and marketing objectives through the integration of transportation, inventory and acquisition. (F)

563. Advanced Business Logistics Management. Cr. 3

Prereq: MKT 562. Utilization of cases; analysis of problems encountered in the design and operation of a logistics system, both domestic and international. (I)

570. Retail Management. Cr. 3

Prereq: MKT 430. Retailing concepts and problems. Competitive structure, store location, organization, buying, inventory control, sales promotion, pricing, credit policy, customer services, research and franchising. (F,W)

575. International Marketing Management. Cr. 3

Prereq: MKT 430. 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)

585. Promotion Strategy. Cr. 3

Prereq: MKT 430. Development of integrated strategies, plans and programs in advertising, personal selling, publicity and promotion, and their implementation in the overall marketing effort. (T)

696. Marketing Policy. Cr. 3

Prereq: MKT 430, 433, 435, five additional courses in marketing concentration and core courses. Open only to marketing majors. Capstone course in the marketing sequence; includes four components designed to develop skills in planning of development of strategies to solve marketing problems. (T)



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 teachers who have the commitment and competence to help young people achieve dignity, preserve individuality, develop democratic values, and find self-fulfillment.

Professional laboratory experiences are an important aspect of the teacher training 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 problems. To meet the needs of our programs, excellent professional resources are available in the other colleges, schools and divisions of the University, and in numerous school districts 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 1993 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
- Elementary Education
- English Education—Secondary
- Foreign Language Education—Secondary
- Mathematics Education
- Physical 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

BACHELOR OF SCIENCE in Recreation and Park Services¹

**MASTER OF ARTS IN TEACHING Majors*

Elementary Education — with concentrations in

- Early Childhood Education
- General Elementary Education

Secondary Education — with concentrations in

- Bilingual-Bicultural Education
- Career and Technical Education
- English Education
- Foreign Language Education
- Mathematics 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
- Career and Technical Education
- Counseling
- 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)
- Evaluation and Research
- Foreign Language Education
(Secondary)—with concentrations in

- Foreign Languages
- Teaching English as a Second Language

- Health Education
- History and Philosophy of Education
- Instructional Technology
- Mathematics Education
- Physical Education
- Preschool and Parent Education
- Reading
- Science Education
- Social Studies Education—Secondary
- Special Education — with concentrations in

- Emotionally Impaired
- Mentally Impaired
- Learning Disabilities

¹ This is a degree program only and does not lead to teacher certification.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

***EDUCATION SPECIALIST CERTIFICATES**

with majors in

Career and Technical Education
Counseling
Elementary Curriculum and Instruction
General Administration and Supervision
Instructional Technology
Mathematics Education
Reading
Science Education
Secondary Curriculum and Instruction
School and Community Psychology
Special Education
Rehabilitation Counseling and Community Inclusion

***DOCTOR OF EDUCATION and DOCTOR OF PHILOSOPHY with majors in**

Career and Technical Education
Counseling
Curriculum and Instruction — with concentrations in

Art Education
Bilingual-Bicultural Education (Ed.D. only)
Elementary Education
English Education—Secondary
Foreign Language Education—Secondary
K-12 Curriculum
Mathematics Education
Science Education
Secondary Education
Social Studies Education—Secondary

Educational Psychology
Educational Sociology
Evaluation and Research
General Administration and Supervision
Higher Education
History and Philosophy of Education
Instructional Technology
Reading (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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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.

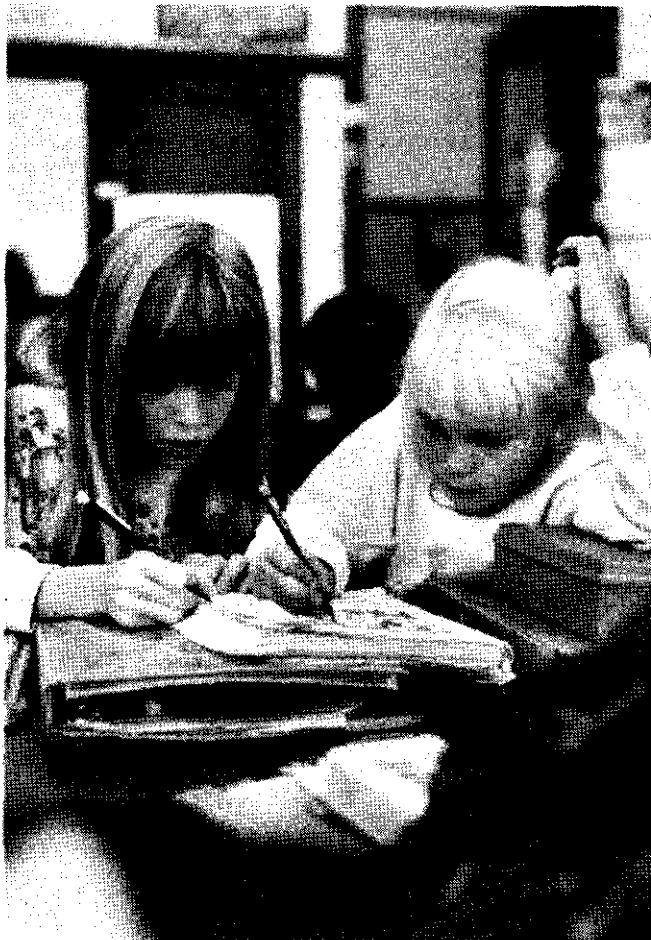
An applicant for a degree from the College must complete at least thirty credits as a registered student in the College.

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: James Boyer

Graduate Advising: Stuart Itzkowitz, Toni Nicholas

Undergraduate Advising: Sallie Smith-Brown, Phyllis Coan,
Mary Manion, Carol Meier

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 honor 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 Building. *Application deadline is January 15.*

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 h.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 h.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 h.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 h.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 h.p.a. and demonstrable financial need.

Dean's Scholarship Award: Award of \$500 open to undergraduate (with minimum 3.5 h.p.a.) or graduate (with minimum 3.75 h.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 h.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 h.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 h.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 h.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 h.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 h.p.a.

James Alvin Hutchinson Memorial Scholarship: Award of \$500 open to full-time students in special education, with cumulative 3.0 h.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 h.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 h.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 h.p.a.

Sally Patterson Memorial Scholarship: Award of \$500 open to any physically-challenged student with a minimum 3.0 h.p.a. and demonstrated financial need.

Phi Delta Kappa Scholarship: Award of \$500 open to full-time undergraduates with a minimum 3.0 h.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 h.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 h.p.a. 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 h.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:

Patula C. Wood Room 441, Education Building; 577-1620

Associate Dean, Research:

Steven Ilmer Room 441, Education Building; 577-1620

Assistant Dean, Academic Services:

James Boyer Room 489, Education Building; 577-1605

Assistant Dean, Administrative and Organizational Studies:

Burnis Hall Room 389, Education Building; 577-1701

Assistant Dean, Health, Physical Education and Recreation:

Sarah Erbaugh Room 261, Matthaei Building; 577-6210

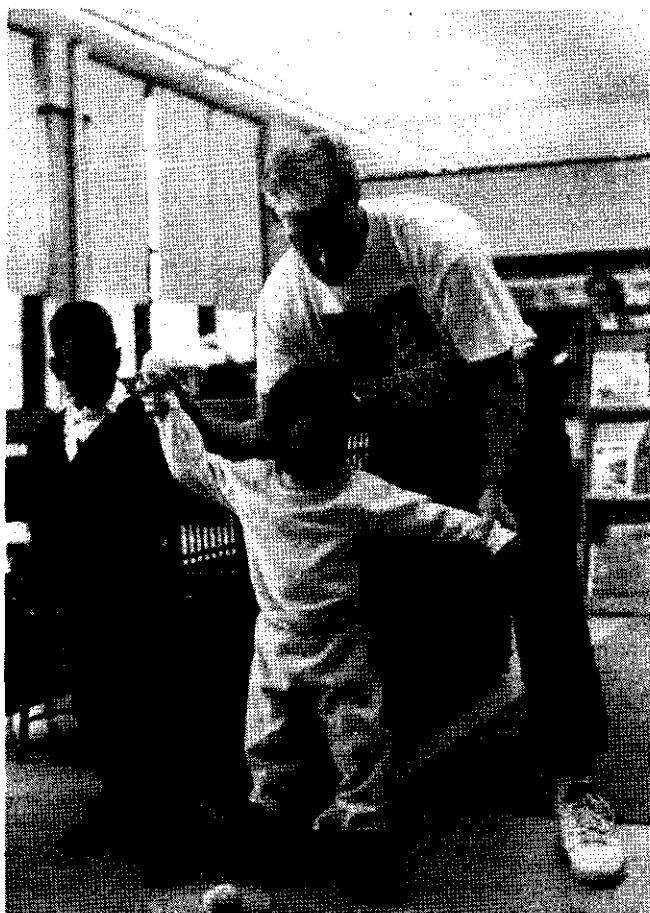
Assistant Dean, Teacher Education:

Sharon Elliott Room 241, Education Building; 577-0902

Assistant Dean, Theoretical and Behavioral Foundations:

Joanne Halbert Room 341, Education Building; 577-1721

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

Assistant Dean: Sarah J. Erbaugh

Associate Professors

David B. Blievemicht, Sarah J. Erbaugh, Frank McBride, Diane Pick

Assistant Professors

Bradley Cardinal, Marita Cardinal, Herman Engels, Avanelle Kidwell, Robert Kohl, Karen K. Kurz, Jeffrey Martin, Peter A. Roberts, Todd Seidler, William W. Sloan, John C. Wirth, Weimo Zhu

Lecturers

Judy Bowen, Timothy Domke, 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
and specializations in school health education,
and clinical/community health education*

**MASTER OF EDUCATION with a major in physical education
and specializations in exercise and sport science,
and physical education pedagogy*

**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 courses of instruction in driver education, health education, physical education and recreation and park services for the general student body. In addition, it provides professional curricula at the undergraduate and graduate levels for those students seeking careers in these areas.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 95. 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 honor point average of 2.5.
2. 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.
3. Personal attributes most desirable for teachers including a high standard of moral conduct and an understanding of the nature of responsible citizenship.
4. Physical and emotional health commensurate with the demands of the physical education profession. All students entering the college of Education are required to complete a T.B. test prior to admission to the College.

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 25); fifty credits in physical education; thirteen credits in health, outdoor skills, and 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 81 and 95, and 15-43, respectively. All major, minor, and education courses must be completed with grades of 'C' or better and an overall 2.5 honor 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 outdoor 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.

HEALTH FOUNDATION SEQUENCE

(Required with each option)

	<i>credits</i>
ANA 301 —Introduction to Human Anatomy	4
HEA 233 —First Aid and CPR	3
PE/PEAR P — Outdoor skills course	2
PSL 322 —Fundamentals of Physiology	4

PHYSICAL EDUCATION CORE

(Required with each option)

	<i>Credits</i>
PE 191 —Professional Perspectives in Physical Education	2
PE 340 —Lifespan Growth and Development	3
PE 354 —Cultural Foundations of Physical Education	3
PE 355 —(W) Motor Learning and Control	3
PE 357 —Physiology of Exercise	3
PE 358 —Biomechanics	3
PE 550 —Evaluation and Measurement in Health & Physical Education	3
Total:	20

TEACHING CERTIFICATION TRACK

PE 258 —Physical Education in Secondary Schools I (Cr. 3, Max. 9)	9
PE 259 —Physical Education in Secondary Schools II (Cr. 3, Max. 6)	6
PE 341 —Physical Education for Elementary School Children I	3
PE 342 —Physical Education for Elementary School Children II	3
PE 344 —Aquatic Leadership	4
PE 540 or PE 541 or PE 542	
—Introduction to PE for Exceptional Children & Adolescents	3
—PE for the Exceptional Student: Methods & Materials	3
—Sports & Recreation for Exceptional Children & Adolescents	3
PE Elective	2
Total:	30

Professional Education Requirements

PE 350 —Instructional Methods in Physical Education	4
PE 441 —Student Teaching and Seminar I	8
PE 442 —Student Teaching and Seminar II	5
EDP 331 —Educational Psychology	3
RDG 443 —(W) Teaching Reading in Subject Matter Areas	3
Total:	23

EXERCISE SCIENCE TRACK

PE 256 —Individual Problems in Physical Education	3
PE 435 —Internship in Fitness	4-8
PE 533 —Principles of Athletic Training	3
PE 632 —Fitness Leadership	3
HPR 665 —Health and Recreation Services for the Aged	3
Electives	0-4
Total:	20

Physical Education Activities

Professional Education Requirements

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 senior college students in the teacher certification program.

1. Students must 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 honor point average overall and in the major is required. The major h.p.a. includes all professional courses as well as ANA 301, PSL 322, and outdoor skills.

- d) Successful completion of the Michigan test for teacher certification, basic skills, and subject matter tests.

5. The following courses must be satisfactorily completed. (An incomplete grade does not constitute satisfactory completion.): ANA 301, PSL 322, EDP 331, P E 191, 258, 259, 340, 341, 342, 350, 355, 357, and 358.

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.

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

(Eight Credits required, including P E 191)

credits

P E 191 —Professional Perspectives in Physical Education	2
P E 340 —Lifespan Growth and Development	3
P E 355 —(WI) Motor Learning and Control	3
P E 357 —Physiology of Exercise (Prereq: ANA 301, PSL 322, or equiv.)	3
P E 358 —Biomechanics (Prereq: ANA 301, PSL 322, or equiv.)	3

SPECIALIZED TEACHING CORE (Twelve Credits—

One of the following options required)

Secondary

P E 258 —Physical Education in Secondary Schools I (Cr. 3, Max. 6)	6
P E 259 —Physical Education in Secondary Schools II Cr. 3, Max. 6)	6

Elementary

P E 258 —Physical Education in Secondary Schools I (Cr. 3, Max. 6)	3
P E 259 —Physical Education in Secondary Schools II Cr. 3, Max. 6)	3
P E 341 — Physical Education for Elementary School Children I	3
P E 342 — Physical Education for Elementary School Children II	3

Teaching Physical Education for the Handicapped

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.

ENDORSEMENT REQUIREMENTS

credits

P E 540 —Intro. to P E for Exceptional Children & Adolescents	3
P E 541 —P E for the Exceptional Student: Methods & Materials	3
P E 542 —Sports & Recreation for Exceptional Children & Adolescents	3
P E 543 —Practicum in P E for the Exceptional Student	2-6
SED 503 —Education of Exceptional Children	3
SED 511 —Mental Retardation and the Cognitive Process	3
SED 514 —Behavior Management: Mental Impairments	3
SED 526 —Home & Hospital Ed. of Children with Physical Impairments	4

Total: 24-28

Physical education majors must consult with their advisers, prior to electing courses for this endorsement.

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) social health; and 5) community health. Students must see an adviser in health education 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>
ANA 301* and PSL 322*, or BIO 287	
— Introduction to Human Anatomy	4
— Fundamentals of Physiology	4
or	
— Anatomy and Physiology	5
HEA 231 —Dynamics of Personal Health	3
HEA 233 —First Aid and CPR	3
H E 330 —Health of the School Child	3
H E 333 —School Health Education	3
H E 434 —Reproductive Health Education	2
Electives (must have prior approval of H E adviser)	5
Total:	24–28

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. Twice 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 honor point average of 2.5, students may apply for senior college status in 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.

DEGREE REQUIREMENTS: Candidates for the Bachelor of Science in Recreation and Park Services must complete 124 credits, sixty-two of which are in general and professional education (including satisfaction of the University General Education Requirements, see page 25), and sixty-four 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 81 and 95, and 15–43, 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 honor 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'. All competency examinations must be completed prior to registering for R P 462.

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 102 —(BC) Introductory College Writing	4
ENG 301 —(IC) Intermediate Writing	3
SPB 101 —(OC) Oral Communication: Basic Speech	2
UGE 100 —(GE) Introduction to the University and its Libraries	1

HUMAN INTERACTION (Nineteen Credits)

PSY 101 —(LS) Introductory Psychology	4
SPC 520 —Group Communication and Human Interaction	3
HEA 233 — First Aid and CPR	3
P E 340 or PSY 241	
— Life Span Motor Development	3
— Human Development and Health	3
Education Electives (chosen with adviser approval)	6

NATURAL SCIENCE (Eight to Thirteen Credits)

'AST 201 or GEL 101	
—(PS) Descriptive Astronomy	4
—(PS) Geology: The Science of the Earth	4
Required only for Recreation Administration students:	
BIO 105 —(LS) An Introduction to Life	3–4
Required only for Therapeutic Recreation students:	
ANA 301 and PSL 322	
—Introduction to Human Anatomy	4
—Fundamentals of Physiology	4
OR	
BIO 105 and BIO 287	
—(LS) An Introduction to Life	4
— Anatomy and Physiology	5

* Or other elective fulfilling University General Education Group Requirement.

* Only a total of five credits from these courses apply to the minor.

GENERAL EDUCATION

(Twenty-three Credits)

¹ P S 101 —(A) American Government	4
¹ HIS 140 or HIS 195	
—(HS) The World since 1945	3
—(HS) Society and the Economic Transition	3
¹ SOC 200 or SOC 202	
—(SS) Understanding Human Society	3
—(SS) Social Problems	3
¹ ANT 315 or NUR 480	
—(FC) Anthropology of Business	3
—(FC) Transcultural Health through the Life Cycle	3
¹ HUM 102 —(VP) Experiencing the Arts	3
¹ PHI 232 —(PL) Introduction to Ethics	3
Elective (Required only for Recreation Administration students)	4
PSY 331 — Abnormal Psychology (Required only for Therapeutic Recreation students)	4

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-four 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

(Forty to Forty-one Credits)

R P 260 —Principles of Leadership and Recreation Programming	4
R P 264 —Camp Leadership and Administration	3
R P 265 — Cultural Arts in Recreation	3
R P 360 —Social Recreation Programming	3
R P 362 —Introductory Field Work	3
R P 367 —Introduction to Therapeutic Recreation ²	3-4
R P 462 —Internship	9
R P 463 — (WI) Philosophy of Recreation and Park Services	3
R P 465 —Recreation and Park Administration	3
P E 550 — Evaluation and Measurement	3
HPR 664 —Legal Issues and Risk Management in HPR	3

ELECTIVES

(Twenty-three to Twenty-four Credits chosen from the following:)

R P 364 —Outdoor Skills	2
R P 563 —TR: Program Development (Required for Therapeutic Recreation students)	3
R P 566 — Independent Study	1-2
R P 576 — Readings in Recreation and Park Services	1
R P 578 —TR: Mental Health	3
R P 660 —Outdoor and Environmental Education	3
R P 663 —TR: Program Implementation (Required for Therapeutic Recreation students)	3
R P 667 —Outdoor Recreation and Tourism	3
R P 673 —TR: Physical Disabilities	3
R P 678 —Leisure Education	3
HPR 665 —Health and Recreation Services for the Aged	3
HPR 574 —Facility Planning, Construction and Utilization	3
HPR 654 — Workshop in HPR	1-3

Scholarships and Financial Aids

Merit 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 21); a list of athletic scholarships appears on page 23; see also the section on scholarships beginning on page 82. 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

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

DRIVER EDUCATION (D E)

573. Teaching Driver Education and Traffic Safety.
(TED 594). Cr. 3

Prereq: valid Michigan driver's license. (F,W)

574. Problems in Driver Education and Traffic Safety.
(TED 574). Cr. 3

Prereq: D E 573. Issues and concerns in professional preparation to meet traffic safety needs of schools and communities. (F,S)

575. Seminar in Driver Education and Traffic Safety.
(TED 575). Cr. 3

Prereq: D E 574. Behavioral, administrative, and professional aspects of the teaching role in driver and traffic safety education. (W,S)

¹ Or other elective fulfilling University General Education Group Requirement.

² Four credits required for Therapeutic Recreation emphasis.

HEALTH (HEA)

231. Dynamics of Personal Health. Cr. 2-3

Critical health issues relevant to college students today; application to personal and family needs. In-depth study of selected health issue when offered for three credits. (T)

232. 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)

233. First Aid and CPR. Cr. 3

Material fee as indicated in *Schedule of Classes*. Theory and practice. Students can qualify for standard national certificates in first aid and CPR. (T)

390. Individual Problems in Health. Cr. 1-3(Max. 03)

Prereq: HEA 231 or 232 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)

330. Health of the School Child. (TED 430). Cr. 3

Health status and problems of school age children. Role of teacher in health promotion and protection; teacher observation and classroom first aid for health problems. (F,W)

333. School Health Education. Cr. 3

Prereq: H E 330. Principles, curriculum development, and techniques in teaching health at elementary and secondary school levels. (F)

434. 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)

480. Practicum in Health Education. Cr. 2

Prereq: professional courses in health education, consent of adviser. Observational experience in health education and implementation of health education unit by student in a variety of settings. Contact departmental chairperson before semester begins. (W)

635. Health Education and the Nation's Health. Cr. 3

Survey of national health status; factors aiding and deterring its improvement. Analysis of current and future plans in technology, finance, legislation and ethics of health care. History, philosophy and role of health education. (B)

642. 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. (B)

643. School Health Curriculum. Cr. 3

Prereq: graduate major in health education. Principles and application of comprehensive school health programming. Role of the school health educator in health services; emphasis on education and environment. (B)

650. 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)

653. Principles and Practice of Health Education and Health Promotion. Cr. 3

Prereq: graduate standing. 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)

655. Teaching Methods and Techniques in Health Education. Cr. 3

Prereq: H E 650 or consent of instructor. Strategies employed in dissemination of health information; concepts and skills development. Integration of cognitive skills, classroom management, and student assistance programs, into teaching strategies. (B)

HEALTH, PHYSICAL EDUCATION and RECREATION (HPR)

552. 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)

574. Facility Planning and Construction. Cr. 3

Fundamentals of planning, design and construction of physical education, athletic and recreation facilities. Understanding the role of the planning team, architect, contractor, professional consultants and facility programmer. (B)

654. Workshop in Health, Physical Education, and Recreation. Cr. 1-3(Max. 6)

Future and current professionals explore topics of current interest, or work cooperatively on current problems in the field. (S)

655. 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. (Y)

664. Legal Issues and Risk Management in HPR. Cr. 3

Identification and analysis of legal issues and risk management in the health, physical education, and recreation professions. Review of relevant litigation patterns. (B)

665. 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. (I)

666. Risk Management in Physical Education and Sports. Cr. 2

Fundamentals of safety and liability and the risks involved in managing activity-related programs. Development of knowledge and skills to recognize and eliminate dangerous situations. (Y)

PHYSICAL EDUCATION (P E)

191. 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)

201. 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)

256. 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)

258. Physical Education In Secondary Schools I. Cr. 3 (Max. 9)

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)

259. 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)

340. 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)

341. Physical Education for Elementary School Children I. (DNC 382)(DNE 382). Cr. 3

Prereq: P E 340. Developmental approach to elementary physical education for grades K-3. Beginning movement concepts and fundamental motor skills that are developmentally appropriate for young children to participate in games, gymnastics and creative dance. (F)

342. Physical Education for Elementary School Children II. (DNC 383)(DNE 383). Cr. 3

Prereq: P E 341 or equiv. Continuation of P E 341, focusing on developmentally appropriate activities in physical education for grades 4-6. Investigation of individual approaches which use sport-related movement themes, sport forms, gymnastic games analysis and physical fitness. Curriculum design and implementation of developmentally appropriate activities in practicum application. (W)

344. 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)

350. Instructional Methods in Physical Education. Cr. 4

Prereq: P E 341. Planning for instruction in physical education with emphasis on unit and lesson planning, teaching styles, principles of motor learning and developmental curriculum planning. (W)

354. 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)

355. (W) Motor Learning and Control. Cr. 3

Prereq: ANA 301 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)

357. Physiology of Exercise. Cr. 3

Prereq: PSL 322, ANA 301 or equiv. Material fee as indicated in *Schedule of Classes*. Physiological basis of human physical performance. (W)

358. Biomechanics. Cr. 3

Prereq: ANA 301, PSL 322 or equiv. Material fee as indicated in *Schedule of Classes*. 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. (F)

435. Internship in Fitness. Cr. 2-4(Max. 8)

Prereq: P E 632, HEA 233. Supervised experience in health and exercise programs with various populations at approved sites. (F,W)

441. Student Teaching and Seminar I. Cr. 8

Prereq: admission to student teaching as listed in p E handbook. Offered for S and U grades only. First experience in student teaching. (F,W)

442. Student Teaching and Seminar II. Cr. 5

Prereq: P E 441. Offered for S and U grades only. (F,W)

533. Principles of Athletic Training. Cr. 3

Prereq: ANA 301 or equiv. Philosophy of athletic training and basic training room protocol. Theory of evaluation techniques, nutrition, emergency techniques. (F)

534. Prevention, Care and Evaluation of Athletic Injuries. Cr. 3

Prereq: ANA 301 or equiv. Material fee as indicated in *Schedule of Classes*. 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. (W)

540. Introduction to Physical Education for Exceptional Children and Adolescents. Cr. 3

Prereq: EDP 331 or equiv. Motor characteristics, behavior and developmental sequences associated with handicapping conditions, including traits of gifted and talented individuals. Anatomy and kinesiology of abnormal motor patterns and assessment of physical education skills. Review of adaptive physical education and special education terminology; legislation and student placement models. (B)

541. Physical Education for the Exceptional Student: Methods and Materials. Cr. 3

Prereq: EDP 331 or equiv. Writing behavioral objectives for exceptional students, including the gifted and talented, and the handicapped, in physical education. Adaptation of teaching methods and materials to meet the needs of handicapped and gifted students in physical fitness, fundamental motor skills, individual and group games, and lifetime sports skills. (B)

542. Sports and Recreation for Exceptional Children and Adolescents. Cr. 3

Prereq: EDP 331 or equiv. Implementation of appropriate physical education curriculum for exceptional individuals, the gifted and handicapped. Coaching and training techniques for handicapping conditions in school, recreational, and competitive sports situations. (B)

543. Practicum in Physical Education for the Exceptional Student. Cr. 2-6

Prereq: P E 540, 541, 542, consent of chairperson. Offered for S and U grades only. Directed fieldwork placement in teaching physical education to handicapped or gifted individuals in school, camp, or recreational setting. Required for State of Michigan Approval in Teacher of Physical Education for the Handicapped. (T)

550. Evaluation and Measurement in Health and Physical Education. Cr. 3

Prereq: senior standing. Student computer account required. Elementary statistical methods and evaluative techniques applied to health, physical education, and recreation. Test construction and standard measurement approaches. (W)

551. 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. (B)

631. (PSL 601) Physiology of Exercise. Cr. 3
Prereq: consent of instructor. Muscular, metabolic, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional consideration, and the effects of different environments on exercise performance. (F)

632. Fitness Leadership. Cr. 3
Prereq: ANA 301, P E 357 or equiv. Material fee as indicated in *Schedule of Classes*. Physiological and anatomical principles of physical fitness. Optimum nutrition for health, weight control and performance. Construction of fitness programs and evaluation of fitness levels. (B)

641. 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. (W)

PHYSICAL EDUCATION ACTIVITY (PEA)

102. 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)

104. Selected Activities. Cr. 1-6
Various sport or activity topics offered on a one-time basis. (T)

105. 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)

110. Swimming: Elementary. Cr. 2 (Max. 4)
Fundamental skills and knowledge in aquatics for beginners. (T)

111. Swimming: Aerobic Conditioning. Cr. 2 (Max. 4)
Prereq: swimming skill. Information and personalized program of swimming activities designed to maintain or improve level of cardiorespiratory fitness. Prescription for future swimming fitness programs; increased proficiency in swimming skills. (T)

112. Swimming: Intermediate. Cr. 2
Prereq: elementary swimming ability. Increased proficiency in swimming strokes and technique. Beginning diving, deep water skills, and swimming endurance. (T)

117. Scuba Diving. Cr. 2
Prereq: intermediate/advanced swimming skill required; 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)

119. Lifeguard Training. Cr. 2
Prereq: swimmer level. Lifeguarding and water safety procedures. Leads to lifeguard training certification. (F,W)

120. Theory and Practice of Aquatics: Water Safety Instructor. Cr. 2
Prereq: PEA 119 or 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)

124. Step and Slide. Cr. 2
Cardiovascular and muscular endurance and strengthening program using adjustable step, slide, and rubber tubing. Low-impact, high-density workout. Energy cost controlled by step height, width of slide, music tempo, tubing tension. (T)

125. Fitness Walking. Cr. 2 (Max. 4)
Structured training and safety guidelines, technique and motivational strategies of fitness walking; includes walking for health and fitness benefit. (F,W)

126. 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)

127. Aquerobics. Cr. 2 (Max. 4)
Program of exercise conducted in shallow water, seigned to improve strength, flexibility, and cardiovascular fitness; includes prescription for future self-directed programs. Especially valuable for students in poor physical condition, or with certain illnesses and handicaps. (Y)

128. Lifestyle Fitness Activities. Cr. 2
Program of exercise designed to improve strength, flexibility and cardiovascular fitness. Approach to overall physical fitness involving a pre- and post-program fitness evaluation and a personalized prescription for the improvement and continuing maintenance of well-being. (F,W)

129. Aerobic Dance. 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)

130. 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)

131. 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)

132. Archery. Cr. 2 (Max. 4)
Analysis and practice of skills, information on scoring, rules, tournament competition. (F,W)

135. Pocket Billiards: Beginning. Cr. 2 (Max. 4)
Vendor's fee: \$10. Basic skills and technique; history, rules, equipment and game courtesy. (F,W)

136. Billiards: Intermediate/Advanced. Cr. 2 (Max. 4)
Prereq: basic billiards skills. Vendor's fee: \$10. Analysis and practice of more advanced skills and strategies; introduction of 14.1 pocket billiards and other billiards games. (F,W)

138. Bowling. Cr. 2 (Max. 4)
Bowling lane rental fee: \$20. Analysis and practice of skills. Information on scoring procedures, rules, tournament play. (F,W)

141. Golf. Cr. 2 (Max. 4)
Analysis and practice of fundamentals focused on development of correct form in the use of different clubs. (F,W)

144. Gymnastics and Tumbling. Cr. 2 (Max. 8)
Analysis and practice of basic gymnastic techniques and events; floor exercise and apparatus. (F,W)

148. 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)

149. Continuing Yoga. Cr. 2 (Max. 8)

Prereq: PEA 148 or beginning 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)

150. Racquetball: Beginning. Cr. 2 (Max. 4)

Basic strokes, history, rules, equipment and game courtesy. Introduction to singles and singles game competition. (T)

151. Racquetball: Intermediate/Advanced. Cr. 2 (Max. 8)

Prereq: basic racquetball skills. Advanced skills and techniques; singles and doubles game strategy; optional competition experience. (T)

153. Basketball: Fundamental Skills. Cr. 2 (Max. 4)

Analysis and practice of fundamental skills, team play, and rules of basketball. (I)

154. Basketball: Shooting Skills and Strategies. Cr. 2 (Max. 6)

Analysis and practice of intermediate and advanced shot-making skills and game strategies. (I)

160. Tennis: Beginning. Cr. 2 (Max. 4)

Analysis and practice of basic strokes, singles and doubles play, strategy, rule interpretation. (T)

161. Tennis: Intermediate/Advanced. Cr. 2 (Max. 8)

Prereq: basic tennis skills. Advanced stroke instruction; practice of skills and strategies needed for tournament play. (F,S)

164. Weightlifting and Training. Cr. 2 (Max. 4)

Analysis and practice of approved lifting techniques and use of weight training for conditioning purposes. (T)

171. Fencing: Beginning. Cr. 2 (Max. 4)

Analysis and practice of skills, rules, strategy, conduct of competitive means. (F,W)

172. Fencing: Intermediate/Advanced. Cr. 2 (Max. 8)

Prereq: basic fencing skills. (F,W)

173. 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)

174. Judo: Continuing. Cr. 2 (Max. 8)

Prereq: PEA 173 or equivalent experience. (Max. 4) This course builds upon basic knowledge of judo; it extends the student's repertoire of judo technique and emphasizes judo as a competitive sport. Continuation of PEA 173. (F,W)

175. 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)

176. 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)

177. Personal Defense. Cr. 2

Personal defense theory, increased defense awareness, anticipation and avoidance of confrontation, basic self-defense skills and techniques. (F,W)

178. 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)

179. Tai Chi Chuan: Continuing. Cr. 2 (Max. 8)

Prereq: PEA 178 or equivalent experience. 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 178. (F,W)

182. Aikido: Beginning. Cr. 2 (Max. 4)

Analysis and practice of fundamental skills, movements and philosophy of Aikido as a modern martial art. (F,W)

183. Aikido: Continuing. Cr. 2 (Max. 8)

Prereq: PEA 182. Analysis and practice of more advanced skills, techniques and philosophy of Aikido as a modern martial art. (F,W)

185. Soccer: Beginning. Cr. 2 (Max. 4)

Fundamental playing skills and basic conditional and tactical aspects of the game of soccer. Rules of the game. (Y)

186. Soccer: Intermediate/Advanced. Cr. 2 (Max. 6)

Prereq: PEA 185. Advanced soccer playing skills. Practice of skills and strategies needed for competitive play, including advanced tactical considerations, conditional considerations, and theoretical aspects of the game. (Y)

192. Volleyball: Beginning. Cr. 2 (Max. 4)

Analysis and practice of skills, team play, strategy, rule interpretation. (F,W)

197. Intermediate Power Volleyball. Cr. 2

Prereq: PEA 196 or consent of instructor. Strategies of advanced volleyball, including team offenses, team defenses, play sets, individual recovery techniques, and player specialization. (W)

RECREATION and PARK SERVICES (R P)

260. 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)

264. 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)

265. Cultural Arts in Recreation. Cr. 3

Exploration of arts and crafts, music, dance, literature, and drama techniques in programming at recreation facilities. (B)

360. 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)

362. 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)

364. Outdoor Skills. Cr. 2

Prereq: basic course in first aid. Introduction to a variety of outdoor activities including backpacking, canoeing, shooting skills and orienteering. Equipment, basic skills, group leadership. Field experience required. (B:S)

367. 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)

462. 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)

463. (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)

465. Recreation and Park Administration. Cr. 3

Administration of recreation and park systems with emphasis on urban agencies. Administrative functions, departmental structures and responsibilities. (B)

562. Advanced Field Work. Cr. 3-6(Max. 12)

Leadership/management in an approved recreation/park setting under professional supervision. Arrangements must be made with Departmental supervisor two months prior to registration to arrange placement. (F,W)

563. TR: Program Development. Cr. 3

Prereq: R P 367 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)

566. Independent Study. Cr. 1-2(Max. 6)

Supervised research, applied or action, in the student's area of concentration or interest. (F,W)

576. 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)

578. 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)

660. 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)

663. TR: Program Implementation. Cr. 3

Prereq: R P 367 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)

667. 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)

673. TR: Physical Disabilities. Cr. 3

Prereq: R P 367 or equivalent experience. 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)

678. 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

Art Education Advising Office: 163 Community Arts Building

Professors

Asa J. Brown, Janice Hale, Leonard Kaplan, Peter L. Sanders, Gary R. Smith

Associate Professors

Rudi Alec, Navezh Bhavangri, James Boyer, John S. Camp, Sharon W. Elliott, Karen Feathers, Lola Jackson, Rodolfo Martinez, John T. Norman, Jr., Arthur R. Park, Richard M. Parres, Virginia L. Pearson, James H. Quina, R. Craig Roncy, Joseph Sales, Sr., Jacqueline Tilles, Paula Wood, Anga Youssef

Assistant Professors

James H. Blake, Thomas Edwards, Sally K. Roberts, Jo-Ann Snyder, Mary Stein, Marshall Zumberg

Lecturers

Anne Williamson Blake, Hal Dittenber, Holly Feen, Cartol Hamilton, Anna Miller, Retta Thompson, 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
- Foreign Language 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:
 - Early Childhood Education
 - General Elementary Education
- Secondary Education—with concentrations in
 - Bilingual-Bicultural Education
 - Career and Technical Education
 - English Education
 - Foreign Language Education
 - Mathematics Education
 - Science Education
 - Social Studies Education

* For specific requirements, consult the Wayne State University Graduate Bulletin.

***MASTER OF EDUCATION**

with majors in

- Art Education
- Bilingual-Bicultural Education
- Career and Technical 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
- Foreign Language Education—Secondary
 - with concentrations in:
 - Foreign Languages
 - Teaching English as a Second Language
- Mathematics Education
- Preschool and Parent Education
- Reading
- Science Education
- Social Studies Education—Secondary
- Special Education—with concentrations in
 - Emotionally Impaired
 - Learning Disabilities

***EDUCATION SPECIALIST CERTIFICATE**

with majors in:

- Career and Technical Education
- Elementary Curriculum and Instruction
- Mathematics Education
- Reading
- Science Education
- Secondary Curriculum and Instruction
- 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 (Ed.D. only)
- Special Education

All of the baccalaureate degree programs listed above lead to Michigan Provisional Certification.

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, consult 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 15-43.

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 honor point average of 2.5 or above. In addition, the honor 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. Writing 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 27).

3. State Basic Skills Test: All students must pass the 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. 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 honor 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 102, plus one course at the 200 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 25).

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 95.

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 25), 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.

ENGLISH (Two Courses)

credits

ENG 102 —(BC) Introductory College Writing 4
Intermediate Composition (IC) — see General Education Requirements, page 25

FOREIGN CULTURE (see *General Education Requirements, page 25*)

HEALTH (One Course)

H E 330 —Health of the School Child	3
HEA 231 —Dynamics of Personal Health	2-3
HEA 233 —First Aid and CPR	3
H E 650 — Comprehensive School Health Education	3

HISTORICAL STUDIES (One Course)

HIS 110 — (HS) The Ancient World	3-4
HIS 120 — (HS) The Medieval World	3-4
HIS 130 — (HS) The World and Europe: 1500-1945	3-4
HIS 140 — (HS) The World Since 1945	3-4
HIS 160 — (HS) African Civilizations to 1800	4
HIS 161 — (HS) African Civilizations Since 1800	4
HIS 171 — (HS) East Asian Civilizations Since 1840	3
HIS 180 — (N E 203) The Age of Islamic Empires: 600-1600	3
HIS 181 — (N E 204) The Modern Middle East	3
HIS 195 — (HS) Society and the Economic Transition	3
HIS 335 — (HS) Revolution in the Modern World: 1750 to Present	3
ANT 320 — (HS) Prehistoric and Early Historic Civilizations	3
HUM 310 — (HS) Historical Epochs in Contrast	3
N E 368 — (N E 204) (HS) Islamic History: The Formation of the State	3

HUMANITIES (see *General Education Requirements, page 25*)

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 103)

PHYSICAL SCIENCES (elect one):

AST 201 — (PS) Descriptive Astronomy	4-5
CHM 100 — (PS) Chemistry and Your World	3-4
CHM 102 — (PS) General Chemistry I	4
CHM 105 — (PS) Introductory Principles of Chemistry	6
CHM 107 — (PS) Principles of Chemistry I	4
CHM 131 — (PS) Chemical Principles and Analysis I	5
GEL 101 — (PS) The Science of the Earth	4
PHY 102 — (PS) Conceptual Physics: The Basic Science	3-4
PHY 104 — (PS) Einstein, Relativity and Quanta: An Introduction	3-4
PHY 213 — (PS) General Physics	4
PHY 217 — (PS) General Physics	4-5
PHY 310 — (PS) The Sounds of Music	4

LIFE SCIENCES (elect two):

PSY 101 — (LS) Introductory Psychology (Required Course)	4
BIO 151 or BIO 103 or BIO 105	
— (LS) Basic Biology I	3-4
— (LS) Environmental Biology	3-4
— (LS) An Introduction to Life	3-4

MATHEMATICS (Two Courses)

MAT 111 and 112 — Mathematics for Elementary Teachers I and II	6
or	
MAT 505 and 506 — Mathematics for Elementary Teachers I and II	6

SOCIAL STUDIES (Three Courses)

P S 101 or P S 103	
—(A) American Government	4
—(A) The American Governmental System	3
GPH 110 —(SS) World Regional Patterns	4
HIS 204 or HIS 205	
—United States to 1877	3-4
—United States since 1877	3-4

SPEECH (One Course)

SPB 101 —(OC) Oral Communication: Basic Speech	3
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THE UNIVERSITY and ITS LIBRARIES: 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 100 — (GE) The University and Its Libraries	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 320 —Literature for Children	3
SCE 501 or SCE 502	
— Biological Science for Elementary & Middle School Teachers	3
— Physical Science for Elementary & Middle School Teachers	3

The following courses may be taken only after admission to the College of Education:

CAMPUS COURSES

BBE 500 —Multicultural Education in Urban America	2
EDP 331 —Educational Psychology	3
ELE 340 —Teaching Mathematics: Preprimary-9	3
ELE 350 —Teaching Science: Preprimary-9	3
ELE 360 —Teaching Social Studies: Preprimary-9	3
RDG 443 — (W) Teaching Reading in Subject Matter Areas	3
SED 501 —Exceptional Child in the Regular Classroom	2
TED 602 —Computer Applications in Teaching I	3
ELE 607 — Parent Intervention Programs in Home and School	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 578.

Phase I

TED 355 —Teaching: Theory and Practice	5
ELE 330 —Teaching Language Arts: Preprimary-9	3

Phase II

TED 356 —Pre-Student Teaching Field Experiences	3
ELE 332 —Teaching Reading: Preprimary-9	3

Phase III

TED 578 —Directed Teaching and Conference	10
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MAJOR AREAS OF STUDY: Students seeking a 6-8 certification must complete one of the following majors:

ENGLISH MAJOR (Minimum Thirty Credits)

ENG 102 — (BC) Introductory College Writing	4
ENG 220 —(PL) Shakespeare	3
ENG 239 — (IC) Introduction to African-American Literature: Literature & Writing	4
ENG 272 — (PL) Basic Concepts in Linguistics	3
ENG 301 — (IC) Intermediate Writing	3
ENG 311 or ENG 312	
—(PL) English Literature to 1700	3
—(PL) English Literature after 1700	3

ENG 314 — (PL) Survey of American Literature	3
ELE 320 — Literature for Children	3
Literature Elective	4

LANGUAGE ARTS GROUP MAJOR (Minimum Thirty-six Credits)

ENG 102 — (BC) Introductory College Writing	4
ENG 220 — (PL) Shakespeare	3
ENG 239 — (IC) Introduction to African-American Literature: Literature and Writing	4
ENG 272 — (PL) Basic Concepts in Linguistics	3
ENG 301 — (IC) Intermediate Writing	3
ENG 311 or ENG 312	
— (PL) English Literature to 1700	3
— (PL) English Literature after 1700	3
ENG 314 — (PL) Survey of American Literature	3
ELE 320 — Literature for Children	3
SPO 204 — Voice and Articulation	3
SPO 250 — Beginning Oral Interpretation	3
Speech Elective	4

FOREIGN LANGUAGE MAJOR (Thirty Credits)

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.

NOTE: Courses in literature in English translation cannot be used to fulfill foreign language requirements.

MATHEMATICS MAJOR (Minimum Thirty Credits)

The following courses plus all of the courses listed under the Mathematics Minor; see below.

MAE 505 — Mathematics for Elementary School Teachers I	3
MAE 506 — Mathematics for Elementary School Teachers II	3
MAE 510 — Math. for Middle & Junior High School Teachers I	3
MAE 511 — Math. for Middle & Junior High School Teachers II	3
MAT 180 — (MC) Elementary Functions *	4
MAT 201 — (MC) Calculus I *	4
STA 102 or MAT 221	
— Elementary Statistics	3
— Elementary Probability and Statistics	4

Plus TWO courses from the following:

MAT 186 — Discrete Mathematics for Computer Science I	4
MAT 187 — Discrete Mathematics for Computer Science II	4
MAT 202 — Calculus II	4
MAT 286 — Discrete Mathematics	4

NATURAL SCIENCE GROUP MAJOR (Thirty-six Credits)

AST 201 — Descriptive Astronomy	4
PHY 102 — (PS) Conceptual Physics: The Basic Science	3-4
BIO 151 — (LS) Basic Biology I	4
BIO 152 — Basic Biology II	4
GEL 101 — (PS) Geology: The Science of the Earth	4
CHM 102 — (PS) General Chemistry I	4
CHM 103 — General Chemistry II	4
SCE 501 — Biological Sciences for Elementary and Middle School Teachers	3
SCE 502 — Physical Sciences for Elementary and Middle School Teachers	3
SCE 504 — Field Course Exploring the Natural Environment	3

* May be elected while in College of Liberal Arts.

SOCIAL STUDIES GROUP MAJOR (Thirty-six Credits)

P S 101 or P S 103	
— (A) American Government	4
— (A) The American Governmental System	3
P S elective	3-4
GPH 110 — (SS) World Regional Patterns	4
GPH elective	3-4
HIS 110 or HIS 120	
— (HS) The Ancient World	4
— (HS) The Medieval World	4
HIS 130 — (HS) The World and the West: 1500-1945	3-4
HIS 204 — United States to 1877	4
HIS 205 — United States Since 1877	4
HIS 224 — History of Michigan	3-4
ECO 201 — Principles of Microeconomics	3-4
ECO 202 — Principles of Macroeconomics	3-4

Elective (one course):

HIS (non-European)	3-4
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MINOR AREAS OF STUDY: Additional endorsement areas available to elementary students:

BILINGUAL-BICULTURAL MINOR (Twenty-five Credits)

BBE 500 — Multicultural Education in Urban America	2
BBE 502 — Effective Involvement of Parents in School and Community	3
BBE 550 — Introduction to Bilingual/Bicultural Education	3
BBE 553 — The Socio-Psychological Needs of Ethnocultural Communities	3
BBE 656 — Teaching Methods in Bilingual/Bicultural Education	3
BBE 660 — Internship in Bilingual/Bicultural Teaching	5
BBE 670 — Seminar in Cultural Awareness	3
BBE 685 — Applied Linguistics: Issues in Bilingual Education	3

EARLY CHILDHOOD MINOR (Minimum Twenty-four Credits)

ELE 320 — Literature for Children *	3
ELE 602 — Seminar in Early Childhood Education	3
ELE 604 — Role of Content Areas in Early Childhood	3
ELE 606 or ELE 607	
— Community Contacts: Working with Families in Urban Settings	3
— Parent Intervention Programs in Home and School	3
ELE 608 — Preprimary Goals and Practice	2
ELE 634 — Teaching Reading in Early Childhood Education	3
PSY 343 — Infant Behavior *	3
Early Childhood Electives	3-4

ENGLISH MINOR (Twenty Credits)

ENG 102 — (BC) Introductory College Writing	4
ENG 301 — (IC) Intermediate Writing	3
ENG 239 — (IC) Introduction to Afro-American Literature: Literature & Writing	4
ENG 272 — (PL) Basic Concepts in Linguistics	3
ENG 314 — (PL) Survey of American Literature	3
ELE 320 — Literature for Children	3

* May be elected while in College of Liberal Arts.

LANGUAGE ARTS GROUP MINOR (Twenty-six Credits)

ENG 102 —(BC) Introductory College Writing	4
ENG 301 —(IC) Intermediate Writing	3
ENG 239 —(IC) Introduction to African-American Literature: Literature & Writing	4
ENG 272 —(PL) Basic Concepts in Linguistics	3
ENG 314 —(PL) Survey of American Literature	3
ELE 320 —Literature for Children	3
SPO 204 —Voice and Articulation	3
SPO 250 —Beginning Oral Interpretation	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.

NOTE: Courses in literature in English translation cannot be used to fulfill foreign language requirement.

HEALTH EDUCATION MINOR (Twenty-four Credits)

ANA 301** and PSL 322**	
—Introduction to Human Anatomy	4
—Fundamentals of Physiology	4
or	
BIO 287 — Anatomy and Physiology	5
(Above option for non-P E majors only)	
HEA 231 —Dynamics of Personal Health	3
HEA 233 —First Aid and CPR	3
H E 330 —Health of the School Child	3
H E 333 —School Health Education	3
H E 434 —Reproductive Health Education	2
Electives (must receive prior approval from H E adviser)	5

MATHEMATICS MINOR (Minimum Twenty Credits)

MAE 505 — Mathematics for Elementary School Teachers I	3
MAE 506 — Mathematics for Elementary School Teachers II	3
MAE 510 —Mathematics for Middle and Junior High School Teachers I	3
MAE 511 —Mathematics for Middle and Junior High School Teachers II	3
MAT 180 — (MC) Elementary Functions	4
MAT 201 — Calculus I	4

NATURAL SCIENCE GROUP MINOR (Twenty-four Credits)

AST 201 — (PS) Descriptive Astronomy	4
BIO 105 — (LS) Introduction to Life	4
PHY 102 —(PS) Conceptual Physics: The Basic Science	3-4
CHM 100 —(PS) Chemistry and Your World	3-4
GEL 101 —(PS) Geology: The Science of the Earth	4
SCE 501 —Biological Sciences for Elementary and Middle School Teachers	3
SCE 502 —Physical Sciences for Elementary and Middle School Teachers	3

PHYSICAL EDUCATION MINOR (Twenty Credits)

Physical Education Core (Eight Credits required)	
P E 191 —Professional Perspectives in Physical Education (Required)	2
P E 340 —Lifespan Growth and Development	3
P E 355 — (WI) Motor Learning and Control	3
P E 357 —Physiology of Exercise	3
P E 358 —Biomechanics	3

SPECIALIZED CORE (Twelve Credits):

P E 341 —Physical Education for Elementary School Children I	3
P E 342 —Physical Education for Elementary School Children II	3
P E 258 — Physical Education in Secondary Schools I	3
P E 259 — Physical Education in Secondary Schools II	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 101 or P S 103	
—(AJ) American Government	4
—(AJ) The American Governmental System	3
P S elective	4
GPH 110 —(SS) World Regional Patterns	4
GPH elective	3-4
HIS 130 or HIS 140	
—(HS) Europe and the World: 1500-1945	4
—(HS) The World Since 1945	4
HIS 204 or HIS 205	
—United States to 1877	4
—United States Since 1877	4
HIS 110 — (HS) The Ancient World	3-4
ECO 201 — (SS) Principles of Microeconomics	3-4
ECO 202 — (SS) Principles of Macroeconomics	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 158 and 212, respectively.

Admission Requirements: see page 95.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined above (see page 95).

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.

** Only a total of five credits from these courses apply to the minor.

GENERAL COURSE REQUIREMENTS

ENG 102 —(BC) Introductory College Writing	4
One 200-level (or above) English course	3-4
SPB 101 —(OC) Oral Communication: Basic Speech	3
HEA 233 or H E 330 or HEA 231 or HEA 650	
—First Aid and CPR	3
—Health of the School Child	3
—Dynamics of Personal Health	2-3
—Comprehensive School Health Education	3
TED 225 —Introduction to Education (optional)	3

FOREIGN CULTURE (see General Education Requirements, page 25)

HISTORICAL STUDIES (One Course)

HIS 110 — (HS) The Ancient World	3-4
HIS 120 — (HS) The Medieval World	3-4
HIS 130 — (HS) The World and Europe: 1500-1945	3-4
HIS 140 — (HS) The World Since 1945	3-4
HIS 160 — (HS) African Civilizations to 1800	4
HIS 161 — (HS) African Civilizations Since 1800	4
HIS 171 — (HS) East Asian Civilizations Since 1840	3
HIS 180 — (N E 203) The Age of Islamic Empires: 600-1600	3
HIS 181 — (N E 204) The Modern Middle East	3
HIS 195 — (HS) Society and the Economic Transition	3
HIS 335 — (HS) Revolution in the Modern World: 1750 to Present	3
ANT 320 — (HS) Prehistoric and Early Historic Civilizations	3
HUM 310 — (HS) Historical Epochs in Contrast	3
N E 368 — (N E 204) (HS) Islamic History: The Formation of the State	3

HUMANITIES (see General Education Requirements, page 25)

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 103)

PHYSICAL SCIENCES (elect one):

AST 201 — (PS) Descriptive Astronomy	4-5
CHM 100 — (PS) Chemistry and Your World	3-4
CHM 102 — (PS) General Chemistry I	4
CHM 105 — (PS) Introductory Principles of Chemistry	6
CHM 107 — (PS) Principles of Chemistry I	4
CHM 131 — (PS) Chemical Principles and Analysis I	5
GEL 101 — (PS) The Science of the Earth	4
PHY 102 — (PS) Conceptual Physics: The Basic Science	3-4
PHY 104 — (PS) Einstein, Relativity and Quanta: An Introduction	3-4
PHY 213 — (PS) General Physics	4
PHY 217 — (PS) General Physics	4-5
PHY 310 — (PS) The Sounds of Music	4

LIFE SCIENCES (elect two):

PSY 101 — (LS) Introductory Psychology (Required Course)	4
BIO 151 or BIO 103 or BIO 105	
— (LS) Basic Biology I	3-4
— (LS) Human Environmental Biology	3-4
— (LS) An Introduction to Life	3-4

SOCIAL SCIENCE (Two Courses)

AMERICAN SOCIETY and INSTITUTIONS:

P S 101 or P S 103	
— (AI) American Government	4
— (AI) The American Governmental System	3

SOCIAL SCIENCES (elect one):

ANT 210 — (SS) Introduction to Anthropology	4
ECO 100 — (SS) Survey of Economics	4
ECO 202 — (SS) Principles of Macroeconomics	4
GPH 110 — (SS) World Regional Patterns	4
SOC 200 — (SS) Understanding Human Society	3
SOC 202 — (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 578.

SEMESTER I

BBE 500 — Multicultural Education in Urban America	2
SED 501 — Exceptional Child in the Regular Classroom	2
TED 602 — Computer Applications in Teaching I	3
EDP 548 — Adolescent Psychology	3

SEMESTER II (must have 24 credits completed in the major)

TED 516 — Analysis of Middle and Secondary School Teaching	3
TED 565 — Pre-Student Teaching Field Experience for Secondary Majors	5
Methods I — (major)	3
EHP 360 — Introduction to the Philosophy of Education	3

SEMESTER III

RDG 443 — (W) Teaching Reading in Subject Matter Areas	3
Methods II — (major)	3
Methods III (in minor, if applicable)	3

SEMESTER IV (major and minor must be completed)

TED 578 — Directed Teaching and Conference	10
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TEACHING METHODS (Two Courses)

CAREER AND TECHNICAL EDUCATION

CTE 541 — Career and Technical Education	4
CTE 693 — Special Problems in Career and Technical Education	1-4

ENGLISH EDUCATION

EED 520 — Methods of Teaching English: Grades 7-12	3
EED 612 or EED 633	
— English Composition in Secondary Schools	3
— Teaching Literature in Secondary Schools	3

FOREIGN LANGUAGE EDUCATION

LED 652 — Teaching English as a Second Language/Foreign Language: Methods I ..	3
LED 653 — Teaching English as a Second Language/Foreign Language: Methods II ..	3

MATHEMATICS EDUCATION

Consult a Mathematics Education adviser for possible substitutions and additional courses.

MAE 515 — Methods and Materials of Instruction — Secondary School Math	3
MAE 605 — Teaching Mathematics in Middle School & Junior High School	3

SCIENCE EDUCATION

SCE 506 — Methods and Materials of Instruction in Secondary School Science I 3
 SCE 507 or SCE 603
 — Methods and Materials of Instruction in Secondary School Science II ... 3
 — Advanced Studies in Teaching Science in Jr. High & Middle School * ... 3

SOCIAL STUDIES EDUCATION

SSE 671 — Methods and Materials of Instruction in Secondary Social Studies 3
 SSE 673 — New Perspectives in Social Studies Education 3

SPEECH EDUCATION

SPC 606 — Teaching Communication at the Secondary Level 3
 EED 520 — 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 301 or ENG 501
 — (IC) Intermediate Writing 3
 — Advanced Expository Writing 3
 ENG 311 or ENG 312
 — (PL) English Literature to 1700 3
 — (PL) English Literature after 1700 3
 ENG 220 — (PL) Shakespeare 3
 ENG 541 — American Literature: 1800–1865 3
 ENG 545 or ENG 542
 — Modern American Literature 3
 — American Literature: 1865–1914 3
 ENG 570 or ENG 573
 — Introduction to Linguistic Theory 3
 — Traditional Grammar 3
 ENG 280 — Techniques of Imaginative Writing 4
 ENG 239 or ENG 548
 — (IC) Introduction to African–American Literature: Literature & Writing ... 4
 — Topics in African–American Literature 3
 English Elective 6

FOREIGN LANGUAGE MAJORS (Thirty Credits)

Secondary certification is offered with majors in the following languages: French, German, Italian, Latin, Russian, and Spanish. The computation of the thirty required credits must be accrued within one language and may begin with the course levels cited below.

FRE 260 — Introduction to the Reading of Literature 4
 GER 202 — Intermediate German 4
 ITA 202 — Intermediate Italian 4
 LAT 260 — Latin Poetry 4
 RUS 245 — Language Skills: Speaking and Writing 4
 SPA 202 — Intermediate Spanish: Readings 4

MATHEMATICS MAJOR (Forty-one Credits)

MAT 201 — Calculus I 4
 MAT 202 — Calculus II 4
 MAT 203 — Calculus III 4
 MAT 225 — Elementary Linear Algebra 3
 MAT 235 — Elementary Differential Equations 3
 MAT 221 or MAT 570
 — Elementary Probability and Statistics 4
 — Introduction to Probability Theory 4
 MAT 507 — Advanced Calculus 4
 MAT 540 or MAT 552
 — Elementary Theory of Numbers 3
 — Introduction to Topology 3

MAT 542 — Algebra I 4
 MAT 613 or MAT 286
 — Topics in Mathematics for High School Teachers I 4
 — Discrete Mathematics 4
 MAT 614 — Topics in Mathematics for High School Teachers II 3

SECONDARY SCIENCE MAJOR (Thirty-two Credits)

A single discipline of thirty-two credits must be completed and combined with either a Mathematics Minor or a Unified Science Minor (for minors, see below). All Physics, Biology, Chemistry and Geology students must follow the minimum Bachelor of Arts requirements and sequences as defined by the specific College of Science department plus additional courses if the thirty-two credit minimum is not attained. CHM 674 (Laboratory Safety, two credits) may be used as part of the Chemistry major or Unified Science Minor. At least sixteen credits in science courses outside the major (in three different science areas) are also required. In addition, MAT 201 (Calculus I) and one statistics course are required.

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 (3 courses):
 BIO 151 — (LS) Basic Biology I 4
 BIO 152 — Basic Biology II 4
 BIO elective 3–4
EARTH SCIENCE (3 courses):
 AST 201 — (PS) Descriptive Astronomy 5
 GEL 101 — (PS) Geology: The Science of the Earth 4
 GEL 137 — Meteorology: The Study of Weather 3
CHEMISTRY (10 credits):
 CHM 107 — (PS) Principles of Chemistry I 4
 CHM 108 — Principles of Chemistry II 5
 CHM 674 — Laboratory Safety 2
PHYSICS (3 courses):
 PHY 213 — (PS) General Physics 4
 PHY 214 — General Physics 4
 PHY elective 3–4
 Additional Science Electives 5

In addition to the above major courses, the following courses are required:

MAT 180 — Elementary Functions 4
 MAT and/or CSC electives 2

SECONDARY SOCIAL STUDIES — Individual Disciplines:

ECONOMICS MAJOR (Thirty-three Credits)

Complete the degree requirements for the Bachelor of Arts in Economics, as indicated on page 227.

GEOGRAPHY MAJOR (Thirty-two Credits):

Complete the degree requirements for the Bachelor of Arts with a Major in Geography, as indicated on page 238.

HISTORY MAJOR (Thirty-three Credits):

Complete the degree requirements for the Bachelor of Arts with a Major in History, as indicated on page 251.

* Replaces SCE 507 for Unified Science Group Majors only.

** Recommended electives for Secondary Mathematics Major.

POLITICAL SCIENCE MAJOR (Thirty-two Credits):

Complete the degree requirements for the Bachelor of Arts with a Major in Political Science, as indicated on page 270 .

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.

SPEECH MAJOR (Thirty Credits)

This major must be combined with an English Minor (see below).

SPC 210 — Persuasive Speaking	3
SPC 211 — (CT) Argumentation and Debate	3
SPC 321 — Communication: Concepts and Contexts	4
SPC 204 — Voice and Articulation	3
SPC 250 — Oral Interpretation of Literature	3
SPR 201 — Survey of Mass Communications	3
Speech Electives	10

SPEECH — RADIO/TELEVISION MAJOR (Thirtysix Credits)

This major must be combined with an English Minor (see below).

SPC 210 — Persuasive Speaking	3
SPC 321 — Communication: Concepts and Contexts	4
SPC 204 — Voice and Articulation	3
SPR 201 — Survey of Mass Communication	3
SPR 211 — Radio and Television Announcing	3
SPR 421 — Writing for Radio, Television and Film	3
SPR 431 — Audio Production	4
SPR 540 — Techniques of Film-Video Production	4
SPR 441 — Television Production	4
SPR 542 — Director's Workshop	4

MINOR AREAS OF STUDY: Students seeking secondary certification for grades 7–12 must complete one of the following minors:

BILINGUAL/BICULTURAL MINOR (Eighteen/Twenty-four Credits)

Eighteen credits is required for candidates holding Michigan Teaching Certificates; twenty-four credits is 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 500 — Multicultural Education in Urban America	2
BBE 550 — Introduction to Bilingual/Bicultural Education	3
BBE 553 — The Socio-Psychological Needs of Ethnocultural Communities	3
BBE 656 — Teaching Methods in Bilingual/Bicultural Education	3
BBE 660 — Internship in Bilingual/Bicultural Teaching	2-12
BBE 670 — Seminar in Cultural Awareness *	3
BBE 685 — Applied Linguistics: Issues in Bilingual Education *	3

COMPUTER SCIENCE MINOR (Twenty Credits)

CSC 110 — (CL) Problem Solving and Programming	4
CSC 211 — (CL) Intro. to Data Structures and Abstraction	4
CSC 112 or CSC 114	
— (CL) Introduction to FORTRAN	3
— (CL) Introduction to COBOL	3
CSC 220 — (WI) Data and File Structures	4

Electives (six credits):

CSC 310 — Computer Organization	4
CSC 471 — Information Systems Design	4
CSC 587 — Computer Graphics I	3

ENGLISH MINOR (Twenty Credits)

ENG 220 — (PL) Shakespeare	3
ENG 301 or ENG 280	
— (IC) Intermediate Writing	3
— Techniques of Imaginative Writing	4
ENG 314 or ENG 545	
— (PL) Survey of American Literature	3
— Modern American Literature	3
ENG 570 or ENG 573	
— Introduction to Linguistic Theory	3
— Traditional Grammar	3
ENG 311 or ENG 312	
— (PL) English Literature to 1700	3
— (PL) English Literature after 1700	3
English Elective	5

FOREIGN LANGUAGE MINORS (Twenty Credits)

Secondary certification is offered with minors in the following languages: French, German, Italian, Latin, Russian, and Spanish. Computation of the twenty required credits may begin with the intermediate university-level course work.

HEALTH EDUCATION MINOR (Twenty-four Credits)

ANA 301** and PSL 322 **	
— Introduction to Human Anatomy	4
— Fundamentals of Physiology	4
HEA 231 — Dynamics of Personal Health	3
HEA 233 — First Aid and CPR	3
H E 330 — Health of the School Child	3
H E 333 — School Health Education	3
H E 434 — Reproductive Health Education	2
Electives (must receive prior approval from H E adviser)	5

MATHEMATICS MINOR (Twenty-two to Twenty-three Credits)

MAT 201 — Calculus I	4
MAT 202 — Calculus II	4
MAT 203 — Calculus III	4
MAT 225 — Elementary Linear Algebra	3
MAT 613 or MAT 286	
— Topics in Mathematics for High School Teachers I	4
— Discrete Mathematics	4

One from the following:

MAT 542 — Algebra I	4
MAT 614 — Topics in Mathematics for High School Teachers II	4

PHYSICAL EDUCATION MINOR (Twenty Credits)

Three courses from the following:	
P E 191 — Professional Perspectives in Physical Education ***	2
P E 340 — Lifespan Growth and Development	3
P E 355 — (WI) Motor Learning and Control	3
P E 357 — Physiology of Exercise (Prereq: ANA 301, PSL 322, or equiv.)	3
P E 358 — Biomechanics (Prereq: ANA 301, PSL 322, or equiv.)	3
Specialized Core — Secondary:	
P E 258 — Physical Education in Secondary Schools I (Cr. 3, Max. 9)	6
P E 259 — Physical Education in Secondary Schools II (Cr. 3, Max. 6)	6

Students minoring in physical education must be advised by the Physical Education advisers: 577-4265.

** Only a total of five credits from these courses apply to the minor.

*** Required of all P E students.

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 one science methods course, SCE 506, as well as MAT 180 or its equivalent.

UNIFIED SCIENCE GROUP MINOR (Twenty-four Credits)

Basic course work in science areas other than the major:

BIO 105 — (LS) Introduction to Life	4
CHM 107 — (PS) Principles of Chemistry I	4
GEL 101 — (PS) Geology: The Science of the Earth	4
PHY 213 — General Physics	4
Science electives	8

In addition to the above courses, the following course is required:

MAT 180 — Elementary Functions	4
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Electives may be taken from among the courses listed under the Group Major, above.

SOCIAL SCIENCE SINGLE SUBJECT MINOR (Twenty Credits)

For a social science minor in a single subject, twenty credits must be completed in one of the following areas: economics, history, geography or political science. The minor in history must include at least three courses each in United States history and world history.

SOCIAL SCIENCE GROUP MINOR (Twenty-four Credits)

This minor includes four social science 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.

SPEECH MINOR (Twenty Credits)

credits

SPB 101 — (OC) Oral Communication: Basic Speech	3
SPR 201 — Survey of Mass Communications	3
SPC 204 — Voice and Articulation	3
SPC 210 — Persuasive Speaking	3
SPC 211 — (CT) Argumentation and Debate	3
SPC 220 — Interpersonal Communications	3
SPC 250 — Oral Interpretation of Literature	3

**Bachelor's Degree Programs
in Special Education**

Leading to Grades K – 8 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 are developmentally disabled. 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 95.

DEGREE REQUIREMENTS: The following requirements in various curricular areas supplement the degree requirements outlined above (see page 95). 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 25), 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 105 — (LS) An Introduction to Life	4
BIO 287 — Anatomy and Physiology	5
ENG 102 — (BC) Introductory College Writing	4
HEA 233 — First Aid and CPR	3
MAT 111 — Mathematics for Elementary Teachers I	3
PSY 101 — (LS) Introductory Psychology	4
SPB 101 — (OC) Oral Communication: Basic Speech	3
Critical Thinking (CT) course:	
PHI 105 or SPC 211	
— (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 101 or P S 103	
— (AI) American Government	4
— (AI) The American Governmental System	3
GPH 110 or SOC 200	
— (SS) World Regional Patterns	4
— (SS) Understanding Human Society	3

THE UNIVERSITY and ITS LIBRARIES: 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 100 — (GE) The University and Its Libraries	1
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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 601 is a corequisite with TED 579.

PHASE I (Seventeen Credits) credits

TED 355 — Teaching: Theory and Practice	5
ELE 330 — Teaching Language Arts: Preprimary-9	3
ELE 340 — Teaching Mathematics: Preprimary-9	3
EDP 331 — Educational Psychology	3
RDG 443 — (WI) Teaching Reading in Subject Matter Areas	3

PHASE II (Fifteen Credits)

TED 356 — Pre-Student Teaching Field Experiences	3
ELE 332 — Teaching Reading: Preprimary-9	3
ELE 350 — Teaching Science: Preprimary-9	3
ELE 360 — Teaching Social Studies: Preprimary-9	3
ELE 607 — Parent Intervention Programs in Home and School	3

PHASE III (Seven Credits)

TED 578 — Directed Teaching and Conference	5
BBE 500 — Multicultural Education in Urban America	2

PHASE IV (Ten-Eleven Credits)

TED 579 — Student Teaching & Conference for Special Groups	8
SED 601 — Seminar in Multi-Handicapped	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 406 and SED 503 can be taken only after admission to the Special Education Program.

<i>MENTALLY IMPAIRED (Thirty-five Credits)</i>	<i>credits</i>
SED 406 — Developing Observation & Assessment Skills—Lab/Seminar	3
SED 408 — Special Educational Services to Severely Handicapped	3
SED 503 — Education of Exceptional Children	3
SED 504 — Speech Improvement in the Classroom	2
SED 511 — Mental Retardation and the Cognitive Process	3
SED 513 — Curriculum Development: Mental Impairments	3
SED 514 — Behavior Management: Mental Impairments	3
SED 526 — Home & Hospital Education of Children with Physical Impairments	4
SED 560 — Intro. to Educ. of Hearing- and Visually-Impaired Children	3
SED 570 — Computer & Adaptive Technology in Special Education	2
SED 600 — Problems in Special Education	3
SED 601 — Seminar in Multi-Handicapped	3

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 389.

PLANNED MINOR Students pursuing a bachelor's degree in education leading to an endorsement in special education must complete the following minor requirement.

<i>PLANNED MINOR (Twenty-two Credits)</i>	
BIO 287 — Anatomy and Physiology	5
PSY 230 — Psychology of Adjustment	4
SOC 200 — (SS) Understanding Human Society	3
P S 101 — (AI) American Government	4
ELE 320 — Literature for Children	3
SED 600 — 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.

Students are encouraged to enter the art education program as freshmen. Undergraduates, however, may be admitted at any time during the course of their baccalaureate studies. 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 104). The sequence begins in the fall semester.

Admission: see page 95. Applicants for admission to the art education program at the senior college level (junior and senior year) and post-degree level are required to submit a satisfactory 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 95).

GENERAL EDUCATION REQUIREMENTS: see page 25.

PRE-PROFESSIONAL REQUIREMENTS: Students pursuing a bachelor's degree leading to grades K-12 certification in art education must complete the following courses:

	<i>credits</i>
ENG 102 — (BC) Introductory College Writing	4
CSC 100 — (CL) Introduction to Computer Science	3
SPB 101 — (OC) Oral Communication: Basic Speech	3
P S 101 — (AI) American Government	4
PSY 101 — (LS) Introductory Psychology	4
A H 111 — (VP) Paleolithic through Gothic Art Survey	3
A H 112 — (VP) Renaissance through Modern Art Survey	3
HEA 233 — First Aid and CPR	3
Intermediate Composition (IC) course	

PROFESSIONAL EDUCATION REQUIREMENTS: Students pursuing a bachelor's degree leading to grade K-12 certification in art education must complete the following courses:

	<i>credits</i>
AED 501 — Art Teaching Laboratory	5
EOP 331 — Educational Psychology	3
AED 516 — Theory and Practice in Art Education	3
RDG 443 — (WI) Teaching Reading in Subject Matter Areas	3
TED 578 — Directed Teaching and Conference	7
TED 579 — Student Teaching and Conference for Special Groups	3
EHP 360 — Introduction to the Philosophy of Education	3

MAJOR REQUIREMENTS: Students pursuing a bachelor's degree in art education must complete forty-eight credits in art/art education major courses distributed as follows:

<i>Required Courses:</i>	<i>credits</i>
ADR 105 — Drawing I	3
ADR 106 — Drawing II	3
ADE 120 — Design I	3
ADE 121 — Design II	3
AED 118 — Methods and Materials of Sculptural Expression	3
AED 118 — Art Process, Perception, and Expression	3
AED 517 — Methods and Materials: Fibers	3
AED 519 — Light, Sound, Space, and Motion	3
AED 522 — Methods and Materials: Painting	3
AED 523 — Ceramics Education I	3
AED 526 — Methods and Materials: Wood, Metal, and Plastic	3
AED 528 — Methods and Materials: Printmaking	3
ADR 207 — Beginning Life Drawing	3
ASL 215 — Introduction to Sculpture	3
AED 515 or AED 615	
— Computer Graphics in the School Art Room	3
— Instructional Applications of Computer Graphics	3

Recommended Electives:

AED 510 — Art for Special Groups	1-3
AED 520 — Computer Programmed Multi-Screen, Multi-Image Presentations	3
AED 530 — Survey of Art Therapy	3
AED 622 — Drawing and Watercolor: Field Studies	3
AED 623 — Ceramics Education II	3
AED 625 — Aspects of Ceramics	3-9
AH elective	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 101–102.

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 student teaching. 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. Conditional application for winter semester Student Teaching must be accomplished by mid-September.

PROGRAM REQUIREMENTS consist of a professional education sequence (twenty-seven 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 101–102.

PROFESSIONAL EDUCATION (Twenty-seven Credits) credits

AED 501 — Art Teaching Laboratory	5
EDP 331 or EDP 545 or EDP 548	
— Educational Psychology	3
— Child Psychology	3
— Adolescent Psychology	3
RDG 443 — Teaching Reading in Subject Matter Areas	3
TED 578 — Directed Teaching and Conference	7
TED 579 — Student Teaching and Conference for Special Groups	3
EHP 360 — Introduction to the Philosophy of Education	3
AED 516 — Theory and Practice in Art Education	3

METHODS AND MATERIALS COURSES (Twenty-four Credits)

AED 117 — Methods and Materials of Sculptural Expression	3
AED 118 — Art Process, Perception, and Expression	3
AED 517 — Methods and Materials: Fibers	3
AED 519 — Light, Sound, Space, and Motion	3
AED 523 — Ceramics Education I	3
AED 528 — Methods and Materials: Printmaking	3
AED 515 or AED 615	
— Computer Graphics in the School Art Room	3
— Instructional Applications of Computer Graphics	3

Electives: One of the following

AED 510 — Art for Special Groups	3
AED 520 — Computer Programmed Multi-Screen, Multi-Image Presentations	3
AED 522 — Methods and Materials: Painting	3
AED 526 — Methods and Materials: Wood, Metal, and Plastic	3
AED 530 — Survey of Art Therapy	3
AED 622 — Drawing and Watercolor—Field Studies	3
AED 623 — Ceramics Education II	3
AED 625 — Aspects of Ceramics	3-9

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. With the exception of the program in industrial arts, all of the programs offered under these generic headings lead to two kinds of certification: secondary school certification, and vocational certification. The industrial arts program leads to secondary school certification only.

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. Students in industrial arts are not required to have work experience.

Admission Requirements: In addition to the regular admission procedures (see page 95), 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 95.

PRE-PROFESSIONAL REQUIREMENTS: Students seeking a bachelor's degree in career and technical education must complete the pre-professional requirements outlined on page 98.

PROFESSIONAL EDUCATION REQUIREMENTS: Students in career and technical education programs must complete the professional education requirements outlined on page 99.

SPECIALIZATIONS: Programs in career and technical education are grouped under four curricular areas:

BUSINESS EDUCATION:

- Accounting and Computing
- Business Information Systems
- General Business (non-vocational education)
- 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 101–102.

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.

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 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. 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

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 classes of kindergarten or preschool children. Students holding existing certificates may add an early childhood endorsement by completing an eighteen-credit planned program. Information on requirements for this endorsement and referral to the appropriate adviser may be obtained in Room 469 or 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 Michigan Competency Examinations in major and minor teaching areas.
4. Satisfactory completion of required courses in the professional education sequence with grades of 'C' or better.
5. Negative tuberculosis test result within six months prior to the start of the assignment.

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, Matthaei Building; Recreation and Park Services, Room 259, Matthaei Building; Speech Impaired, 563 Manooogian; 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 463.

TEACHER EDUCATION DIVISION (TED)

225. 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)

355. Teaching: Theory and Practice. Cr. 5

Prereq: admission to teacher certification program; coreq: ELE 330. 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)

356. Pre-Student Teaching Field Experiences. Cr. 3(Max. 6)

Offered for S and U grades only. Prereq: admission to teacher certification program; coreq: ELE 332. 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)

430. (H E 330) Health of the School Child. Cr. 3

Prereq: HEA 231. Health status and problems of youth at various stages of growth and development; teacher's role in health protection and promotion. (F,W)

515. 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)

516. Analysis of Middle and Secondary School Teaching. Cr. 3

Prereq: admission to teacher certification program; coreq: TED 565. 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. (T)

546. (DNC 546) Music and Dance in the Music Class II. (MED 558). Cr. 1-2

Prereq: TED 544. Continuation of TED 544; added experience using the Orff instrumentation for accompaniment. (S)

565. Pre-Student Teaching Field Experience for Secondary Majors. Cr. 3-5

Offered for S and U grades only. Prereq: admission to secondary certification program; coreq: TED 516. Field experience in secondary school settings prior to full-time student teaching. (F,W)

574. (D E 574) Problems in Driver Education and Traffic Safety. Cr. 3

Prereq: TED 594. Issues and concerns in professional preparation to meet traffic safety needs of schools and communities. (F,S)

575. (D E 575) Seminar in Driver Education and Traffic Safety. Cr. 3

Prereq: TED 574. Behavioral, administrative, and professional aspects of the teaching role in driver and traffic safety education. (W,S)

578. Directed Teaching and Conference. Cr. 1-10

Prereq: admission to student teaching. 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)

579. 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)

581. (DNC 581) Creative Dance for Children. (DNE 581). 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)

582. (DNC 582) Creative Movement for the Pre-School Child I. Cr. 3

Creative dance activities; manipulative, musical, imaginative and kinesthetic approaches to movement. (F,W)

583. (DNC 583) Field Work in Creative Dance. Cr. 2-8

Prereq: DNC 583 or consent of instructor. Supervised professional study in field settings. (T)

594. (D E 573) 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)

602. Computer Applications in Teaching I. Cr. 3

Advanced programming in BASIC and other languages appropriate for instruction; computers and teaching; problem-solving, modeling, data-analysis and testing; development of computer-based instructional materials and evaluation of existing materials. (T)

613. 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)

614. Local School Curriculum Planning. Cr. 1-6(Max. 12)

Prereq: teaching experience. 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)

117. Methods and Materials of Sculptural Expression. Cr. 3

Required for certification in art education and prior to student teaching. Material fee as indicated in *Schedule of Classes*. 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. (F)

118. Art Process, Perception and Expression. Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (Y)

501. Art Teaching Laboratory. Cr. 5

Prereq: consent of instructor. Material fee as indicated in *Schedule of Classes*. Laboratory experience in teaching art to upper elementary children, middle school and high school students. Includes planning, producing visual aids, evaluating children's work and peer- and self-assessment in teaching using video tape recording equipment. (F)

510. Art for Special Groups. Cr. 1-3(Max. 9)

Material fee as indicated in *Schedule of Classes*. Art experiences designed for the specific needs of special groups. Topics to be announced in *Schedule of Classes*. (I)

512. Art for Special Education. Cr. 2-4

Material fee as indicated in *Schedule of Classes*. Students will experience a wide variety of two- and three-dimensional art forms selected and designed specifically for use with exceptional children and adults as a way to produce self-esteem, encourage learning and provide therapeutic value. (Y)

515. Computer Graphics in the School Art Room. Cr. 3

Instruction and laboratory experiences in the production of computer graphics, primarily using the AppleIIe 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)

516. Theory and Practice in Art Education. Cr. 3 (Max. 9)

Prereq: AED 501; prereq. or coreq: student teaching. Required for certification in art education. Seminar, lectures, readings and writing pertaining to the history, philosophies, purposes and practices of art education; philosophical influences on art education. Required field experience in alternative setting. (W)

517. Methods and Materials: Fibers. Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. 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. (F)

519. Light, Sound, Space and Motion. (I T 519). Cr. 3(Max. 9)

Required for certification in Art Education. Material fee as indicated in *Schedule of Classes*. 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. (W)

520. (I T 513) Computer-Programmed

Multi-screen/Multi-Image Presentations. Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. Examination of methods and procedures for producing multi-screen/multi-image presentations including the use of micro-processing computers. Students plan and produce a multi-screen or multi-image presentation. (W)

522. Methods and Materials: Painting. Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. 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. (F)

523. Ceramics Education I. Cr. 3

Required for certification in Art Education. Material fee as indicated in *Schedule of Classes*. 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. (Y)

526. Methods and Materials: Wood, Metal and Plastic.
Cr. 2-3(Max. 9)

Material fee as indicated in *Schedule of Classes*. 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. (W,S)

528. Methods and Materials: Printmaking. Cr. 3(Max. 9)

Prereq: one college-level drawing class. Material fee as indicated in *Schedule of Classes*. 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. (W)

530. Survey of Art Therapy. Cr. 3

Slide lectures, readings, and studio experience in and related to art therapy. (Y)

615. Instructional Applications of Computer Graphics.
(I T 615). Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (T)

622. Drawing and Watercolor – Field Studies. Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. 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. (S)

623. Ceramics Education II. Cr. 3 (Max. 9)

Prereq: AED 523. Material fee as indicated in *Schedule of Classes*. 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. (Y)

625. Aspects of Ceramics. Cr. 3-9(Max. 9)

Material fee as indicated in *Schedule of Classes*. Various aspects of ceramics chosen to develop the students' understanding of the potential for ceramic education. Topics to be announced in *Schedule of Classes*. (I)

632. Introduction to Art Therapy. Cr. 3

Prereq: admission to art therapy program. 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)

634. History and Literature of Art Therapy. Cr. 3

Prereq: AED 632; admission to art therapy program. Open only to art therapy majors. Slide lectures, studio experiences, assigned readings, discussions, and critical evaluations in the history and literature of art therapy and closely-related fields. (Y)

636. Aspects of Art Therapy. Cr. 3-12

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)

500. 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)

502. 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)

550. 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)

553. 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)

555. Urban Education. Cr. 3

Prereq: student in bilingual/English/language education area. Language program implementation within the urban culture of the school, community, and state. (I)

656. 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)

659. Culture and Language in Bilingual/Bicultural Education.
Cr. 1-3

Prereq: BBE 656. Research and application of multicultural activities for designing processes to bring language and culture, and instruction in English, into the classroom. (I)

660. Internship in Bilingual/Bicultural Teaching. Cr. 2-12

Prereq: admission to bilingual internship. 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)

670. 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)

685. 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)

530. Business/Distributive Education Word Processing I: Typewriting. Cr. 3

Prereq: touch typewriting knowledge. 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)

541. Career and Technical Education. Cr. 3

Coreq: BDE 532, FLE 545, FLE 501, or I E 677. Open only to career and technical education majors. 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)

601. 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)

692. Cooperative Education – Field Study. Cr. 1–10(Max. 12)
Prereq: career/technical education major, curriculum area approval. Field experience to correlate with the teaching of career/technical education subjects. (F,W)

693. 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.)

Prereq: career/technical education experience; consent of adviser. Special workshops and short term seminars in career and technical education subjects. (F,S)

699. 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)

COUNSELOR EDUCATION (CED)

503. 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)

509. Family Education and Counseling: Substance Abusers. Cr. 3

Prereq: CED 503 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)

607. 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)

608. Theories of Counseling. Cr. 3

Prereq: CED 607. Major theories of counseling: humanistic, analytic, behavioral, cognitive behavioral traditions. Ethical, legal, multicultural factors in conceptualization and delivery of counseling series. (T)

670. The Role of the Teacher in Guidance. Cr. 2

Introduction to guidance principles, techniques and roles, with stress on classroom application. Primarily for school personnel other than counselors. (T)

671. 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)

672. 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)

673. 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)

EDUCATION (ED)

390. Directed Study. Cr. 1–6(Max. 6)

Prereq: written consent of adviser. (T)

598. Field Studies. Cr. 1–8(Max. 8)

Prereq: consent of adviser or instructor. Supervised professional study in field settings. (T)

EDUCATIONAL HISTORY and PHILOSOPHY (EHP)

360. 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)

331. Educational Psychology. Cr. 3

Prereq: admission to teacher certification program. 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)

545. Child Psychology. Cr. 2–3

Prereq: admission to teacher certification program. 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)

548. Adolescent Psychology. Cr. 2–3

Prereq: admission to teacher certification program. 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)

621. 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)

622. Psychology of Exceptional Children. Cr. 3 or 4

Material fee as indicated in *Schedule of Classes*. Psychological aspects of cognitive and physical deficits in children; laboratory experience in differential diagnosis. (F)

EDUCATIONAL SOCIOLOGY (EDS)

662. Sociology of Urban Schools. Cr. 2–3

Sociological analysis of the societal and institutional problems and processes bearing on the education of children from the various subcultural backgrounds found in modern urban areas. Emphasis on contemporary educational problems in the urban setting. (Y)

ELEMENTARY EDUCATION (ELE)

320. Literature for Children. Cr. 3

Literature appropriate for use with children from preprimary through middle school age. (T)

330. Teaching Language Arts: Preprimary–9. Cr. 3

Prereq: admission to teacher certification program; coreq: TED 365. 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)

332. Teaching Reading: Preprimary-9. Cr. 3

Prereq: RDG 443; coreq: TED 356. 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)

340. 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)

350. Teaching Science: Preprimary-9. Cr. 3

Prereq: TED 355; admission to teacher certification program. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

360. Teaching Social Studies: Preprimary-9. Cr. 3

Prereq: TED 355; admission to teacher certification program. Objectives, curriculum content and organization, teaching strategies, instructional materials. Evaluation of learning. Utilization of community resources. (F,W)

602. 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)

603. Observation and Assessment of Caregiver-Infant Interactions. Cr. 3

Prereq: one course in child growth and development, or consent of instructor. Developing skills in observing and recording infant's relationship with parent/caregivers; assessments of caregiver interactions; family-interaction and attachment theories related to practice of administering assessments. (Y)

604. Role of Content Areas in Early Childhood Education. Cr. 2-8

Child growth and development related to the content areas within early childhood years (birth to eight years). Appropriate subject matter, field experience, reference materials, audio-visual resources in lives of young children. Topics announced in *Schedule of Classes*. (S)

606. 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)

607. Parent Intervention Programs in Home and School. Cr. 3

Program models, research, and relationship between school and parent intervention programs. (Y)

608. Preprimary Goals and Practice. Cr. 2

An examination of current programs and research in nursery school and kindergarten education. (F,W)

609. Introduction to Infant Mental Health Theory and Practice. Cr. 1

Prereq: PSY 240, PSY 243; EDP 331 or equiv. 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)

610. Planning and Implementing Nursery School Curriculum. Cr. 3

Prereq: teaching experience. Short and long term planning, staff and parent relationships, curriculum areas. (I)

629. 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)

630. 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)

631. Reading Instruction: Preprimary-9. Cr. 3

Prereq: admission to M.A.T. degree program. Developing reading skills in elementary and middle schools. Students plan, implement and evaluate learning experience with children under professional guidance. (F,W)

632. Reading Curriculum: Preprimary-9. Cr. 3

The reading process; procedure, materials and organizational patterns used when teaching reading. (T)

634. 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)

636. Remedial Instruction in Reading and Related School Subjects. Cr. 3

Prereq: teaching experience. Diagnosis, treatment, and prevention of learning difficulties in reading and related subjects. Emphasis on overcoming learning difficulties within the regular classroom. (Y)

639. 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)

640. 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)

650. Science Curriculum: Preprimary-9. Cr. 3

Prereq: admission to teacher certification program. Material fee as indicated in *Schedule of Classes*. 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. (T)

660. Social Studies Curriculum: Preprimary-9. Cr. 3

Prereq: admission to teacher certification program. Social studies program in elementary and middle schools emphasizing intellectual, social and affective development. Designing programs based on social priorities, modern socioeconomic, cultural, ethnic, political concepts. (T)

ENGLISH EDUCATION (EED)

520. Methods of Teaching English: Grades 7-12. Cr. 3

Prereq: 18 credits in English beyond freshman composition; TED 516. Introduction to the purposes and methods of teaching English composition and literature in grades seven through twelve. (Y)

612. English Composition in Secondary Schools. Cr. 3

Prereq: EED 520 or teaching experience. 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)

621. Linguistics and Learning. Cr. 3

Prereq: directed or regular teaching. Intensive review of current linguistic theory; introduction to psycholinguistics application for

teaching grammar, usage, and composition; development of teaching materials. (S)

631. Literature for Adolescents. (LIS 653). Cr. 3

Prereq: directed or regular teaching. 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)

633. Teaching Literature in Secondary Schools. Cr. 3

Prereq: EED 520 or teaching experience. 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)

INDUSTRIAL EDUCATION (IED)

677. Methods and Materials of Instruction II – Industrial Education. Cr. 4

Practice and techniques for teaching units in industrial education with group and individualized methods; locating, selecting, and using educational materials. Students demonstrate selected course objectives in a field setting. (W)

INSTRUCTIONAL TECHNOLOGY (IT)

510. Using Educational Media Methods and Materials. (LIS 638). Cr. 2

Survey of educational media, methods, and materials. Techniques of operating and using traditional audiovisual aids and new technologies, to deliver instruction. Overview of innovative applications of technology in variety of instructional settings. (Y)

511. Educational Technology. (LIS 636). Cr. 2

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. (T)

512. Producing Instructional Media and Materials. (LIS 637). Cr. 2-3

Design and development of instructional media and materials for use in educational, industrial, or human services programs. Development of computer-generated instructional materials. (T)

513. Computer-Programmed Multi-Screen/Multi-Image Presentations. (AED 520). Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. Methods and procedures for producing multi-screen/multi-image presentations including the use of micro-processing computers. Students plan and produce a multi-screen or multi-image presentation. (W)

519. (AED 519) Light, Sound, Space, and Motion. Cr. 3

Required for certification in Art Education. Material fee as indicated in *Schedule of Classes*. 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. (F)

606. 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. (W,S)

611. Systems Techniques in Educational Planning and Management. Cr. 4

Principles of general systems theory; their applications in instructional design and project program management. Emphasis on alternative systems models of design and specific planning techniques. Topics

include: systems analysis and synthesis, flow charting, data management, budgeting systems, PERT charting. (T)

615. (AED 615) Instructional Applications of Computer Graphics. Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (T)

LANGUAGE EDUCATION (LED)

652. 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)

653. 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)

658. 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)

505. (MAT 516) Mathematics for Elementary School Teachers I. Cr. 3

Prereq: one of following within previous two semesters: satisfactory score on qualifying exam or MAT 105, or MAT 095 with recommendation of instructor to enter MAE 505. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 505 only; undergraduate credit for MAT 516 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)

506. (MAT 517) Mathematics for Elementary School Teachers II. Cr. 3

Prereq: MAE 505. No credit towards a major or minor for secondary mathematics teaching. Graduate credit for MAE 506 only; undergraduate credit for MAT 517 only. 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)

510. (MAT 518) Mathematics for Middle/Junior High School Teachers I. Cr. 3

Prereq: MAE 505 and 506 or consent of instructor. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 510 only; undergraduate credit for MAT 518 only. Development of Euclidean geometry as a mathematical system; related historical topics; introduction to other geometries; selected topics such as transformations and tessellations. (F)

511. (MAT 519) 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 511 only; undergraduate credit for MAT 519 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)

515. Methods and Materials of Instruction – Secondary School Mathematics. Cr. 3

Prereq: admission to teacher education; 21 credits toward secondary mathematics major (incl. MAT 614) or consent of instructor. Graduate credit only in M.A.T. program. To be elected before student teaching. Mathematics in secondary school; major concepts of secondary school mathematics; methods and instructional materials; classroom administration; modern trends. (B)

605. Teaching Mathematics In the Middle School and the Junior High School. 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. (B)

615. Creative Approaches In Mathematics Education. Cr. 2–6(Max. 12)

Prereq: teaching experience. Current issues and trends; areas of neglected content; curriculum proposals; related research. Topics to be announced in *Schedule of Classes*. (I)

READING EDUCATION (RDG)

443. (WI) Teaching Reading in Subject Matter Areas. Cr. 3

Prereq: admission to teacher certification program. 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)

612. Reading in the Content Areas. Cr. 3

Prereq: admission to teacher certification program. Practical approach to the problems of reading disability as they affect the subject matter teacher in social studies, science, mathematics and other areas. (T)

640. 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)

641. 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)

642. Practicum in Reading in the Content Areas. Cr. 1–4

Prereq: RDG 443 or equiv.; consent of instructor. Identifying and solving field problems in reading in the content areas. (I)

SCIENCE EDUCATION (SCE)

501. Biological Sciences for Elementary and Middle School Teachers. Cr. 3–4

Material fee as indicated in *Schedule of Classes*. 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. (F,W)

502. Physical Sciences for Elementary and Middle School Teachers. Cr. 3–4

Material fee as indicated in *Schedule of Classes*. 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. (F,W)

504. 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)

506. Methods and Materials of Instruction In Secondary School Science I. Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (F)

507. Methods and Materials of Instruction In Secondary School Science II. Cr. 3

Prereq: SCE 506. Material fee as indicated in *Schedule of Classes*. 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)

603. 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)

604. Advanced Studies in Teaching Science In the High School. Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (S)

608. Teaching Environmental Studies. Cr. 3–6

Material fee as indicated in *Schedule of Classes*. 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. (S)

SOCIAL STUDIES EDUCATION (SSE)

671. 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)

673. New Perspectives in Social Studies Education. Cr. 3

Prereq: TED 516, SSE 671. 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)

406. Developing Observation and Assessment Skills – Laboratory/Seminar. Cr. 3

Investigation and application of appropriate evaluation techniques for use with severe/profound learners in a practice setting. (Y)

408. Special Education Services to the Severely Handicapped. Cr. 3

Prereq: SED 406 and admission to teacher certification program. Characteristics of profoundly/severely handicapped; emphasis on development of skills necessary for functioning as an adult. (Y)

501. The Exceptional Child In the Regular Classroom. Cr. 2

Open only to undergraduate nonmajors. Overview of characteristics of and interventions with exceptional children in regular classrooms. (Y)

- 503. 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, their role in society, and their education. (T)
- 504. Speech Improvement In the Classroom. Cr. 2**
Prereq: admission to teacher certification program. Identification of the speech characteristics and needs of teachers and pupils; deviations from normal speech; integration of speech improvement in classroom activities. (S)
- 505. (NUR 525) Introduction to Developmental Disabilities. (S W 555)(P T 505). Cr. 3-4**
Prereq: junior standing; senior standing for nursing students. Nursing students must elect for four credits. Cross-disciplinary overview of developmental disabilities, e.g., mental impairment, epilepsy, cerebral palsy, autism, through presentation of contrasting theoretical schools of thought and intervention schema. (I)
- 507. (CDS 701) Acoustics of Speech. Cr. 3**
Prereq: CDS 508, CDS 509. Acoustic consequences of phonetically-relevant articulatory movements. (F)
- 511. Mental Retardation and the Cognitive Process. Cr. 3**
Prereq: SED 503 and admission to teacher certification program. Characteristics, classifications, etiologies, evaluation and learning strategies for the improvement of the cognitive processes in mentally impaired learners. (F,W)
- 513. Curriculum Development: Mental Impairments. Cr. 3**
Prereq: SED 503, 511 and admission to teacher certification program. Specialized instructional approaches, evaluation, techniques, curriculum and instructional aids for the mildly to profoundly mentally-impaired learner. (Y)
- 514. Behavior Management: Mental Impairments. Cr. 3**
Prereq: SED503, SED 511 and admission to teacher certification program. Specialized instructional and training approaches for management of behavior problems of mildly to profoundly mentally impaired and multiply impaired learners. (Y)
- 526. Home and Hospital Education of Children with Physical Impairments. Cr. 4**
Prereq: SED 503 and admission to teacher certification program. Emphasis on educational, recreational and vocational programs for children with physical health and neurological impairments in home, school and hospital settings. (F)
- 530. (CDS 530) Introduction to Communication Disorders. Cr. 3-4**
Speech-language pathology in clinical and educational settings; classification of communication disorders and related management strategies. (F,S)
- 531. (CDS 531) Clinical Methods in Communication Disorders. Cr. 3**
Prereq: CDS 508, CDS 509, CDS 530, CDS 532. Procedures and materials for clinical diagnosis of articulatory, language, rhythm, and voice deficits of organic and non-organic causation. (W)
- 532. (CDS 508) Phonetics. (LIN 508). Cr. 3**
Multisensory study of sounds of the English language, emphasizing acoustic, physiologic, kinesiologic approaches. (F)
- 533. (CDS 509) Anatomy and Physiology of the Speech Mechanism. Cr. 3**
General science of normal speech; anatomy, physiology and mechanics of respiration, phonation, resonance, articulation. (W)
- 534. (CDS 536) Clinical Practice in Communication Disorders, Cr. 2**
Prereq: CDS 646, CDS 648, and CDS 531, each with grade of B or better. Material fee as indicated in *Schedule of Classes*. Supervised experience in application of methods of diagnosis and treatment of clinical cases. (T)
- 536. (CDS 532) Normal Acquisition and Usage. (LIN 536). Cr. 3**
Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (F)
- 560. Introduction to Education of Hearing- and Visually-Impaired Children. Cr. 3**
Prereq: SED 593 and admission to teacher certification program. Characteristics of children with substantial hearing and vision impairments; how these impairments relate to curriculum planning and instruction in school; includes those defined as deaf or blind. (I)
- 561. Pathology of Organs of Vision. Cr. 3**
Prereq: SED 560. Anatomy, physiology of vision; lectures by ophthalmologists on pathologies and correction of refractive errors; clinical observations; coordinated with procedures for teaching the visually handicapped. (I)
- 570. Computer and Adaptive Technology in Special Education. Cr. 2-3**
Prereq: SED 503, TED 602 and admission to teacher certification program. Offered for three credits to graduate students only. Introduction to computer applications in the education and habilitation of exceptional children and youth in schools. Experience with general purpose microcomputers and microprocessor-based adaptive devices for use in all categories and degrees of impairment. (S)
- 600. 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)
- 601. Seminar in Multi-Handicapped. Cr. 2-3**
Coreq: student teaching in special education. For teachers, supervisors, and administrators. Investigation of theories, programs, and practices in teaching the multi-handicapped. Emphasis on the problems associated with the education, training, and programming of multi-handicapped students. (F,W)
- 602. Educating Intellectually Superior, Creative, and Talented Children. Cr. 3**
Prereq: six credits in psychology or special education. Individual differences, characteristics, identification, development, curriculum, adaptations, teaching procedures. (I)
- 636. (CDS 636) Advanced Clinical Practice in Communication Disorders. Cr. 2**
Prereq: CDS 536 or equiv. with grade of B or better. Material fee as indicated in *Schedule of Classes*. Supervised experience in application of diagnosis and treatment of clinical cases. (T)
- 646. (CDS 646) Communication Disorders I. Cr. 4**
Prereq: CDS 508, CDS 509, CDS 530, CDS 532. Introduction to the clinical management of articulation and language disorders. (F)
- 648. (CDS 648) Communication Disorders II. Cr. 4**
Prereq: CDS 508, CDS 509, CDS 530, CDS 532. Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (F)
- 664. (CDS 664) Language Pathology: Etiology and Diagnosis. Cr. 3**
Prereq: SED 530 and 532. Descriptions, etiology, methods of diagnosis of language disorders in children, including remediation. (F)

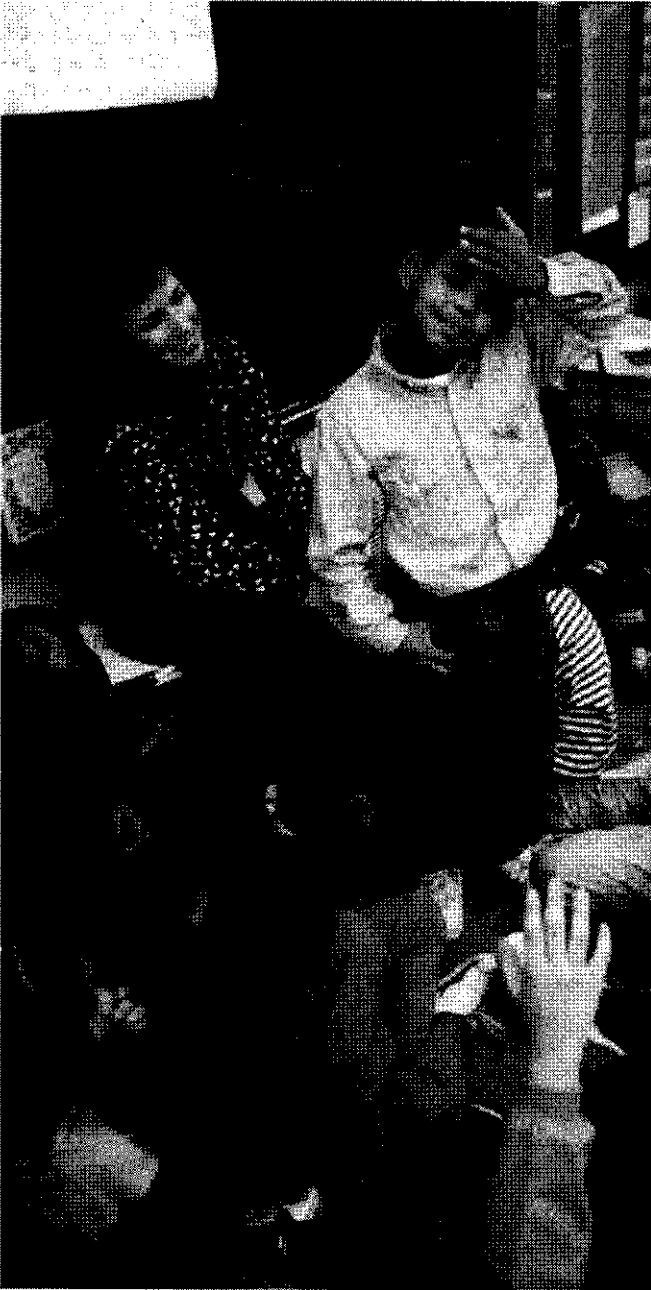
SPEECH EDUCATION (S E)

537. (SPC 504) The Rhetoric of Racism. (AFS 504). 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)

606. (SPC 606) 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)



COLLEGE OF ENGINEERING

DEAN: Fred W. Beaufait

Foreword

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

In the 1986-87 academic year, the College of Engineering occupied the new, three-story addition to the Engineering Building. The College's existing facilities have been completely redesigned and extensively refurbished into a modern teaching and research facility containing instructional aids and research equipment. A College of Engineering Computer Center, including a computer graphics and design laboratory and new computer equipment, is located in the recently renovated units. Curricula in all departments incorporate the use of computers at all levels of instruction, and students are provided easy access to necessary hardware and software. In addition to the library and general resources of the University, the College of Engineering itself has 215,500 square feet of classroom, office and laboratory space. Included in the renovated three-story engineering building are classrooms, undergraduate laboratories, departmental computer facilities, shops, and research laboratories.

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 specific 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 the undergraduate curricula of the Division of Engineering leading to a Bachelor of Science degree, except the new program in Manufacturing Engineering, are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (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 123.

The College is affiliated with eleven other schools and colleges of Wayne State University. The University setting, with its 32,500 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
Manufacturing Engineering
Materials Science and Engineering
Mechanical Engineering

**MASTER OF SCIENCE in*

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*

Chemical Engineering
Civil Engineering
Computer Engineering
Electrical Engineering
Industrial Engineering
Operations Research
Materials Science and Engineering
Mechanical Engineering

**GRADUATE CERTIFICATE Programs in*

Hazardous Waste Control
Polymer Engineering

Division of Engineering 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

**MASTER OF SCIENCE in Engineering Technology*

* For specific requirements, consult the Wayne State University Graduate Bulletin.

COLLEGE OF ENGINEERING DIRECTORY

<i>Dean</i>	Room 1100, Engineering Building; 577-3775
<i>Assistant Dean—Student Affairs and Minority Programs</i>	Room 1100, Engineering Building; 577-3780
<i>Associate Dean—Graduate Programs and Research</i>	Room 1100, Engineering Building; 577-3861
<i>Associate Dean—Academic Affairs and Undergraduate Programs</i>	Room 1100, Engineering Building; 577-3040
<i>Director of Alumni and Corporate Relations</i>	Room 1100, Engineering Building; 577-4707
<i>Business Manager</i>	Room 1100, Engineering Building; 577-3817
<i>Engineering Technology</i>	4855 Fourth Avenue; 577-0800
<i>Coordinator, Cooperative Education</i>	University Placement Office, 1001 Faculty/Administration Bldg.
<i>Chemical Engineering and Materials Science</i>	Room 1100, Engineering Building; 577-3800
<i>Civil and Environmental Engineering</i>	Room 2100, Engineering Building; 577-3789
<i>Electrical and Computer Engineering</i>	Room 3100, Engineering Building; 577-3920
<i>Graduate Certificate Program in Polymer Engineering</i>	Room 1100, Engineering Building; 577-3800
<i>Hazardous Waste Management</i>	Room 1100, Engineering Building; 577-3800
<i>Industrial and Manufacturing Engineering</i>	Room 3100, Engineering Building; 577-3821
<i>Mechanical Engineering</i>	Room 2100, Engineering Building; 577-3845
<i>Bio-Engineering Center</i>	818 West Hancock; 577-1344
<i>Center for Automotive Research</i>	Room 2121, Engineering Building; 577-3887

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

STUDENT ORGANIZATIONS and FINANCIAL AID

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.

The Wayne Engineer, a student engineering magazine, is published four times yearly. It is a member of the Engineering College Magazines Association.

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, founded in 1969, was established to encourage the choice of engineering and science as career fields for black students.

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 several 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
Institute of Industrial 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 h.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.

AMAX Undergraduate Scholarship Fund: Awarded to chemical engineering students.

The American Metal Climax Foundation Scholarship—Climax Molybdenum: Award open to materials science and engineering students.

The American Society for Metals Scholarship: Award open to materials science and engineering students.

American Welding Society Scholarship: Award of tuition and \$150 in fees open to engineering technology students with demonstrated financial need, and outstanding scholarship and leadership qualities.

Anderson Consulting Merit Scholarship: Awarded to full-time engineering undergraduate juniors and seniors who have a 3.5 h.p.a. or above and who have demonstrated leadership in student organizations and interest in information systems and technology.

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.

College of Engineering Scholarship: Award open to full-time undergraduate engineering students, with demonstrated financial need, and outstanding scholarship and leadership qualities.

L. David Cook Memorial Education Scholarship: Awarded to any full-time undergraduate major in materials science and engineering in good standing with the College.

Dow Chemical Company—DOW—DAPCEP Scholarship: Awarded to full-time minority students majoring in chemical engineering, with demonstrated financial need 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 h.p.a.

Dow Outstanding Junior Award: Awarded to majors in chemical and mechanical engineering, who have demonstrated outstanding scholarship and leadership qualities.

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 h.p.a.

Engineering Minority Student Support Program: Awarded to a full-time minority undergraduate engineering student, with demonstrated financial need and outstanding scholastic achievement and leadership qualities.

Engineering Student Financial Aid: Awarded to undergraduate engineering students with outstanding scholarship and leadership qualities and demonstrable financial need.

Engineering Undergraduate Scholarship: Awarded to any undergraduate engineering student of at least junior standing and minimum 3.0 h.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 h.p.a. and demonstrated financial need. Preference given to those demonstrating exceptional research work on an engineering project.

Giffels Scholarship: Awarded to undergraduate student majoring in civil, electrical or mechanical engineering.

Smith, Hinchman, & Grylls Engineering Scholarship: Awarded to any undergraduate student with demonstrable financial need, outstanding scholarship and leadership qualities and majoring in civil, electrical or mechanical engineering.

The Howard M. Hess Scholarship for Engineering 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.

Herbert Lissner Memorial Scholarship: Awarded to any full-time graduating senior in bio-engineering with outstanding scholastic achievement.

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.

MichCon—Leon Atchison Scholarship: Awarded to any minority student from the MichCon service area majoring in accounting, chemical engineering, mechanical engineering, or computer science with a minimum 2.5 h.p.a. and demonstrable financial need.

Michigan Road Builders Association Scholarship: Awarded to any full-time undergraduate student with outstanding scholarship and

leadership qualities, demonstrable financial need, and majoring in civil engineering.

Monsanto/Detroit Urban League Scholarship: Award of tuition and some expenses to full-time student in engineering with demonstrated scholastic achievements, high character and leadership qualities, and financial need; preference to graduates of public high schools in Detroit, Hamtramck, Highland Park, Inkster or Pontiac.

James E. and Christina L. Orr Scholarship: Awarded to full-time engineering undergraduates with demonstrated financial need, outstanding scholastic achievement and leadership qualities.

Joseph N. Prentis Scholarship in Engineering: Awarded to full-time undergraduate engineering students of junior or senior standing, with a minimum 3.0 h.p.a.

Society of Engineers' Wives Scholarship: Awarded to full-time engineering students who have completed the sophomore year and are U.S. citizens.

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 h.p.a.

UNISYS Scholarship Awards in Engineering: Open to full-time undergraduate electrical and computer engineering students who are in upper one-third of their class, demonstrate financial need and outstanding scholastic and leadership qualities, and serve in a UNISYS co-op internship; essay required.

Frank G. Viscomi Memorial Scholarship: Awarded to full-time materials science and engineering student in good standing with the University and College, who submits the best senior research paper.

Robert G. Wingerter Awards: Award of \$500 open to graduating senior demonstrating outstanding scholarship and leadership qualities.

John G. Wright Memorial Scholarship: Awarded to full-time mechanical engineering student who demonstrates financial need and outstanding scholarship and leadership qualities.



DIVISION OF ENGINEERING

Bachelor of Science

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. Further, 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 honor point average (h.p.a.) and ACT or SAT scores for those students entering directly from high school, and upon honor 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 h.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 h.p.a. of 2.75 or above but less than 3.5 are admitted to the *pre-professional* program.

Freshmen with an h.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 h.p.a. of 3.0 or above, and who have completed the calculus (MAT 201, 202, 203 and 215), chemistry (CHM 107), and physics (PHY 217 and 218) sequences with an h.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 an h.p.a. of 2.0 or better, and have completed the equivalent of MAT 201 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 faculty 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 201, 202, 203 and 215, CHM 105 or 107, PHY 217 and 218, ENG 102, B E 101, MSE 130, CHE 304, I E 322, and a minimum of six credits in other 200- or 300-level engineering courses. Students who earn a grade of 'C' or better in each course in the above set, earn an h.p.a. of at least 2.3 in this set of courses, earn an overall h.p.a. of at least 2.3, earn an h.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 h.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 an h.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 h.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 honor 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 300-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 107. Qualification for Chemistry 107 requires a satisfactory score on the Chemistry Qualification Examination. If a student is not properly prepared to consider placement in Chemistry 107, direct entry into Chemistry 105 is permissible. Four credits from Chemistry 105 will then replace 107 in the student's program.

— 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 101 before they can enroll in English 102. This examination is not a replacement for the English Composition Proficiency Examination (see page 123).

— Mathematics

The sequence of mathematics courses for the engineering student normally begins with Mathematics 201. For admission to Mathematics 201, a qualifying examination must be passed. Failure to qualify for Mathematics 201 may result in the student being placed in a lower level course such as Mathematics 093, 095/105 or 180, depending upon the student's performance. Engineering students who qualify at the 095/105 level are encouraged to take MAT 105 instead of MAT 095. Students may apply to take the Qualifying examination in either Mathematics 180 or 201 depending upon their preparation in mathematics. The Mathematics 180 Qualifying Examination is based upon one and one-half units of high school algebra and one unit of high school geometry. The Mathematics 201 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 093.

Degree Requirements

The normal program of study for each of the degrees awarded in the Division of Engineering requires 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 double asterisk (**) in the curricular plans shown in the departmental sections. Specific requirements for these degrees may be found in the departmental sections for this College (pages 126-154). 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 25. 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.

— 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 105; 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 120. 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 107, Physics 217 and 218. These three 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 151 or BIO 220. 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 25 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, and are summarized as follows:

(HS) Historical Studies	HIS 195
(AI) American Society and Institutions	P S 103
	(P S 101 elected for four credits may be substituted)
(SS) Social Sciences	ECO 201
	(ECO 202 may be substituted)
(FC) Foreign Culture	ANT 315
(VP) Visual and Performing Arts	Any (VP)-designated course
(PL) Philosophy and Letters	Any (PL)-designated 300-level course

As an alternative to the six courses as listed above, students may elect a seven-course sequence. This sequence must include ECO 201 or 202 to satisfy the Social Sciences (SS) requirement plus any course from each of the other five groups of General Education courses above, and a 300-level course in any one of the subject areas used to satisfy these six requirements.

As another alternative to the rigid six-course sequence described above, students may elect an eight-course sequence. This sequence must include ECO 201 or 202 to satisfy the Social Sciences (SS) requirement; two 100-level introductory courses in a foreign language, followed by the intermediate 201 course in the chosen language, to satisfy the Foreign Culture (FC) requirement; plus any designated course which satisfies the AI, HS, VP, and PL General Education Requirements. In satisfying these four requirements, students must choose only one course from any subject area (for example, if HIS 103 is elected to satisfy the American Institutions requirement, HIS 130 cannot be elected to satisfy the Historical Studies requirement).

— English and Mathematics Proficiency

See the *General Education Requirements (pages 27 – 35)* 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 108 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 102, six credits in communication skills are required of all students. The courses, English 305 and 306, entitled Technical Communication 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 180 or MAT 201.

— 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 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 '500' 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. Special cooperative programs are available on a limited basis providing special arrangements in the definition of the work-study period. For further information, consult the Co-op Coordinator at the University Placement Office.

Most of the work assignments are in the Metropolitan Detroit area on a commuting basis; however, job opportunities are available in other cities and states. The Co-op program is available in all the undergraduate engineering curricula.

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 351 or Chemical Engineering 351 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. For details and enrollment procedures, contact the Co-op Coordinator in the University Placement Office.

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 39 for information relating to late registration.) Special attention should be paid to course pre- and corequisites, and departmental grade requirements in prerequisites. 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 prerequisites, 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.

Course Materials Fees

A course materials fee may be assessed for registration in certain courses, principally courses with associated laboratories, where University-supplied materials warrant such a fee. Course Material Fee Cards are to be turned into the course instructor by the end of the second week of classes. Students failing to comply with this will be withdrawn from the course.

Attendance

Regularity in attendance is necessary to 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 honor 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 an h.p.a. of 2.3 or above, and must earn a grade of 'C' 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,' in the section on 'Matriculation.' Students admitted to a professional program prior to the Winter 1994 semester must maintain an overall as well as departmental h.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 honor point average, or his/her honor 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 honor point deficiency promptly. (Honor point deficiency is obtained by subtracting the total number of honor points from twice the total number of credits in the honor point base. It is the number of honor points by which the student fails to achieve a 2.0 honor point average.) If, at the end of the first semester on probation, the student's cumulative honor 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 h.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 honor 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 Honor Point Average

The Division of Engineering computes Departmental and Program honor point averages using rules which differ from those used to compute the cumulative honor 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 honor point average.

Substandard Performance

The grade of 'D' is considered by the Division of Engineering to represent sub-standard performance. The minimum acceptable grade in any engineering course is a 'C.' Thus, all courses in which a grade of 'D' or 'E' is earned must be repeated.

If a grade of 'D' 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' has been earned may not be subsequently passed by Special Examination.

Repeating Courses: Courses in which a 'D' or 'E' grade 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 a 'C' 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 of 'D' or 'E' 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 38-40 of this bulletin for University policies related to repeating courses and credit by special examination. See also 'Division Rules for Calculating Honor Point Average,' above.

Withdrawal From Courses

General rules governing withdrawal from courses and changes of program can be found on page 40. 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.

Graduation

At graduation the University requires a minimum 2.0 honor point average in the total residence credit. Additionally, the Division of Engineering requires a minimum 2.0 honor point average in the total work taken in the department of specialization. The student's total as well as departmental honor 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 an honor point average of at least 3.0 may qualify for a special diploma under the following conditions:

Summa Cum Laude: Student must have an honor point average in the top five per cent of the College of Engineering graduating class.

Magna Cum Laude: Student must have an honor point average in the five per cent of the graduating class subsequent to *summa cum laude* students.

Cum Laude: Student must have an honor 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 461.

100. Introduction to Engineering Computation. (Lct: 1; Lab: 6). Cr. 3

Prereq. or coreq: MAT 180. An introduction to the profession of engineering, professional ethics, social responsibilities, the design process and the use of a variety of computational methods and computers. Use of word processing, spreadsheet, statistical and graphics software. Development of computer literacy. (Y)

101. (CL) Introduction to Computers in Engineering. Cr. 3

Prereq. or coreq: MAT 180. 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)

350. Co-Op Record. Cr. 0

Prereq: sophomore standing and consent of coordinator. Offered for S and U grades only. Engineering practice under supervision in cooperative education program. (T)

351. Co-Op Experience. (Ind: 1). Cr. 1 (Max. 4)

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
Chairperson: E. Gulari

Professors

E. Gulari, R.H. Kummeler, R. Marriott, S. Ng, E. W. Rothe, S.K. Stynes
(Emeritus)

Associate Professors

W.G. Madden, C.W. Manke, J.H. McMicking, S.K. Putatunda, S.O. Salley

Assistant Professors

J.E. Benci, L. Huang, H.W.T. Matthew, G. Shreve

Degree Programs

BACHELOR OF SCIENCE in Chemical Engineering

BACHELOR OF SCIENCE in Materials Science and Engineering

**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, nuclear engineering, pollution control, material science, and other special topics.

The breadth of this program permits graduates to enter the chemical industries with confidence that 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Materials Science and Engineering

Materials problems constitute an important area of research and development in the complex technology of our industrial society. Lighter and more crashworthy automobiles, electronic device miniaturization, and earth-orbiting satellites all depend on the development of new engineering materials or the improvement of well-tried ones. Materials engineers must master the science that enables them to understand the behavior of materials, their mechanical, optical, thermal, electrical and chemical properties and the internal structure that determines these properties. They can then apply their knowledge to the synthesis, fabrication, and processing of materials into useful products.

The materials science and engineering curriculum combines the study of the relationship between the structure and properties of materials with the engineering aspect of materials production, fabrication and use. Engineering courses provide a coherent program covering thermodynamics, material and energy balances, transport phenomena, statics, strength of materials, electrical and electronic circuits and fundamental courses in the structure and properties of metals, polymers, ceramics and composite materials. A senior research and seminar sequence provides the opportunity for independent work with appropriate faculty guidance.

Bachelor of Science in Chemical Engineering

Admission Requirements: see pages 120-122.

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 25), 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 15-43 and 120 - 125 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.

Freshman Year

<i>First Semester</i>	<i>credits</i>
UGE 100 —(GE) Introduction to the University & its Libraries	1
MAT 201 —Calculus I	4
CHM 107 —(PS) Principles of Chemistry I	4
ENG 102 —(BC) Introductory College Writing	4
B E 101 — (CL) Introduction to Computers in Engineering	3
Total:	16

Second Semester

MAT 202 —Calculus II	4
CHM 108 —Principles of Chemistry II	5
P S 103 —(AI) The American Governmental System	3
PHY 217 —(PS) General Physics	4
MSE 130 —Science of Engineering Materials I **	4
Total:	20

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

Sophomore Year

First Semester

MAT 203—Calculus III	4
PHY 218—General Physics	4
I E 322—Probability and Statistics in Engineering	3
CHM 224—Organic Chemistry I	4
Visual and Performing Arts (VP) elective	3
Total: 18	

Second Semester

MAT 215—Differential Equations and Matrix Algebra	4
CHE 280—Material and Energy Balances	4
CHE 304—Computational Methods in Engineering **	3
CHM 226—Organic Chemistry II	4
ECO 201—(SS) Principles of Microeconomics	3
Total: 18	

Junior Year

First Semester

	credits
CHE 320—Chemical Process Engineering I	4
CHE 330—Thermodynamics: Chemical Equilibria	4
CHM 544—Physical Chemistry II	4
ENG 305—(IC) Technical Communication I: Report Writing	3
HIS 195—(HS) Society and the Economic Transition	3
Total: 18	

Second Semester

CHE 322—Measurements Laboratory	2
CHE 340—Kinetics and Reactor Design	3
CHE 380—Chemical Process Engineering II: Mass Transfer	4
CHE 386—Chemical Engineering Seminar I	0
MSE 230 or MSE 501	
— Science of Engineering Materials II	3
— Materials for Engineering	4
ENG 306—(OC) Technical Communication II: Writing & Speaking	3
Total: 15–16	

Senior Year

First Semester

CHE 382—Chemical Engineering Laboratory	2
CHE 420—(WI) Chemical Process Engineering III	3
CHE 426—Chemical Engineering Seminar II	0
CHE 460—Process Dynamics and Simulation	3
BIO 220—(LS) Introductory Microbiology	4
Total: 15	

Second Semester

CHE 486—Chemical Engineering Seminar III	1
Chemical Engineering Technical Electives	6
CHE 480—Chemical Process Integration	3
ANT 315—(FC) Anthropology of Business	3
Philosophy & Letters (PL) elective (300-level)	3
Total: 16	

TOTAL CREDITS 136

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

Bachelor of Science in Materials Science and Engineering

Admission Requirements: see pages 120–122. The degree requirements shown in following curriculum are in effect as of the publication date of this bulletin, however, students should consult an academic adviser for verification of current requirements.

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 25), 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 15–43 and 120–125 respectively. Non-engineering entries cited below by subject, rather than by individual course numbers, indicate courses to be selected in fulfillment of the University General Education Requirements.

BACHELOR'S DEGREE CURRICULUM

Freshman Year

First Semester

	credits
UGE 100—(GE) The University and its Libraries	1
CHM 107—(PS) Principles of Chemistry I	4
ENG 102—(BC) Introductory College Writing	4
MAT 201—Calculus I	4
B E 101—(CL) Introduction to Computers in Engineering	3
Total: 16	

Second Semester

MAT 202—Calculus II	4
CHM 108—Principles of Chemistry II	5
PHY 217—(PS) General Physics	5
P S 103—(AI) The American Governmental System	3
MSE 130—Science of Engineering Materials I **	4
Total: 21	

Sophomore Year

First Semester

MAT 203—Calculus III	4
PHY 218—(PS) General Physics	5
I E 322—Probability and Statistics in Engineering	3
M E 240—Statics (C E 240)	3
Visual and Performing Arts (VP) elective	3
Total: 18	

Second Semester

MAT 215—Differential Equations and Matrix Algebra	4
CHE 280—Material and Energy Balances	4
CHE 304—Computational Methods in Engineering **	3
MSE 230—Science of Engineering Materials II	3
ECO 201—(SS) Principles of Microeconomics	3
Total: 17	

Junior Year

First Semester

CHM 542—Physical Chemistry I	3
ENG 305—(IC) Technical Communication I: Report Writing	3
PHY 330—Introductory Physics	3
CHE 520—Transport Phenomena	3
MSE 340—Physical Metallurgy I	3
Total: 15	

Second Semester

MSE 342 — Materials Laboratory	1
MSE 370 — Strength and Mechanical Behavior of Materials	4
MSE 409 — Physical Ceramics	3
CHM 544 or CHM 224	
— Physical Chemistry II	4
— Organic Chemistry I	4
ENG 306 — (OC) Technical Communication II**	3
Philosophy and Letters (PL) elective	3
Total:	18

Senior Year

First Semester

MSE 425 — Materials Seminar	0
MSE 430 — Processing and Fabrication of Materials	3
MSE 435 — Polymer Structure and Properties	3
MSE 542 — Advanced Materials Laboratory	1
MSE 560 — Composite Materials	3
ECE 330 — Introduction to Electrical Circuits	3
HIS 195 — (HS) Society and the Economic Transition	3
Total:	16

Second Semester

MSE 426 — Senior Project	3
MSE 450 — (WI) Materials Selection and Design	3
ANT 315 — (FC) Anthropology of Business	3
Life Science (LS) elective	3
Technical elective	3
Total:	15

TOTAL CREDITS: 136

UNDERGRADUATE COURSES

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 463.

CHEMICAL ENGINEERING (CHE)

280. Material and Energy Balances. Cr. 4

Prereq: PHY 217 and CHM 108. Material fee as indicated in *Schedule of Classes*. Material balances, stoichiometry and simultaneous mass energy balances. (F,W)

304. Computational Methods in Engineering. Cr. 3

Prereq: BE 101; coreq: MAT 215. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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. (T)

320. Chemical Process Engineering I: Fluid Flow and Heat Transfer. Cr. 4

Prereq: MAT 202, PHY 217, CHE 280. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

322. Measurements Laboratory. Cr. 2

Prereq: CHE 304, I E 322; coreq: CHE 320, ENG 305. Student computer account required. Material fee as indicated in *Schedule of Classes*. Laboratory course in the principles and practice of measuring chemical, physical and thermodynamic properties of importance to chemical engineering problems. Technical reports. (F,W)

330. Thermodynamics: Chemical Equilibria. Cr. 4

Prereq: CHE 280, MAT 235. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

340. Kinetics and Reactor Design. Cr. 3

Prereq: CHE 330, MAT 235. Material fee as indicated in *Schedule of Classes*. Quantitative treatment of complex homogeneous and heterogeneous chemical reactions and the design of batch, stirred and flow reactor systems. (W,S)

351. 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)

380. Chemical Process Engineering II: Mass Transfer. Cr. 4

Prereq: CHE 320, 330. Material fee as indicated in *Schedule of Classes*. Quantitative treatment of separation processes in which there is simultaneous heat and mass transfer. (W,S)

382. Chemical Engineering Laboratory. Cr. 2

Prereq: CHE 322, ENG 305; coreq: CHE 380, 340. Student computer account required. Material fee as indicated in *Schedule of Classes*. Experimental study of chemical equilibria, reaction kinetics and rate processes. Laboratory case studies. (F,W)

386. Chemical Engineering Seminar I. Cr. 0

Coreq: CHE 340, 380. Required for graduation. Offered for S and U grades only. (T)

420. (WI) Chemical Process Engineering III: Economics and Design. Cr. 3

Prereq: CHE 380 and 340. Student computer account required. The overall chemical process. Economic analysis of the process and the optimum-economic design of process. (F)

426. Chemical Engineering Seminar II. Cr. 0

Prereq: CHE 386. Required for graduation. Offered for S and U grades only. Material fee as indicated in *Schedule of Classes*. (T)

456. Chemical Engineering Senior Research. Cr. 4–6

Prereq: CHE 386; coreq: 426. Student computer account required. Research project. (T)

460. Process Dynamics and Simulation. Cr. 3

Prereq: CHE 304, 340, 380. Material fee as indicated in *Schedule of Classes*. Application of system dynamics and mathematical modeling to design and analysis of chemical processing systems. (F)

480. Chemical Process Integration. Cr. 3

Prereq: CHE 420. Student computer account required. 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)

486. Chemical Engineering Seminar III. Cr. 1

Prereq: CHE 426. Required for graduation. Offered for S and U grades only. (T)

490. Directed Study. Cr. 1–9 (Max. 9)

Prereq: consent of adviser. Students select a field of chemical engineering for advanced study and instruction. (T)

- 503. Ethical and Legal Constraints in Chemical Engineering. Cr. 2**
Prereq: upper division or graduate standing. Limitations placed on chemical process design and operation by non-technical and non-economic parameters, including ethical, environmental, safety, and legal considerations. (Y)
- 504. (ECE 504) Numerical Methods for Engineers. Cr. 4**
Prereq: MAT 215, CHE 304. Student computer account required. Solution of ordinary and partial differential equations of engineering by modern numerical methods, including digital computer programming. (B)
- 505. Design of Chemical Process Experiments I. Cr. 3**
Prereq: I E 322, CHE 304, CHE 380, 340. Application of modern statistical experimental design methods to improve effectiveness and success in experimental projects, in chemical industry manufacturing, and research and design. (F)
- 509. (MSE 509) Physical Ceramics. Cr. 3**
Prereq: MSE 230. 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)
- 520. Transport Phenomena. Cr. 3**
Prereq: CHE 380, 340. Unified principles of heat mass and momentum transport with application to applied science and engineering problem areas. (F)
- 535. Polymer Science. (MSE 535). Cr. 3**
Prereq. or coreq: MAT 215. Material fee as indicated in *Schedule of Classes*. 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)
- 536. Polymer Processing. (MSE 536). Cr. 3**
Prereq: CHE 320 or equivalent undergraduate fluid mechanics. Material fee as indicated in *Schedule of Classes*. A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, coating and injection molding. (W)
- 553. Thermal Processing of Hazardous Waste. (HWM 553). Cr. 2**
Prereq: HWM 551. Thermal processing technologies, such as combustion fundamentals, thermal incineration equipment and hardware, chemical reaction and recovery systems for hazardous waste control. (W,S)
- 560. (MSE 560) Composite Materials. Cr. 3**
Coreq: CHE 535. 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)
- 577. Computer-Aided Design and Graphics Techniques in Chemical Engineering. Cr. 3**
Prereq: CHE 304, 330, 380. Applications of advanced techniques in computer graphics and specialized engineering analysis software to problems of design in chemical engineering. Design elective includes: information transfer simulation, control/dynamics, optimization techniques. (Y)
- 580. Computer-Aided Process Design. Cr. 3**
Prereq: CHE 304 and 380. Application of computer programs to design chemical process operations. Problems include stagewise and continuous operations. (B)
- 586. Elements of Nuclear Engineering. (MSE 586). Cr. 3**
Prereq: senior standing. Material fee as indicated in *Schedule of Classes*. An introduction to nuclear energy. The relevant aspects of nuclear physics, radioactivity, shielding, heat transfer and fluid flow are reviewed and applied to the design of large thermal reactors. Biological hazard, waste disposal and developments such as fast breeder are discussed. (B)
- 595. 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)
- 613. (NFS 613) Food Preservation. Cr. 4**
Prereq: senior standing. Material fee as indicated in *Schedule of Classes*. Basic food preservation methods and the underlying physical, chemical, bacteriological and organoleptic properties of foods to be preserved. (W)
- 645. Biochemical Engineering. Cr. 3**
Prereq: CHE 340, 380. 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)
- 652. Chemodynamics: Environmental Transport. (HWM 652). Cr. 3**
Prereq: CHE 330, 340, 380. Application of chemical engineering fundamentals and transport phenomena to study the movement and fate of chemicals within the environment (air, water, soil). (S)
- 657. Safety in the Chemical Process Industry. (HWM 657). Cr. 3**
Prereq: CHE 340, 380. Fundamental and practical experience necessary for safe operation of a chemical process plant. Actual industrial case studies conducted under industry supervision. (W)
- 659. Bioremediation of Hazardous Waste. (HWM 659). Cr. 3**
Prereq: CHE 304, 340, and 380. 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. (Y)
- 670. Fundamentals of Fractals. Cr. 3**
Prereq: MAT 215. Thorough introduction to fundamentals of fractal theory; application of fractal geometry to solve engineering and materials problems. (B)
- 671. Irreversibility and Chaos. Cr. 3**
Prereq: MAT 202, MAT 215, MAT 221, or equiv. Near-equilibrium and far-from-equilibrium thermophysics, its extension to chaos, and current concepts of the existence of irreversibility and its relation to entropy on the molecular and macroscopic level of daily experience. (Y)
- 685. (MSE 685) Corrosion. 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)
- 697. Optimization of Chemical Processes. Cr. 3**
Prereq: CHE 420. The application of optimization techniques in the design and operation of chemical processes. (W)
- 698. Technical Aspects of Marketing in the Chemical Process Industries. Cr. 2**
Prereq: senior or graduate standing. Review of strategic marketing concepts for the chemical process industries; emphasis on technical issues related to strategies. (Y)

HAZARDOUS WASTE MANAGEMENT (HWM)

- 532. (OEH 765) Chemistry of Industrial Processes. Cr. 3**
The mechanical and theoretical similarities of various kinds of process equipment are studied with respect to the OSHA and EPA standards of measurement of worker exposure. Emphasis is placed on the

operation of actual processes components with respect to the likelihood of mechanical failure. (W)

551. Introduction to Hazardous Waste Management. Cr. 2

Prereq: senior standing in engineering, biological or physical sciences; MAT 203, CHM 224, PHY 214, CHM 542 or CHE 280. Solid waste, site selection, thermal processing, biological waste disposal, hazardous chemical spill cleanup, and transportation. (T)

552. (OE 751) Air Sampling and Analysis. Cr. 3

Material fee as indicated in *Schedule of Classes*. Classical methods of obtaining samples of the air, recent developments in the field of portable direct reading devices. Theory underlying the use of impingers, impactors, electrostatic and thermal precipitators, filtration media and other sampling devices. (F,W)

553. (CHE 553) Thermal Processing of Hazardous Waste. Cr. 2

Prereq: HWM 551. Thermal processing technologies, such as combustion fundamentals, thermal incineration equipment and hardware, chemical reaction and recovery systems for hazardous waste control. (W,S)

554. Law and Administration Issues in Hazardous Waste Management I. Cr. 2

Prereq: senior standing. Management guidelines for industrial waste control including: cradle-to-grave concepts, RCRA, Superfund, the Solid Waste Disposal Act, identification, modification, reporting, standards, permits and rules. (T)

556. Transportation of Hazardous Materials. Cr. 2

Prereq: HWM 551, 554. Election for three credits requires consent of adviser. Overview of air, rail, maritime and highway transportation of hazardous materials. Applicable regulations and management (interstate, intrastate, and international). Standard procedures and guides for shippers (manifesting, labeling, packaging, marking, placarding, and shipment). (T)

557. Emergency Spill Response. Cr. 2

Prereq: HWM 551, 554, 556. Overview of regulations, management and methodologies for emergency spill response to hazardous material incidents, hazard recognition, analysis and evaluation, safety contingency planning, hazmat incidents, response techniques, clean-up and follow-up. (T)

558. Land Disposal of Hazardous Waste. (C E 558). Cr. 2

Prereq: HWM 551. Industrial landfill, biological methods of disposal, land disposal techniques, ocean disposal techniques, disposal of flue gas cleaning wastes. (F,W)

559. Biological Waste Disposal. (C E 559). Cr. 2

Prereq: HWM 551. Biological treatment of industrial wastes, including unit operations, solids handling and activated carbon processes. (F,W)

581. (GEG 581) Locational Issues in Hazardous Waste Management. (GPH 581). Cr. 3

Analyses of spatial aspects of hazardous waste sites; corporate and public considerations and reactions; regulatory impacts. (S)

595. Special Topics in Hazardous Waste Management. Cr. 1-4

Prereq: graduate standing, consent of instructor. Maximum nine credits of Special Topics in any one degree program. Special subject material in hazardous waste or materials management. (T)

620. Site Characterization. Cr. 2

Prereq: HWM 551, 554. Methodology to determine whether land is contaminated, to provide basic understanding of multimedia flow from a contaminated site both in general and specific applications, and to provide sampling strategies and hands-on experience in sampling. (Y)

621. Preliminary Assessments under CERCLA. Cr. 1

Prereq: HWM 551 and 554. Performance of preliminary assessment per EPA and BLM guidelines in compliance with CERCLA (Superfund). (Y)

622. Negotiated Procurement in Hazardous Materials Management (HMM). Cr. 1

Prereq: HWM 551 and 554. Definition of HAZMAT contract, government procedures, format, elements, instructions, evaluation criteria, and cost estimation; how to evaluate and select contractors; administrative dispute resolution. (Y)

623. Preparation of Statements of Work. Cr. 1

Prereq: HWM 551. Writing statements of work for CERCLA project management providing for adequate project development, organization, management overview, contract type selection for hazardous waste investigations. (Y)

625. Law Enforcement in Hazardous Waste Management. Cr. 1

Prereq: HWM 551. Priorities and safe procedures for investigations and mitigations of hazardous materials incidents on public lands. (Y)

652. (CHE 652) Chemodynamics: Environmental Transport. Cr. 3

Prereq: CHE 330, CHE 340, CHE 380. Application of chemical engineering fundamentals and transport phenomena to study the movement and fate of chemicals within the environment (air, water, soil). (S)

653. Pollution Prevention: Waste Management. Cr. 2

Prereq: HWM 551, 554. Case-study approach to hazardous waste management in industrial processes through process design to minimize or eliminate chemical waste production. Solvent recovery, process change and recycle concepts included. (S,F)

654. Insurance and Risk Management for Environmental Liabilities. Cr. 2

Prereq: HWM 551, 554. Use of insurance and other risk management techniques to anticipate, reduce, or respond to environmental hazards. Coverage issues, financial responsibility prerequisites of various environmental laws; and various policy forms and coverages. (Y)

655. Fundamentals of Environmental Auditing. Cr. 2

Prereq: HWM 554, 551. Introduction to the fundamentals and techniques in environmental auditing with special emphasis on auditing protocols, verification of findings and interpretation. (W)

657. (CHE 657) Safety in the Chemical Process Industry. Cr. 3

Prereq: CHE 340, CHE 380. Fundamental and practical experience necessary for safe operation of a chemical process plant. Actual industrial case studies conducted under industry supervision. (W)

658. Principles of Environmental Sampling. Cr. 2

Prereq: I E 322, HWM 655. Introduction to environmental sampling with emphasis on statistical design, quality control and quality assurance, and interpretation of data. (Y)

659. (CHE 659) Bioremediation of Hazardous Waste. Cr. 3

Prereq: CHE 304, CHE 340, and CHE 380. 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. (Y)

660. Air Pollution Control Management. Cr. 2

Prereq: HWM 551 or 555. Elements as dictated by 1990 Clean Air Act and related state and local legislation to prepare practitioner for analysis, auditing, permitting, policy making, and implementation of control programs; including comparative studies with at least one other country. (Y)

661. Risk Assessment. Cr. 3

Prereq: MAT 203, I E 322, and CHM 224. Introduction to risk assessment in environmental hazard management with emphasis on the chemical industry, including hazard identification, exposure analysis and risk characterization. (W)

670. Introduction to Environmental Information Management. Cr. 2

Prereq: HWM 551. Introduction to use of personal computers and networks to obtain and use environmental data from public and commercial sources; use of Internet, WSUnet, E-mail, government and commercial bulletin boards; interaction of networks and CD-ROM resources. (Y)

MATERIALS SCIENCE (MSE)

130. Science of Engineering Materials I. Cr. 4

Prereq: CHM 107; coreq: PHY 217. Material fee as indicated in *Schedule of Classes*. 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. (T)

230. Science of Engineering Materials II. Cr. 3

Prereq: MSE 130; PHY 218. In-depth treatment of several concepts introduced in MSE 130, including crystal structures, x-ray diffraction, crystal defects, diffusion and phase diagrams. (F,W)

340. Physical Metallurgy I. Cr. 3

Prereq: MSE 230; coreq: 330. Detailed understanding of relationships between structure and properties of metals and alloys, and of the principles of microstructural control. Crystallography, methods of structural analysis, crystal defects and interfaces, diffusion, and nucleation. Course is continued in MSE 360. (F)

342. Materials Laboratory. Cr. 1

Prereq: I E 322; coreq: MSE 340, ENG 305. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of topics covered in MSE 340 and related areas. (W)

370. Strength and Mechanical Behavior of Materials. Cr. 4

Prereq: MSE 230. Strength, plastic deformation and failure of crystalline materials from the metallurgical point of view. Dislocation behavior and the mechanisms of yielding, strengthening, fracture, fatigue and creep of engineering materials. (W)

400. Modern Methods of Structural Analysis. Cr. 3

Prereq: MSE 340. Material fee as indicated in *Schedule of Classes*. Introduction to x-ray crystallography, diffraction theory and its applications, the stereographic projection, pole figures, twinning, crystal orientation and line broadening. Introduction to reciprocal lattice in solution of crystallographic problems. (I)

409. Physical Ceramics. Cr. 3

Prereq: MSE 130; senior standing. Relationships between the structure and properties of ceramic materials including ceramic for electronic, optical or photonic, biological and structural applications. (W)

425. Materials Seminar. Cr. 0

Prereq: MSE 342, 370. Offered for S and U grades only. Required for graduation. Must be taken in semester immediately prior to registration in MSE 426. Current issues. (F,W)

426. Senior Project. Cr. 3

Prereq: MSE 425 in immediately preceding semester. 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)

430. Processing and Fabrication of Materials. Cr. 3

Prereq: MSE 340, 370. Analysis of forming and joining from the materials point of view. Deformation processing, powder processing,

brazing and welding. Materials properties and behavior during and after processing. (W)

435. Polymer Structure and Properties. Cr. 3

Prereq: MAT 204, CHM 224, MSE 130. Introductory study of fundamental relations between chemical structures and physical properties of polymers. (F)

450. (WI) Materials Selection and Design. Cr. 3

Prereq: MSE 370, ENG 305. Application of engineering and science background to the design of equipment and processes. Comprehensive problems dealing with data sources, design principles and economics. (W)

457. (ECE 457) Electronics II. (Lct: 4). Cr. 4

Prereq: ECE 330, PHY 330, MAT 235. 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)

490. Directed Study. Cr. 1-6

Prereq: consent of adviser. Student selects some field of materials science for advanced study and instruction. (T)

494. Engineering Experience Report. Cr. 1-3(Max. 3)

Prereq: consent of adviser and minimum of 8 weeks of approved materials science or allied professional work in industry. Offered for S and U grades only. Preparation of an engineering report covering its nature, scope and professional responsibilities. Oral report to peer group. (T)

501. Materials for Engineering. Cr. 4

Prereq: CHM 107, PHY 218, MSE 130, senior or graduate standing. 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)

509. Physical Ceramics. (CHE 509). Cr. 3

Prereq: MSE 230. 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)

510. Ceramic Processing and Fabrication. Cr. 3

Prereq: MSE 409 or 509 or CHE 509. Principles and practices of the processing and fabrication of ceramic materials as well as the characterization of the properties of such materials. (I)

518. (M E 518) Introduction to Biomaterials. Cr. 4

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)

535. (CHE 535) Polymer Science. Cr. 3

Prereq. or coreq: MAT 215. 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)

536. (CHE 536) Polymer Processing. Cr. 3

Prereq: CHE 320 or equivalent undergraduate fluid mechanics. Material fee as indicated in *Schedule of Classes*. A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendaring, extrusion, coating and injection molding. (W)

542. Advanced Materials Laboratory. Cr. 1

Prereq: MSE 342, 370, ENG 306. Experiments in materials science utilizing advanced processing, characterization and testing techniques. (F)

550. Diffusion in Solids. Cr. 3

Prereq: MSE 340, MAT 215. A comprehensive treatment of mass transport or diffusion in solids including mathematical formalism, atomic mechanisms of diffusion, diffusion kinetics, random walk and correlation effects. (B)

552. Deformation and Fracture of Materials at High Temperatures. Cr. 3

Prereq: MSE 340, 370. Behavior of metals at elevated temperatures from the microstructural point of view; concepts of creep and failure mechanism at elevated temperatures. (B)

553. Fatigue of Engineering Materials. Cr. 3

Prereq: MSE 370, C E 240. Fatigue, cyclic stress and strain, fatigue crack initiation, dislocation behavior in cyclic loading, stress controlled fatigue, Goodman, Soderberg, Gerber diagram fatigue crack propagation in metals, polymers, ceramics and composite materials. (B)

560. Composite Materials. (CHE 560). Cr. 3

Prereq: MSE 370; coreq: 535. 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)

562. Electron Microscopy. Cr. 4

Prereq: MSE 340. Theory and practice of electron image formation, sample preparation, diffraction principles and interpretation of effects. (B)

563. Cast Ferrous Alloys. Cr. 3

Prereq: MSE 340. Advanced study of the properties of ferrous castings and solidification mechanisms. (B)

565. Surface Science. Cr. 3

Prereq: MSE 230; CHM 542 or MSE 330. 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)

573. Physical Metallurgy of Steels. Cr. 3

Prereq: MSE 340. Properties of iron and other BCC metals; relations between microstructures and mechanical or physical properties of steel products; emphasis on products of greatest economic importance, including sheet, HSLA, alloy and stainless steels. (Y)

580. Powder Metallurgy. Cr. 3

Prereq: MSE 340. 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. (B)

585. (CHE 585) Vacuum Technology. Cr. 2

Prereq: PHY 218. Vacuum technique, flow of gases through tubes and orifices, operation of pumps and manometers, vacuum materials, vacuum systems. (B)

586. (CHE 586) Elements of Nuclear Engineering. Cr. 3

Prereq: senior standing. An introduction to nuclear engineering. The relevant aspects of nuclear physics, radioactivity, shielding, heat transfer and fluid flow are reviewed and applied to the design of large thermal power reactors. Biological hazards, waste disposal and developments such as fast breeders are discussed. (B)

595. Special Topics in Materials Science I. Cr. 1-4

Prereq: MSE 340, 370. Maximum of twelve credits in Special Topics may be elected in any one degree program. Consideration of special subject matter in materials science. Topics to be announced in *Schedule of Classes*. (Y)

650. Fatigue and Fracture of Metals. Cr. 3

Prereq: MSE 370. 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)

685. Corrosion. (CHE 685). 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)

687. (CHE 687) Elevated Temperature Corrosion. Cr. 3

Prereq: senior standing in engineering. Advanced study in the theories of high temperature corrosion and applications. Analysis of industrial problems and case histories. Classified as CHE design elective. (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, D.S. Ling (Emeritus), J. M. Paulson (Emeritus), M.A. Usmen

Associate Professors

R. A. Dusseau, T. M. Heidtke, T. Kagawa, C.J. Miller

Adjunct Faculty

M. Bhatti, A. Davanzo, B. Kim, I. Salmeen

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 implementation of complex systems. They have traditionally been leaders in many aspects of urban development and the urban crisis in America has brought into sharp focus the profession of civil engineering and the responsibilities of its practitioners. The civil engineer is a leader in such diverse areas of concern as: the design 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 implementation 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, expert systems, transportation, hydraulics, geotechnical 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

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

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 and related non-technical areas.

Admission Requirements: see pages 120-122.

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 25), 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 15-43 and 120-125, 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.

Freshman Year

<i>First Semester</i>	<i>credits</i>
MAT 201 —Calculus I	4
CHM 107 —(PS) Principles of Chemistry I	4
B E 101 — (CL) Introduction to Computers in Engineering	3
UGE 100 —(GE) The University and its Libraries	1
ENG 102 —(BC) Introductory College Writing	4
Total: 16	

Second Semester

MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics	4
MSE 130 —Science of Engineering Materials I	4
P S 103 —(AI) The American Governmental System **	3
Life Sciences (LS) elective	3
Total: 18	

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 218 —General Physics	4
C E 101 — Introduction to Civil Engineering	0
C E 240 —Statics	3
I E 322 —Probability and Statistics in Engineering	3
Visual and Performing Arts (VP) elective **	3
Total: 17	

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Second Semester

MAT 215—Differential Equations and Matrix Algebra	4
C E 360—Elementary Mechanics of Materials	3
CHE 304—Computational Methods in Engineering	3
M E 340—Dynamics	3
ECO 201 - Principles of Microeconomics	3
Total: 15	

Junior Year

First Semester

C E 325—Applied Fluid Mechanics	3
C E 401—Civil Engineering Analysis	3
C E 430—Structures I	2
C E 485—Engineering Economy and Decision Theory	3
ENG 305—(IC) Technical Communication I: Report Writing **	3
HIS 195—(HS) Society and the Economic Transition	3
Total: 17	

Second Semester

C E 421—Water Resources	3
C E 431—Structures II	3
C E 451—Introduction to Geotechnical Engineering	4
C E 460—Transportation Engineering	4
ANT 315—(FC) Anthropology of Business **	3
Total: 17	

Senior Year

First Semester

C E 422—(WI) Environmental Engineering	3
C E 436—Reinforced Concrete I	3
C E 445—Civil Engineering Materials	3
C E 464—Transportation Design	4
C E 551—Foundation Engineering *	3
Total: 16	

Second Semester

C E 435—Structural Steel Design I	3
C E 528—Sanitary Engineering Design *	3
ENG 306—(OC) Technical Communication II: Writing & Speaking	3
Technical Electives	7
Philosophy and Letters (PL) elective (300-level) **	3
Total: 19	

TOTAL CREDITS 136

Humanities and Social Science Electives: See page 122 for socio-humanistic requirements.

Life Science Electives: Civil Engineering students are required to complete three credits of life science electives. Faculty advisers should be consulted for specific recommendations.

Technical Electives: Civil Engineering students are required to complete at least seven credits in technical electives.

Design Electives: Students are required to complete two courses from: C E 528, C E 551, C E 552, C E 561, C E 634, C E 637, C E 638, C E 641, and C E 652, one of which must be either C E 528 or C E 551.

* One design elective may be substituted for either C E 528 or C E 551.

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

UNDERGRADUATE COURSES (C E)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

101. Introduction to Civil Engineering. Cr. 0

Offered for S and U grades only. Material fee as indicated in *Schedule of Classes*. History of civil engineering; major areas of specialization within civil engineering introduced. Required readings and term paper; guest speakers. (F)

240. (M E 240) Statics. Cr. 3

Prereq: MAT 202, PHY 217; Coreq: B E 101. Basic concepts and principles of statics with application of Newton's Laws of Motion to engineering problems. Forces, moments, equilibrium, couples, free-body diagrams, trusses, frames, fluid statics, centroids, friction and area and mass moments of inertia. (T)

301. Introduction to CAD in Civil Engineering. Cr. 3

Prereq: B E 101. Principles of computer graphics and utilization of computers in the design process. Civil engineering applications of AutoCAD. (B)

307. Surveying. (Lct: 2; Lab: 3). Cr. 3

Prereq: PHY 218 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Principles of plane surveying; measurement of horizontal and vertical distance, directions and angles, traverses, areas. (I)

325. Applied Fluid Mechanics. Cr. 3

Prereq: MAT 203. Material fee as indicated in *Schedule of Classes*. Experimental verification of theories of fluid mechanics as encountered in civil engineering problems. Specific problems include hydraulics of pipe flow, open channel flow, pumps and pumping stations, flow under a sheet pile and one-dimensional consolidation. Demonstration labs for flow measurements. (F)

360. (M E 360) ELeMentary Mechanics of Materials. Cr. 3

Prereq: C E 240 or M E 240. Elastic relationships between external forces acting on deformable bodies and the associated stresses and deformations; structural members subjected to axial loads, torsion and bending; column buckling; combined stresses, repeated loads. (T)

401. Civil Engineering Analysis. Cr. 3

Prereq: MAT 215; prereq. or coreq: CHE 304. Student computer account required. Numerical methods applied to linear systems; matrix techniques, linear programming, linear regression; finite difference techniques applied to partial differential equations. (F)

421. Water Resources. Cr. 3

Prereq: C E 325. Material fee as indicated in *Schedule of Classes*. Water supply, surface and ground water sources, treatment and distribution; water quality, chemical, bacteriological and microscopic; financing and economics of utilities. (Y)

422. (WI) Environmental Engineering. Cr. 3

Prereq: C E 421. Material fee as indicated in *Schedule of Classes*. Waste water, collection, treatment and disposal; waste water characteristics; stream sanitation. (Y)

430. Structures I. Cr. 2

Prereq: M E 240 or C E 240. Student computer account required. Mechanics of engineering structures. Equilibrium analysis and deformations of trusses and beams. Computer applications. (F)

431. Structures II. Cr. 3

Prereq: C E 430 and 360 or M E 360. Student computer account required. Analysis of structural systems. Force and displacement methods, deflections, reciprocal relations and influence lines. Introduction to plastic analysis. Computer applications. (W)

435. Structural Steel Design I. Cr. 3

Prereq: C E 430 and 360 or M E 360. Behavior and design of structural steel members using LRFD. Tension, compression and flexural members. Welded and bolted connections. (W)

436. Reinforced Concrete I. Cr. 3

Prereq: C E 431. Behavior and design of reinforced concrete members using ultimate strength design. Rectangular and tee beams, columns and slabs. Shear, torsion, and continuity of members. Development length. (F)

445. Civil Engineering Materials. (Lct: 2; Lab: 3). Cr. 3

Prereq: MSE 130, C E 240, ENG 205. Material fee as indicated in *Schedule of Classes*. Structure; composition; physical, chemical, and mechanical properties of steel, aggregates, concrete, asphalt, wood, plastic and composites. Mix design and quality control of concrete and asphalt. (F)

451. Introduction to Geotechnical Engineering.

(Lct: 3; Lab: 3). Cr. 4

Prereq. or coreq: C E 445 and 325. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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. (W)

460. Transportation Engineering. Cr. 4

Prereq: C E 401. Material fee as indicated in *Schedule of Classes*. Transportation functions; transportation systems including highways, railways and airways. Techniques of transportation systems analysis including optimization, network flows and queueing theory. (W)

464. Transportation Design. Cr. 4

Prereq: C E 460. Student computer account required. 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)

485. Engineering Economy and Decision Theory in Civil Engineering Systems. Cr. 3

Prereq: I E 322. Material fee as indicated in *Schedule of Classes*. Analysis and evaluation of economic alternatives: interest factors, risks and uncertainties in decision problems; value of perfect and imperfect information in decision making, portfolio investments, utility theory in risk analysis and inventory control under certain and uncertain demand. (Y)

490. Directed Study. Cr. 1-4(Max. 6)

Prereq: consent of chairperson. Supervised study and instruction in civil engineering. Written report required. (T)

522. Sanitary Chemistry. Cr. 3

Prereq: C E 421. Material fee as indicated in *Schedule of Classes*. Fundamentals of chemical principles and their application to unit operations and processes encountered in the treatment of water and waste water. (B)

528. Sanitary Engineering Design. Cr. 3

Prereq: C E 422. Material fee as indicated in *Schedule of Classes*. Design principles of water and waste water treatment plants. Plant layouts and the design of elements of the plant. (W)

535. Introduction to Structural Dynamics. Cr. 3

Prereq: M E 340, C E 431. Dynamic properties of structures, nature of dynamic loads, response of structures to dynamic loading, design codes for dynamic loads. (W)

537. Finite Elements for Structural Engineers. Cr. 4

Prereq: C E 431 or M E 560. 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)

551. Foundation Engineering. Cr. 3

Prereq: C E 451. Student computer account required. Site investigation: exploration, sampling and testing techniques. Site preparation: compaction, dewatering. Design of shallow and deep foundations: bearing capacity and settlements. (F)

552. Earth Retaining Systems. Cr. 3

Prereq: C E 551. Application of soil mechanics principles to the analysis, design and construction of unbraced and braced excavations, bulkheads, retaining walls and earth slopes. (B)

558. (HWM 558) Land Disposal of Hazardous Waste. Cr. 2

Prereq: CHE 551. Industrial landfill, biological methods of disposal, land disposal techniques, ocean disposal techniques, disposal of flue gas cleaning wastes. (Y)

559. (HWM 559) Biological Waste Disposal. Cr. 2

Prereq: CHE 551. Biological treatment of industrial wastes, including unit operations, solids handling and activated carbon processes. (S)

561. Highway Design. Cr. 3

Prereq: C E 464. 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)

581. Legal Aspects of Engineering Problems. Cr. 3

Open only to seniors and graduate students. Material fee as indicated in *Schedule of Classes*. Business of contracting, construction, liabilities of owner, architect, engineer and contractor. Rights in land, boundaries and foundations. Case studies. (F)

595. Special Topics in Civil Engineering I. Cr. 1-4

Prereq: consent of chairperson. Student computer account required. Topics to be announced in *Schedule of Classes*. (I)

601. Construction Organization and Management. Cr. 3

Prereq: C E 401 or consent of instructor. Material fee as indicated in *Schedule of Classes*. 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. (W)

602. Construction Safety. Cr. 3

Prereq: C E 401 or I E 556. Safety problems in construction industry and their technical and managerial solutions. Accident and hazard analysis and control techniques; safety program design and implementation. (B)

605. Construction Estimating. Cr. 3

Prereq: C E 485. 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)

613. Engineering Hydraulics. Cr. 3

Prereq: C E 325 or equiv. Student computer account required. Fluid mechanics applied to engineering problems. Dimensional analysis and similitude. Open channel flow, non-uniform flow and hydraulic structures. (W)

615. Hydrology. Cr. 3

Prereq: C E 613. Student computer account required. Precipitation and runoff, probability applications to hydrological data. Stream flow and storage reservoirs; flood control and flood routing; drainage; ground water and well flows; evaporation and water budgets. (B)

619. Ground Water. Cr. 4

Prereq: C E 325. 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)

633. Advanced Structural Analysis I. Cr. 3

Prereq: C E 431. Student computer account required. Effect of axial loads on stiffness of flexural members. Buckling of trusses and rigid frames. Introduction to plastic analysis. Matrix method of analysis. Computer applications. (F)

634. Bridge Analysis and Design. Cr. 3

Prereq: C E 435. Structural engineering lecture course: description and demonstration of principles, procedures and techniques used in analysis and design of modern structural steel and prestressed concrete highway bridges. (B)

637. Reinforced Concrete II. Cr. 3

Prereq: C E 436. Theory and design of two-way slabs, footings, retaining walls, shear walls, and composite beams using ultimate strength design. (W)

638. Prestressed Concrete. Cr. 3

Prereq: C E 436. Theory and design of pretensioned and post-tensioned concrete members. (F)

639. Plastic Analysis and Design of Steel Structures. Cr. 3

Prereq: C E 431, 435. Structural properties of ductile and strain hardening materials, moment rotation characteristics of structural members, equilibrium methods of analysis, mechanism methods, upper and lower bound theorems, design of beams and frames, limitations of the theory. (B)

641. Structural Steel Design II. Cr. 3

Prereq: C E 435. Student computer account required. Advanced topics in steel design, connections, thin walled built up members, thin walled cold rolled members, flexural buildings, lateral torsional buckling, steel design project. (W)

652. Earth Dams. Cr. 3

Prereq: C E 552. Student computer account required. Design, analysis and construction of earth dams, rockfill dams and sheetpile cofferdams; control of seepage and piping; cracking of earth dams; case histories. (I)

666. Pavement Management Systems: Principles and Practices Cr. 3

Prereq: C E 460, 464. 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
Interim Chairperson: Mohamad H. Hassoun
Associate Chairpersons: R. Barnard, F. Westervelt

Professors

R. Arrathoon, R. D. Barnard (Emeritus), F. E. Brammer (Emeritus), J. Meisel, V. Mitin, A.W. Olbrot, M.P. Polis, M. B. Scherba (Emeritus), M. P. Shaw, D.J. Silversmith, H. Singh, F. Westervelt

Associate Professors

J. S. Bedi, R. F. Erlandson, M.H. Hassoun, F. Lin, S.M. Mahmud, P. Siy, J. R. Woodyard, Y. Zhao

Assistant Professors

G. Auner, V. Chandhary, G. Singh (Research), J. Sun, L. Y. Wang, P. Watta (Research)

Adjunct Professor

G.R. Gerhart

Adjunct Associate Professors

R. Pryor, R.A. Spitzer

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.

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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 recently renovated 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

Admission Requirements: see pages 120-122.

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 25), 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 15-43 and 120-125, 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.

ELECTRICAL ENGINEERING CURRICULUM

Freshman Year

First Semester	credits
MAT 201 —Calculus I	4
CHM 107 —(PS) Principles of Chemistry I	4
B E 101 —(CL) Introduction to Computers in Engineering	3
ENG 102 —(BC) Introductory College Writing	4
UGE 100 —(PE) The University and its Libraries	1
	Total: 16

Second Semester

BIO 151 —(LS) Basic Biology I	3
MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics (with lab)	5

P S 103 —(AI) The American Governmental System **	3
MSE 130 —Science of Engineering Materials I	4
	Total: 19

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 218 —General Physics	4
ECE 262 —Introduction to Microcomputers	4
IE 322 —Probability and Statistics in Engineering	3
Visual and Performing Arts (VP) elective **	3
	Total: 18

Second Semester

MAT 215 —Introduction to Differential Equations and Matrix Algebra	4
CHE 304 —Computational Methods in Engineering	3
ECE 330 —Introduction to Electrical Circuits	3
ECE 331 —Electrical Circuits: Laboratory	1
ECE 361 —Digital Logic I	4
ECE 363 —Digital Circuits Laboratory **	2
ECO 201 (recommended) or ECO 202	
—(SS) Principles of Microeconomics **	3
—(SS) Principles of Macroeconomics **	3
	Total: 20

Junior Year

First Semester

ECE 333 —Electrical Circuits II	4
ECE 357 —Electronics I	4
ECE 358 —Electronics Laboratory	2
ENG 305 —(IC) Technical Communication I: Report Writing	3
HIS 195 —(HS) Society and the Economic Transition	3
	Total: 16

Second Semester

ECE 433 —Linear Network and System Analysis	4
ECE 434 —Microcomputer Based Instrumentation Laboratory	2
ECE 457 —Electronics II	4
ENG 306 —(OC) Technical Communication II: Writing and Speaking	3
ANT 315 —(FC) Anthropology of Business	3
	Total: 16

Senior Year

First Semester

ECE 447 —Control Systems I	4
ECE 470 —Introduction to Communication Theory	4
ECE 480 —Electromagnetic Fields and Waves I	4
ECE Design Laboratory Elective	2
Philosophy and Letters (PL) 300-level elective **	3
	Total: 17

Second Semester

ECE 460 —(WI) Microcomputer Interfacing Design	4
Electrical and Computer Engineering Electives	8
ECE Design Laboratory Elective	2
	Total: 14

TOTAL CREDITS

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

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 262, seven credits in other ECE laboratory courses, plus four credits in ECE Design Laboratory courses (including, but not limited to, ECE 448, 548, 563, 573), 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 448, 548, 563, 573), 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 medical excuse.

Course Material Fee: A course material fee is charged for laboratory courses using expendable materials.

COMPUTER OPTION

Admission Requirements: see pages 120–122

DEGREE REQUIREMENTS: The undergraduate curriculum for the Computer Option is the same as the Bachelor of Science in Electrical Engineering curriculum given above, with some differences in the first semester of the senior year, as follows:

Senior Year

First Semester

ECE 461—Introduction to Logical Design of Computers	4
ECE 468—Computer Organization	4
ECE 480—Electromagnetic Fields and Waves	4
ECE Design Laboratory Elective	2
Philosophy and Letters (PL) 300-level elective **	3

The following course may be taken as an alternate to ECE 480:

ECE 470—Introduction to Communication Theory	4
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UNDERGRADUATE COURSES (ECE)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

262. Introduction to Microcomputers. (Lct: 3; Lab: 3). Cr. 4
Prereq: B E 101. Material fee as indicated in *Schedule of Classes*. 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. (T)

330. Introduction to Electrical Circuits. (Lct: 3). Cr. 3
Prereq: PHY 218; coreq: MAT 235. Student computer account required. 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)

331. Electrical Circuits: Laboratory. (Lab: 4). Cr. 1
Coreq: ECE 330. Material fee as indicated in *Schedule of Classes*. Introduction to DC/AC circuits and electronic instrumentation with applications to measurements in simple electrical networks. (T)

333. Electrical Circuits II. (Lct: 4). Cr. 4
Prereq: ECE 330 and 331, MAT 204. Continuation of sinusoidal steady-state concepts from ECE 330. Three-phase systems. Complex frequency concepts. Frequency response and S-plane. Resonant and coupled circuits. Two-port networks. (T)

357. Electronics I. (Lct: 4). Cr. 4
Prereq. or coreq: ECE 333. Material fee as indicated in *Schedule of Classes*. Graphical and small signal analysis of semiconductor devices; equivalent circuits; gain and bandwidth; multi-state and feedback amplifiers; special-purpose circuits. (T)

358. Electronics Laboratory. (Lct: 1; Lab: 3). Cr. 2
Prereq. or coreq: ECE 357. Material fee as indicated in *Schedule of Classes*. Experimental investigation of semiconductor devices and their behavior in single-stage amplifier, pulse, and power circuits. Design of simple single-state circuits. (T)

361. Digital Logic I. (Lct: 4). Cr. 4
Prereq: PHY 218, ECE 262; prereq. or coreq: MAT 235. 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)

363. Digital Circuits Laboratory. (Lct: 1; Lab: 3). Cr. 2
Prereq: or coreq: ECE 361; coreq: MAT 235. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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. (T)

433. Linear Network and System Analysis. (Lct: 4). Cr. 4
Prereq: ECE 333. Student computer account required. 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)

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

434. Microcomputer-Based Instrumentation Laboratory. (Lct: 1; Lab: 3). Cr. 2

Prereq: ECE 357, 358, 363; prereq. or coreq: 433. Material fee as indicated in *Schedule of Classes*. Multipurpose personal-computer-based approach to real time instrumentation. Current interfacing and software used for data acquisition, transmission, analysis and report writing. (T)

447. Control Systems I. (Lct: 4). Cr. 4

Prereq: ECE 433. Student computer account required. System representations; feedback characteristics; time-domain characteristics; Routh-Hurwitz; Root Locus Plots; Nyquist criteria, Bode plots and Nichols charts; series compensation. (T)

448. Systems and Control Laboratory. (Lct: 1; Lab: 3). Cr. 2

Prereq: ECE 447. Material fee as indicated in *Schedule of Classes*. 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. (Y)

457. Electronics II. (MSE 457). (Lct: 4). Cr. 4

Prereq: ECE 357; prereq. or coreq: 358. 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)

460. (WI) Microcomputer Interface Design. (Lct: 4). Cr. 4

Prereq: ENG 305, ECE 361. 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)

461. Introduction to Logical Design of Computers. (Lct: 4). Cr. 4

Prereq: ECE 361, 357. 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)

468. Computer Organization. (Lct: 4). Cr. 4

Prereq: ECE 333, 361. 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)

470. Introduction to Communication Theory. (Lct: 4). Cr. 4

Prereq: I E 322 and ECE 433. Basic information transmission concepts. Spectral analysis. Transmission through linear networks. Sampling principles. Digital and analog communication signals and systems. The effect of noise in communication systems. Elementary decision theory. (T)

480. Electromagnetic Fields and Waves I. (Lct: 4). Cr. 4

Prereq: ECE 333. 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)

485. Introduction to Engineering Optics. (Lct: 4). Cr. 4

Prereq: ECE 433. Introduction to contemporary optical engineering. The fundamental principles of geometrical optics, wave properties of light, Fourier optics and interaction of light and matter. (T)

490. Directed Study. (Ind: 1). Cr. 1-4(Max. 4)

Prereq: senior standing; approval of outline of proposed study by adviser and chairperson prior to registration. Supervised study and instruction in a field selected by the student. (T)

502. (CSC 662) Matrix Computation I. (Lct: 4). Cr. 4

Prereq: CSC 211, CSC 206 or equiv.; and CHE 304 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)

504. Numerical Methods for Engineers. (CHE 504). (Lct: 4). Cr. 4

Prereq: MAT 215, CHE 304. Student computer account required. Solution of ordinary and partial differential equations of engineering by modern numerical methods, including digital computation aspects. (B)

510. (M E 510) Engineering Physiology. (I E 510). (Lct: 4). Cr. 4

Prereq: ECE 433 or M E 340. 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. (I)

512. Artificial Neural Systems I. Cr. 4

Prereq: ECE 433 or M E 500. 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)

516. (M E 516) Biomechanics I. (I E 516). (Lct: 4). Cr. 4

Prereq: M E 510 or ECE 510 or I E 510; M E 240. Mechanics applied to biological systems. Static and dynamic analysis of bone, muscle and joints. Impact biomechanics, including experimental simulation of automotive collision, instrumentation and data analysis. (I)

531. Active Filters. (Lct: 4). Cr. 4

Prereq: ECE 433, 434. 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)

536. Computer-Aided System Analysis and Design. (Lct: 4). Cr. 4

Prereq: ECE 433, 434. Student computer account required. Generation of nodal and mesh equations using computers, graph theory, advanced formulation methods, numerical solution of the network equation in the frequency and time domain, computer generation of the sensitivities, and introduction to circuit optimization. (Y)

537. Mechatronic System Design I. Cr. 4

Prereq: ECE 433 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)

538. Mechatronic System Design II. 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)

541. Power Electronics and Control. (Lct: 3). Cr. 4

Prereq: ECE 433. 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)

542. Electromechanical Energy Conversion. (Lct: 4). Cr. 4

Prereq: ECE 433 and 480. Formulation of equilibrium equations for electromechanical systems in both classical and state-space form, using Lagrange's equation. Linear incremental concepts, general numerical solutions. (I)

543. Electric Energy Systems Engineering. (Lct: 4). Cr. 4

Prereq: ECE 433. Student computer account required. 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)

544. Computer-Controlled Systems. Cr. 4

Prereq: ECE 447 or CHE 460 or M E 440. 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)

546. Stochastic Processes in Engineering. Cr. 4

Prereq: I E 322; and ECE 433 or M E 500. Elements of probability theory. Random variables. Random sequences. Convergence concepts, limit theorems and sampling. Gaussain 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)

547. Control Systems II. (Lct: 4). Cr. 4

Prereq: ECE 447; prereq. or coreq: 448. Student computer account required. 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)

548. Power Electronics Laboratory. Cr. 2

Prereq. or coreq: ECE 541. Material fee as indicated in *Schedule of Classes*. Laboratory study of basic power electronic circuits for control of flow and mode of electric energy. Digital instrumentation and correlation of theoretical models with observed data. Applications include basic motor drive controllers. (Y)

550. Current Electronic and Photonic Materials Technology. Cr. 4

Prereq: ECE 457, MSE 130, 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)

551. Electronic and Photonic Materials Laboratory. Cr. 2

Prereq: ECE 550. Laboratory experience in state-of-the-art techniques for electronic and photonic materials synthesis, processing, and characterization. (W)

555. Solid-State Electronics I. (Lct: 4). Cr. 4

Prereq: ECE 457, 480. 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)

560. Design of Computer Languages. (Lct: 4). Cr. 4

Prereq: ECE 460, 468. Student computer account required. Statement structure, algorithmic structure, as well as list processing, string and array manipulation; and special topics in programming languages. (Y)

561. Introduction to Parallel and Distributed Systems. Cr. 4

Prereq: ECE 468. Fundamentals of parallels and distributed systems. Programming experience in both computing environments. (F,W)

562. Mini- and Microcomputers. (Lct: 4). Cr. 4

Prereq: ECE 460 and 468. Student computer account required. 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, applications and required software systems. Personal computers and their applications. (T)

563. Microcomputer Laboratory. (Lct: 1; Lab: 3). Cr. 2

Prereq: ECE 434, 460. Material fee as indicated in *Schedule of Classes*. 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. (T)

564. (CSC 628) Advanced Operating Systems. Cr. 4

Prereq: CSC 442 or graduate standing. Design issues in advanced operating systems; distributed real-time operating systems; discussion of case studies such as UNIX, MACH, and AMOEBA. (I)

568. Switching Circuits. (Lct: 4). Cr. 4

Prereq: ECE 468. 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)

570. Analog and Digital Communication Circuits. (Lct: 4). Cr. 4

Prereq: ECE 457 and 470. Student computer account required. Amplitude, frequency, pulse modulation and digital modulation. Detection, operational amplifiers; introduction to linear integrated circuits. Digital modulation. (I)

573. Communications Laboratory. (Lab: 2). Cr. 2

Prereq: ECE 470; coreq: 570. Material fee as indicated in *Schedule of Classes*. Analog and digital modulation techniques, pulse code modulation, delta modulation, FSK, PSK and ASK, data communication, signal processing. (Y)

575. Advanced Communication Systems. Cr. 4

Coreq: ECE 570. Generalized functions and spectral densities, stationary and non-stationary random processes, signal spaces, coding theorems, synchronization and stability analysis, applications to advanced systems: FDMA, TDMA, CDMA (spread spectrum), cellular. (Y)

577. Digital Signal Processing. (Lct: 4). Cr. 4

Prereq: ECE 470. Student computer account required. Analysis of discrete signals and systems. Applications to digital filtering, active filters, digital communication and encoding. (Y)

587. Introduction to Lasers. (Lct: 4). Cr. 4

Prereq: ECE 457, 480. Fundamental principles of laser operation. Detailed description of various laser systems. An introduction to fiber and integrated optics; particular emphasis on modern communication systems. (Y)

590. Directed Study. (Ind: 1). Cr. 1-4 (Max. 4)

Prereq: admission to M.S. program, approval of outline for proposed study by adviser and chairperson prior to registration. Supervised study and instruction in the field selected by the student. (T)

595. Special Topics in Electrical and Computer Engineering I. (Lct: 1). Cr. 1-4

Prereq: 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)

618. (M E 618) Bioinstrumentation. (I E 618). (Lct: 4). Cr. 4

Prereq: ECE 510. Engineering principles of physiological measurements, signal conditioning equipment, amplifiers, recorders and transducers. Recent advances in instrumentation. (I)

655. Solid State Electronics II. (Lct: 4). Cr. 4

Prereq: ECE 555. 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)

660. Engineering Software Design. (Lct: 4). Cr. 4

Prereq: CSC 370 or ECE 562. 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)

664. Database Machines. (Lct: 4). Cr. 4

Prereq: ECE 562. Theory, design, and applications of database machines. Hardware implementation of database functions; search, sort, relation operations, and the like. Example of early and current machines: RAP, CASSM, DBC, DIRECT, RDBM, SABRE, VERSO.

(Y)

666. Design of Digital Systems. (Lct: 4). Cr. 4

Prereq: ECE 461, 562. Student computer account required. Introduction to computer hardware description languages. Computer design; data flow, ALU, control section, I/O section. Communication interfaces; handshaking. Special purpose hardware design.

(T)

669. Fuzzy Systems and Applications. Cr. 4

Prereq: I E 322, CHE 304. 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)

671. Irreversibility and Chaos. Cr. 3

Prereq: MAT 215, I E 322. Near-equilibrium and far-from-equilibrium thermophysics, its extension to chaos, and current concepts of the existence of irreversibility and its relation to entropy on the molecular and macroscopic level of daily experience.

(Y)



INDUSTRIAL and MANUFACTURING ENGINEERING

Office: 3100 W. Engineering Building; 577-3822

Chairperson: Donald R. Falkenburg

Professors

Marietta Baba (Adjunct) Kenneth R. Chelst, Donald R. Falkenburg, H. Allan Knappenberger, Frank E. Plonka

Associate Professors

Herbert G. Ludwig (Emeritus), Gary Wasserman

Assistant Professors

Darin Ellis, Olugbenga Mejabi, Kai Yang

Degree Programs

BACHELOR OF SCIENCE in Industrial Engineering

BACHELOR OF SCIENCE in Manufacturing 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*

**DOCTOR OF PHILOSOPHY with a major in Operations Research*

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 specific requirements, consult the Wayne State University Graduate Bulletin.

Today's production is computer-based and provides flexibility through numerical 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, and concurrent engineering design.

Bachelor of Science Degrees in Industrial and Manufacturing Engineering

Admission Requirements: see pages 120-122.

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 25), 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 15-43 and 120-125, 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.

Freshman Year

First Semester

	<i>credits</i>
MAT 201—Calculus I	4
CHM 107—(PS) Principles of Chemistry I	4
ENG 102—(BC) Introductory College Writing	4
UGE 100—(GE) Introduction to the University & its Libraries	1
B E 101—(CL) Introduction to Computers in Engineering	3
Total:	16

Second Semester

MAT 202—Calculus II	4
PHY 217—(PS) General Physics	4
MSE 130—Science of Engineering Materials I **	4
BIO 151—(LS) Basic Biology I	3
P S 101 or P S 103	
—(A) American Government	3
—(A) The American Governmental System	3
Total:	18

Sophomore Year

First Semester

MAT 203—Calculus III	4
PHY 218—General Physics	4
M E 240—Statics **	3
I E 322—Probability and Statistics in Engineering	3
Visual and Performing Arts (VP) elective	3
Total:	17

Second Semester

MAT 215—Differential Equations and Matrix Algebra	4
CHE 304—Computational Methods in Engineering **	3
I E 525—Engineering Data Analysis	4
ECO 201 or ECO 202	
—(SS) Principles of Microeconomics	3
—(SS) Principles of Macroeconomics	3
ECE 262—Introduction to Microcomputers	4
Total:	18

Industrial Engineering Degree

Junior Year

First Semester

I E 556—Operations Research I	4
I E 487—Engineering Economy	3
I E 312—Work Environment	4
ENG 305—(IC) Technical Communication I: Report Writing	3
HIS 195—(HS) Society and the Economic Transition **	3
Total:	17

Second Semester

I E 341—Systems Simulation	4
I E 431—(WI) Production Control	4
M E 220—Thermodynamics	3
ENG 306—(OC) Technical Communication II: Writing & Speaking **	3
ECE 330—Introduction to Electrical Circuits	3
ECE 331—Electrical Circuits Laboratory	1
Total:	18

Senior Year

First Semester

M E 360—Elementary Mechanics of Materials	3
I E elective	4
I E elective	4
I E 526 or I E 624	
—Principles of Quality Control	4
—Reliability & Quality Assurance Systems	4
ANT 315—(FC) Anthropology of Business	3
Total:	18

Second Semester

I E 480—Engineering Design Project	4
I E Elective	4
Directed Elective	3
Philosophy and Letters (PL) elective (300-level)	3
Total:	14
TOTAL CREDITS	136

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

Manufacturing Engineering Degree

Junior Year

First Semester

IE 556—Operations Research I	4
IE 487—Engineering Economy	3
ME 360—Elementary Mechanics of Materials	3
ENG 305—(IC) Technical Communication I: Report Writing	3
His 195—(HS) Society & the Economic Transition **	3
Total: 16	

Second Semester

IE 335—Manufacturing Processes I	3
IE 431—(WI) Production Control	4
ME 220—Thermodynamics I **	3
ENG 306—(OC) Technical Communication II: Writing & Speaking	3
ECE 330—Introduction to Electrical Circuits	3
ECE 331—Electrical Circuits Laboratory	1
Total: 17	

Senior Year

First Semester

IE 445—Concurrent Engineering Design	4
IE elective	4
Directed Elective	4
IE 526 or IE 624	
— Principles of Quality Control	4
— Reliability and Quality Assurance Systems	4
ANT 315—(FC) Anthropology of Business **	3
Total: 19	

Second Semester

IE 341—Systems Simulation	4
IE 441—Computer Aided Manufacturing I	4
IE 480—Engineering Design Project	4
Philosophy and Letters (PL) elective (300-level)	3
Total: 15	
TOTAL CREDITS	136

UNDERGRADUATE COURSES (I E)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

205. (M E 205) Introduction to Computer-Aided Mechanical Drafting. Cr. 2

Prereq: B E 101. Introduction to CAD system using available software system at the College Computer Center, including AutoCAD. (Y)

311. Human Factors in Design. Cr. 4

Prereq: I E 322. Student computer account required. Anthropometric, physiologic, psychologic and biomechanical characteristics of people

which affect the performance of man-machine systems. Sensory, information processing and motor abilities of people. Systematic consideration of human factors in engineering. A design project is required. (Y)

312. The Work Environment. Cr. 4

Prereq: I E 322. 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)

322. Probability and Statistics In Engineering. Cr. 3

Prereq: MAT 202. 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)

345. (M E 345) Manufacturing Processes I. Cr. 3

Prereq: M E 360, MSE 130. Material fee as indicated in *Schedule of Classes*. A study of the field of manufacturing processes from a mechanical engineering design standpoint. Topics include optimum mechanical design for cost, weight, stress, energy, tolerances in such processes as forging, casting, welding and metal cutting. (Y)

425. Engineering Data Analysis. Cr. 4

Prereq: I E 322. 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)

431. (WI) Production Control. Cr. 4

Prereq: I E 556, ENG 305, I E 425. 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)

433. Facilities Design. Cr. 4

Prereq: I E 312, 431, 487. Design of manufacturing, warehouse and material handling facilities. Use of analytic and computer-aided methods in the facilities design process. (Y)

441. Computer Aided Manufacture. Cr. 4

Prereq: B E 101. 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)

442. Systems Simulation. Cr. 4

Prereq: I E 322, B E 101. 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)

445. Concurrent Engineering Design. Cr. 4

Prereq: I E 345. 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)

451. Information and Organization. Cr. 4

Prereq: B E 201. Introduction to information as a strategic resource of any enterprise. Methods for the analysis of information flows within an organization. Impact of information on performance and job design. Includes a major design project aimed at implementation of a task-supporting information system. (Y)

480. Engineering Design Project. Cr. 4

Prereq: I E 425, 431, 487, 556. An intensive design experience defined and executed by the student; course serves both industrial

engineering and manufacturing engineering branches of the curriculum. (Y)

487. Engineering Economy. Cr. 3

Prereq: I E 322. Economic analysis of engineering projects. Selection of appropriate interest rates and methods of analysis, depreciation and tax considerations and use of accounting data in the comparison of investment alternatives. (F)

490. 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)

510. (M E 510) Engineering Physiology. (ECE 510). Cr. 4

Prereq: ECE 430 or ME 340. 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. (I)

516. (M E 516) Biomechanics I. (ECE 516). Cr. 4

Prereq: ME 510 or ECE 510 or I E 510; ME 240. Mechanics applied to biological systems. Static and dynamic analysis of bone, muscle and joints. Impact biomechanics, including experimental simulation of automotive collision, instrumentation and data analysis. (I)

526. Principles of Quality Control. Cr. 4

Prereq: I E 322. 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)

547. Industrial Automation. Cr. 3

Prereq: ECE 331, CSC 105. Integrating logic design, machine interfaces, PLCs and hydraulic and pneumatic systems for the design of hard-wired automation and computer-integrated manufacturing (CIM) systems. (Y)

556. Operations Research. Cr. 4

Prereq: I E 322, MAT 215. Student computer account required. 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)

618. (M E 618) Bioinstrumentation. (ECE 618). Cr. 4

Prereq: ECE 330, M E 510. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (I)

621. Probability Models and Data Analysis. Cr. 4

Prereq: MAT 204. No credit after I E 525. Student computer account required. Analysis of variability in engineering decision making; data analysis, probabilistic models, expectation, joint distributions, confidence limits and hypothesis testing. (F)

624. Quality Management Systems. Cr. 4

Prereq: I E 322 or 621. Survey of topics relating to effective management of a product assurance organization. Two team-design projects assigned. (W)

626. Reliability and Quality Control. Cr. 4

Prereq: I E 425 or 621. 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)

627. Engineering Experimental Design. Cr. 4

Prereq: I E 425 or 621. 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)

628. Quality Engineering Practicum. Cr. 4

Prereq: I E 621. No credit applicable to B.S. or M.S. departmental degree programs. Management topics and related process improvement models necessary for the practice of quality engineering. Major class project assigned. (Y)

631. Production Systems I. Cr. 4

Prereq: I E 621. No credit after I E 431 or I E 433. Fundamental theories and concepts in the design and operation of production systems for manufacturing and service organization. (W)

638. Material Handling Systems. Cr. 4

Prereq: I E 642. Principles of material handling systems. Material handling systems analysis and design. Interfacing material handling systems. Principles of robotics. Robotic applications in manufacturing. (Y)

640. Expert Systems in Manufacturing. Cr. 4

Prereq: ME 345. Expert systems in manufacturing for diagnostics and design. Declarative and procedural nature of PROLOG, VP-Expert. Structure of expert systems in manufacturing, knowledge representation methods, solution space search algorithms, inference engine, forward and backward chaining. (Y)

641. Manufacturing Dimensioning and Tolerancing. Cr. 4

Prereq: I E 322 or 621 and 631 or ME 345. Study of dimensioning and tolerancing in design and manufacturing, exploring statistical tolerance analysis for production and quality control. (Y)

642. Computer Aided Manufacturing II. Cr. 4

Prereq: I E 441 or consent of instructor. Student computer account required. 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)

643. Computer Simulation Methods. Cr. 4

Prereq: I E 425 or 621 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)

645. (M E 645) Advanced Manufacturing Processes and Methods. Cr. 4

Prereq: ME 345, CHE 304, 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)

MECHANICAL ENGINEERING

Office: 2100 W. Engineering Building; 577-3845
Chairperson: K. A. Kline
Associate Chairperson: T. Singh

Professors

V.L. Berdichevsky, C. N. DeSilva, R. Gibson, N. A. Henein, R. A. Ibrahim, A. I. King (Distinguished Professor), K. A. Kline, G.M. Newaz, L. M. Patrick (Emeritus), R. A. Piccirelli, G. E. Rivers (Emeritus), E. Rivin, T. Singh, A. B. Whitman

Associate Professors

E.O. Ayorinde, N. Chalhoub, P.B. Karlic, M. G. Koenig (Emeritus), J.C. Ku, M.C. Lai, K.H. Yang, E. C. Zobel (Emeritus)

Assistant Professors

S.W. Joo, S.J. Shieh, C.A. Tan, H. M. Uras, X. F. Wu

Visiting Assistant Professor

M.J. Grimm

Adjunct Professors

D.D. Ardayfio, W. Bryzik, B. Gans, R. S. Levine, K.N. Morman, P.R. Perumalswami, A.S.P. Solomon, P. Subbarao, J.L. Sullivan, D. Viano, J. Wolf

Adjunct Associate Professors

T. Khalil, D.M. Lawson, J.W. Melvin, D.G. Penney, J.A. Sedensky

Adjunct Assistant Professor

J. Cavanaugh

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 biomechanics, 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 specific 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.

Admission Requirements: see pages 120-122. 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. Two technical electives must be chosen from among the 500 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 25), 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 15-43 and 120-125, 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.

MECHANICAL ENGINEERING CURRICULUM

Freshman Year

First Semester	credits
MAT 201 —Calculus I	4
CHM 107 —(PS) Principles of Chemistry	4
ENG 102 —(BC) Introductory College Writing	4
UGE 100 —(GE) The University and its Libraries	1
BE 101 — (CL) Introduction to Computers in Engineering	3
Total:	16

Second Semester

P S 103 — (AI) The American Governmental System	3
MAT 202 —Calculus II	4
PHY 217 —(PS) General Physics	4
MSE 130 —Science of Engineering Materials I	4
BIO 151 — (LS) Basic Biology I	3
Total:	18

Sophomore Year

First Semester

MAT 203 —Calculus III	4
PHY 218 —General Physics	4
ME 205 —Intro. to Computer-Aided Mechanical Drafting	2
ME 240 —Statics	3
ME 220 —Thermodynamics I	3
IE 322 —Probability and Statistics in Engineering **	3
Total:	19

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

Second Semester

M E 221 — Analysis of Thermodynamic Cycles	1
M E 360 —Elementary Mechanics of Materials	3
M E 340 —Dynamics	3
MAT 215 —Differential Equations and Matrix Algebra	4
ECE 330 —Introduction to Electrical Circuits	3
CHE 304 — Computational Methods in Engineering **	3
Total:	17

Junior Year

First Semester

ECE 331 —Electrical Circuits: Laboratory	1
M E 345 —Manufacturing Processes I	3
M E 330 —Fluid Mechanics	4
M E 420 — Heat Transfer	3
M E 348 —Design of Machine Elements	3
ENG 3065—(OC) Technical Communication I: Report Writing	3
Total:	17

Second Semester

M E 341 —Vibrations I	3
M E 349 — Introduction to Machine Design	3
M E 491 —Thermal and Fluid Sciences Laboratory	2
ECO 201 — (SS) Principles of Microeconomics	3
ENG 306 —(OC) Technical Communication II: Writing & Speaking	3
Visual and Performing Arts (VP) elective	3
Total:	17

Senior Year

First Semester

M E 445 —Mechanical Engineering Design I	4
M E 493 —Solid Mechanics and Vibration Laboratory	2
M E 430 — Thermal Fluid Systems Design	4
HIS 195 — (HS) Society and the Economic Transition	3
Technical Elective	4
Total:	17

Second Semester

M E 450 —(WI) Mechanical Engineering Design II	5
Philosophy and Letters (PL) elective (300-level)	3
ANT 315 — (FC) Anthropology of Business	3
Technical Elective	4
Total:	15
TOTAL CREDITS	136

Technical Electives must be selected from the Mechanical Engineering Department at the 500 level.

UNDERGRADUATE COURSES (M E)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

114. (E T 114) Engineering Graphics I. Cr. 2

Material fee as indicated in *Schedule of Classes*. Theory and application of projection drawing; multiview drawing and sketching; pictorial drawing and sketching; sectional views; the basic techniques of dimensioning; charts and graphs. (Y)

115. (E T 115) Engineering Graphics II. Cr. 2

Prereq: M E 114. Material fee as indicated in *Schedule of Classes*. Multiview and pictorial drawing of complex objects; advanced dimensioning techniques; standard drafting room practices; drafting standards; interpretation of industrial drawings; major topics in descriptive geometry: primary and successive auxiliary views, lines and line measurements, planes and plane measurements, intersection of two- and three-dimensional objects and revolution of lines and surfaces. (Y)

205. Introduction to Computer-Aided Mechanical Drafting. (I E 205). Cr. 2

Prereq: B E 101. Introduction to CAD system using available software system at the college computer center, including AutoCAD. (F,W)

220. Thermodynamics I. Cr. 3

Prereq: MAT 202, PHY 217 and B E 101. A study of the transformation of heat energy to other energy forms. Introduction to the basic concepts and laws of thermodynamics. Description of thermodynamic properties and processes for simple substances. Applications to energy conversion systems, power and refrigeration cycles. (T)

221. Analysis of Thermodynamic Cycles. Cr. 1

Prereq: M E 220. Material fee as indicated in *Schedule of Classes*. Review of first and second laws of thermodynamics with emphasis on their applications. Detailed treatment of certain power and refrigeration cycles. Laboratory experiments to supplement lectures. (F,W)

240. Statics. (C E 240). Cr. 3

Prereq: MAT 202, PHY 217; Coreq: B E 101. Basic concepts and principles of statics with application of Newton's Laws of Motion to engineering problems. Forces, moments, equilibrium, couples, freebody diagrams, trusses, frames, fluid statics, centroids, friction and area and mass moments of inertia. (T)

330. Fluid Mechanics. Cr. 4

Prereq: M E 220, 240; MAT 204 or MAT 235. Student computer account required. Introduction to the nature and physical properties of fluids, fluid statics, equation of motion, incompressible inviscid flow, dimensional analysis, incompressible viscous flows, one-dimensional compressible channel flow. (F,W)

340. Dynamics. Cr. 3

Prereq: M E 240. 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)

341. Vibrations I. Cr. 3

Prereq: MAT 235, M E 340. 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. (F,W)

** Students who wish to carry sixteen or fewer credits per semester may defer this course until the spring or summer term.

345. Manufacturing Processes I. (I E 345). Cr. 3

Prereq: M E 360, MSE 130. Material fee as indicated in *Schedule of Classes*. A study of the field of manufacturing processes from a mechanical engineering design standpoint. Topics include optimum mechanical design for cost, weight, stress, energy, tolerances in such processes as forging, casting, welding and metal cutting. (F,W)

348. Design of Machine Elements. Cr. 3

Prereq: M E 205, 360. Material fee as indicated in *Schedule of Classes*. 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. (W,S)

349. Introduction to Machine Design. Cr. 3

Prereq: M E 348, MAT 235. Material fee as indicated in *Schedule of Classes*. Analysis and design of complex mechanical elements such as gears, clutches, brakes, belts and chains. (F,S)

360. Elementary Mechanics of Materials. (C E 360). Cr. 3

Prereq: M E 240 or C E 240. Elastic relationships between external forces acting on deformable bodies and the associated stresses and deformations; structural members subjected to axial load, torsion and bending; column buckling; combined stresses, repeated loads. (T)

420. Heat Transfer. Cr. 3

Coreq: M E 330. Student computer account required. Fundamental concepts and the basic modes of heat transfer. The 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; the concept of the heat transfer coefficient and Nusselt number. (F,W)

430. Thermal Fluid Systems Design. Cr. 4

Prereq: M E 221, 420; ENG 306; CHE 304. Material fee as indicated in *Schedule of Classes*. Design of thermal-fluid systems to meet system performance requirements, computer-aided design, system simulation, design optimization including investment economics. (F,W)

445. Mechanical Engineering Design I. Cr. 4

Prereq: M E 330, 341, 345, 349, ECE 330, ENG 305. Material fee as indicated in *Schedule of Classes*. 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)

450. (W) Mechanical Engineering Design II. Cr. 5

Prereq: M E 420, 445, ENG 306, and consent of instructor. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

490. Directed Study. Cr. 1-6(Max. 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 the field selected by the student. (T)

491. Thermal and Fluid Sciences Laboratory. Cr. 2

Prereq: M E 330, 420, ENG 305, I R 322. Student computer account required. Material fee as indicated in *Schedule of Classes*. Laboratory experience in measuring some of the physical phenomena encountered in thermodynamics, fluid mechanics, and heat transfer. General principles of several frequently-used transducers and modern data acquisition. Data analysis techniques; statistical data treatment. (F,W)

493. Solid Mechanics and Vibration Laboratory. Cr. 2

Prereq: ENG 306, M E 360, M E 341; Coreq: 491. Student computer account required. Material fee as indicated in *Schedule of Classes*. Fundamentals of stress concentration, stress-strain relation, digital signal analysis and modal analysis. General methods for measuring displacement, velocity acceleration, bending and torsional vibration. (F,W)

500. Engineering Analysis I. Cr. 4

Prereq: MAT 204 and senior standing. Material fee as indicated in *Schedule of Classes*. 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. (F)

501. Engineering Analysis II. Cr. 4

Prereq: MAT 204 and senior standing. Material fee as indicated in *Schedule of Classes*. 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. Applications to mechanical and electrical engineering problems. (W)

504. Finite Element Methods I. Cr. 4

Prereq: M E 360, MAT 235. Student computer account required. 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)

510. Engineering Physiology. (ECE 510)(I E 510). Cr. 4

Prereq: ECE 433 or M E 340. 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)

516. Biomechanics I. (ECE 516)(I E 516). Cr. 4

Prereq: M E 510 or ECE 510 or I E 510; M E 240. Mechanics applied to biological systems. Static and dynamic analysis of bone, muscle and joints. Impact biomechanics, including experimental simulation of automotive collision, instrumentation and data analysis. (W)

517. Design of Human Rehabilitation Systems. Cr. 4

Prereq: M E 445; senior standing. Design, fabrication and testing of customized hardware to aid handicapped patients. (W)

518. Introduction to Biomaterials. (MSE 518). Cr. 4

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)

521. Convective and Radiative Heat Transfer. Cr. 4

Prereq: M E 420. 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)

530. Intermediate Fluid Mechanics. Cr. 4

Prereq: M E 330. Student computer account required. 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)

540. Dynamics II. Cr. 4

Prereq: M E 340. Material fee as indicated in *Schedule of Classes*. 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. (F)

541. Vibrations II. Cr. 4

Prereq: M E 341. 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)

544. 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)

546. Fundamentals of Acoustic Radiation. Cr. 4

Prereq: senior or graduate standing. Theory of sound generation and propagation. Acoustic source models, wave theory, principles of transducers and speakers. Architectural acoustics. (B:F)

547. Creative Problem Solving in Design and Manufacturing. Cr. 4

Coreq: M E 445. 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)

554. Analysis and Control of Dynamic Systems. Cr. 4

Prereq: MAT 235 or MAT 204, M E 340. 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)

560. Advanced Mechanics of Materials. Cr. 4

Prereq: M E 360. 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)

570. Introduction to Continuum Mechanics. Cr. 4

Prereq: MAT 507. Material fee as indicated in *Schedule of Classes*. 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. (F)

572. Mechanics of Composite Materials. Cr. 4

Prereq: M E 360, 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)

580. Combustion Engines. Cr. 4

Prereq: M E 220 and 221 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)

581. Combustion and Emissions. Cr. 4

Prereq: M E 580; for chemical engineering students: senior standing or equiv. 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)

582. Thermal Environmental Engineering. Cr. 4

Prereq: M E 320 and 420. 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)

590. 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)

595. 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)

618. Biinstrumentation. (ECE 618)(I E 618). Cr. 4

Prereq: ECE 330 and M E 510. Engineering principles of physiological measurements. Signal conditioning equipment, amplifiers, recorders and transducers. Recent advances. (B:F)

645. Advanced Manufacturing Processes and Methods. (I E 645). Cr. 4

Prereq: M E 345, CHE 304, 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)

655. Modeling and Control of Dynamic Systems. Cr. 4

Prereq: M E 554. Material fee as indicated in *Schedule of Classes*. 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. (W)

661. (O T 661) Clinical and Experimental Biomechanics. (P T 504). Cr. 4

Prereq: M E 510 or consent of instructor. Interdisciplinary course: quantitative and qualitative assessment of human motion and the analysis of human performance; normal and abnormal movement, motion problems and injuries, design and utilization of adaptive equipment. (I)

DIVISION of ENGINEERING TECHNOLOGY

Office: 4855 Fourth Street; 577-0800
Chairperson: Mulchand S. Rathod

Professors

Howard M. Hess (Emeritus), Mulchand S. Rathod, Donald V. Stocker (Emeritus)

Associate Professors

Seymour Cuker (Emeritus), Vladimir Sheyman, Mukasa E. Ssemakula

Assistant Professors

Shamala Chickamenahalli, Victor Korolov, Ece Yaprak, Chih-Ping Yeh

Part-Time Faculty

Majid Amirjalali, Lissa Anneberg, Mounir Blibeche, John Boyle, Phillip Chams, Nicholas Daddario, Cyrilla Dalstra, Egas DeSouza, Robert Ferrand, Roger Gay, Geoffrey Geisz, Bryce Grevenmeyer, Ravi Gupta, David Hanna, Jay Hazra, Prasanna Kondapalli, Charles Loeher, Richard Netzloff, Sandra Overway-Freeman, Prashant Shah, Anthony Slominis, Edward Sturgeon, Srinivas Sureddi, Anne Williams, Mark Zachos

Degree Programs

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*

***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 ENGINEERING TECHNOLOGY

Admission Requirements: The 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 engineering/technology-related area. A minimum honor point average (h.p.a.) of 2.50 is required for admission to the program. Students with an h.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 180 and PHY 213 with an h.p.a. of 2.5.

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 (577-2479) for examination schedules.

Application for Undergraduate Admissions 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 25). 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 15-43 and 120-125, respectively) and must conform to Division academic standards.

At graduation, the University requires a minimum 2.0 honor point average in total residence credit. Additionally, the Division of Engineering Technology requires a minimum 2.0 h.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

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 149. 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.

BASIC SCIENCE AND MATHEMATICS

credits

CSC 105—(CL) Introduction to C and Unix	2
MAT 180—Elementary Functions	4
MAT 343—(E T 343) Applied Differential and Integral Calculus	4
MAT 345—(E T 345) Applied Calculus and Differential Equations	4
PHY 213—(PS) General Physics	4
PHY 214—General Physics	4
CHM 102—(PS) General Chemistry I	4
Life Sciences (LS) elective	3

Total: 29

EET TECHNICAL CORE

credits

E T 303—Statics	3
E T 385—Reliability and Engineering Statistics	3
E T 387—Engineering Economic Analysis	3
EET 310—Digital Design	3
EET 315—Network Analysis	4
EET 318—Analog Electronics I	3
EET 372—Microprocessor Programming and Interfacing	2
EET 415—Advanced Network Analysis	2
EET 418—Analog Electronics II	3
EET 420—Control Systems	4
EET Upper Division Technical Electives	9
E T 499—(WI) Senior Project	3

Total: 42

COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 114—Engineering Graphics	2
EET 200—Electrical Principles	3
EET 210—Principles of Digital Design	3
EET 272—Microprocessor Fundamentals	3
Other	19

Total: 30

COMMUNICATION REQUIREMENTS

ENG 102—(BC) Introductory College Writing	4
ENG 305—(IC) Technical Communication I: Report Writing	3
SPB 101—(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 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 105 —(CL) Introduction to C and Unix	2
MAT 180 —Elementary Functions	4
MAT 343 —(E T 343) Applied Differential and Integral Calculus	4
MAT 345 —(E T 345) Applied Calculus and Differential Equations	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
CHM 102 —(PS) General Chemistry I	4
Life Sciences (LS) elective	3
Total	29

EMT TECHNICAL CORE

E T 214 —Computer Graphics	2
E T 303 —Statics	3
E T 385 —Reliability and Engineering Statistics	3
E T 387 —Engineering Economic Analysis	3
EET 301 —Instrumentation	2
EET 372 —Microprocessor Programming and Interfacing	2
MCT 310 —Mechanics of Materials	4
MIT 351 —Manufacturing Processes	3
EMT Upper Division Technical Electives	17
E T 499 —(WI) Senior Project	3
Total	42

COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 114 —Engineering Graphics	2
E T 220 —Engineering Materials	3
EET 200 —Electrical Principles	3
EET 272 —Microprocessor Fundamentals	3
Other	19
Total	30

COMMUNICATION REQUIREMENTS

ENG 102 —(BC) Introductory College Writing	4
ENG 305 —(IC) Technical Communication I: Report Writing	3
SPB 101 —(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 149. 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 105 —(CL) Introduction to C and Unix	2
MAT 180 —Elementary Functions	4
MAT 343 —(E T 343) Applied Differential and Integral Calculus	4
MAT 345 —(E T 345) Applied Calculus and Differential Equations	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
CHM 102 —(PS) General Chemistry I	4
Life Sciences (LS) elective	3
Total	29

MIT TECHNICAL CORE

E T 214 —Computer Graphics	2
E T 303 —Statics	3
E T 305 —Dynamics	3
E T 385 —Reliability and Engineering Statistics	3
E T 387 —Engineering Economic Analysis	3
EET 301 —Instrumentation	2
MCT 310 —Mechanics of Materials	4
MCT 341 —Kinematics and Dynamics of Machines	3
MIT 351 —Manufacturing Processes	3
MIT 470 —Computer-Aided Design and Manufacturing	3
MIT Upper Division Technical Electives	10
E T 499 —(WI) Senior Project	3
Total: 42	

COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 114 —Engineering Graphics	2
E T 220 —Engineering Materials	3
EET 200 —Electrical Principles	3
Other	22
Total: 30	

COMMUNICATION REQUIREMENTS

ENG 102 —(BC) Introductory College Writing	4
ENG 305 —(IC) Technical Communication I: Report Writing	3
SPB 101 —(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 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 149.

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 105 —(CL) Introduction to C and Unix	2
MAT 180 —Elementary Functions	4
MAT 343 —(E T 343) Applied Differential and Integral Calculus	4
MAT 345 —(E T 345) Applied Calculus and Differential Equations	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
CHM 102 —(PS) General Chemistry I	4
Life Sciences (LS) elective	3
Total: 29	

MCT TECHNICAL CORE

E T 214 —Computer Graphics	2
E T 303 —Statics	3
E T 305 —Dynamics	3
E T 385 —Reliability and Engineering Statistics	3
E T 387 —Engineering Economic Analysis	3
EET 301 —Instrumentation	2
MIT 351 —Manufacturing Processes	3
MCT 310 —Mechanics of Materials	4
MCT 315 —Applied Thermodynamics	4
MCT 341 —Kinematics and Dynamics of Machines	3
MCT Upper Division Technical Electives	9
E T 499 —(WI) Senior Project	3
Total: 42	

COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 114 —Engineering Graphics	2
E T 220 —Engineering Materials	2
EET 200 —Electrical Principles	3
Other	23
Total: 30	

COMMUNICATION REQUIREMENTS

ENG 102 —(BC) Introductory College Writing	4
ENG 305 —(IC) Technical Communication I: Report Writing	3
SPB 101 —(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 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 149. 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.

BASIC SCIENCE AND MATHEMATICS credits

CSC 105 — (CL) Introduction to C and Unix	2
MAT 180 —Elementary Functions	4
MAT 343 —(E T 343) Applied Differential and Integral Calculus	4
MAT 345 —(E T 345) Applied Calculus and Differential Equations	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
CHM 102 —(PS) General Chemistry I	4
Life Sciences (LS) elective	3
Total:	29

PDT TECHNICAL CORE

E T 214 —Computer Graphics	2
E T 303 —Statics	3
E T 385 —Reliability and Engineering Statistics	3
E T 387 —Engineering Economic Analysis	3
EET 301 —Instrumentation	2
MIT 335 —Applied Human Factors	3
MIT 351 — Manufacturing Processes	3
MIT 470 —Computer-Aided Design and Manufacturing	3
AID 330 — Introduction to Industrial Design	3
AID 630 — Transportation Design	3
PDT Upper Division Technical Electives	11
E T 499 —(WI) Senior Project	3
Total:	42

COMMUNITY COLLEGE TECHNICAL TRANSFER

E T 114 —Engineering Graphics	2
E T 220 —Engineering Materials	3
EET 200 —Electrical Principles	3
Other	22
Total:	30

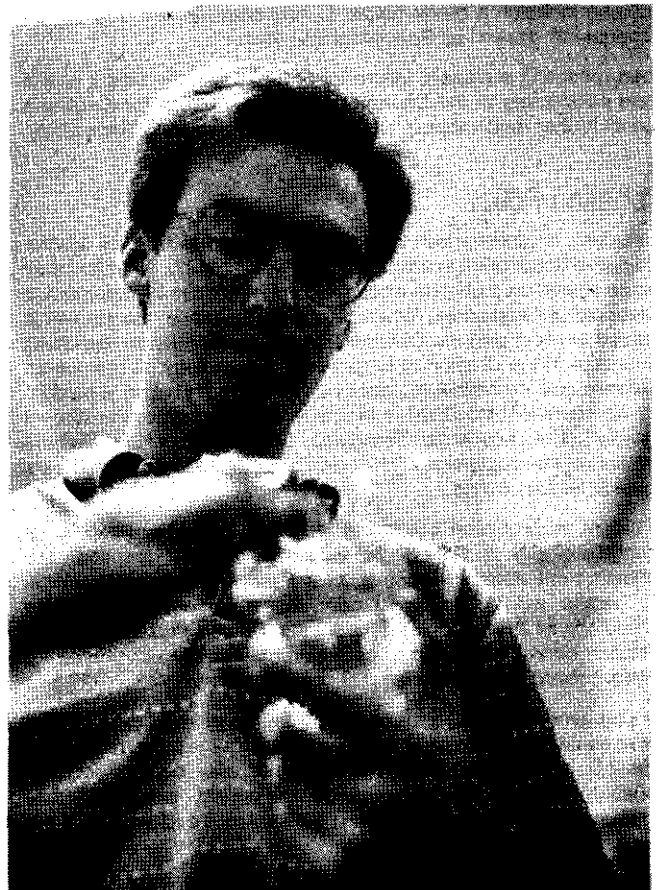
COMMUNICATION REQUIREMENTS

ENG 102 —(BC) Introductory College Writing	4
ENG 305 — (IC) Technical Communication I: Report Writing	3
SPB 101 —(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



ACADEMIC REGULATIONS

For complete information regarding academic rules and regulations of the University, students should consult the General Information section, pages 15-43. The following additions and amendments pertain to the Division of Engineering Technology.

Dean's List of Honor Students

A student who achieves a semester honor 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 honor point average (h.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 honor point average promptly. If, at the end of the first semester on probation, the student's cumulative honor 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 h.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 honor 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 40. 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

ENGINEERING TECHNOLOGY (E T)

114. Engineering Graphics. (M E 114). (Lct: 1; Lab: 3). Cr. 2
Material fee as indicated in *Schedule of Classes*. Theory and application of projection drawing; multiview drawing and sketching; pictorial drawing and sketching; sectional views; basic techniques of dimensioning; charts and graphs. (T)

214. Computer Graphics. (Lct: 1; Lab: 2). Cr. 2
Prereq: E T 114; coreq: CSC 105. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

220. Engineering Materials. (Lct: 3). Cr. 3
Coreq: CHM 102. Application and characteristics, both physical and chemical, of metallic and nonmetallic materials, polymers, and composites used in industry. The primary process involved in producing these materials. (Y)

250. 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)

303. Statics. (Lct: 3). Cr. 3

Prereq: PHY 213; coreq: E T 343. 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)

305. Dynamics. (Lct: 3). Cr. 3

Prereq: E T 303 and MAT 343. 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)

343. (MAT 343) Applied Differential and Integral Calculus. (Lct: 4). Cr. 4

Prereq: MAT 180. 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)

345. (MAT 345) Applied Calculus and Differential Equations. (Lct: 4). Cr. 4

Prereq: E T 343. No degree credit in Colleges of Science and Liberal Arts. A continuation of E T 343, including logarithmic and exponential functions, first and second order ordinary differential equations, vectors, polar coordinates, Laplace transforms, Taylor series, and Fourier series. (F,W)

385. Reliability and Engineering Statistics. (Lct: 3). Cr. 3

Coreq: E T 343. 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)

387. Engineering Economic Analysis. (Lct: 3). Cr. 3

Prereq: MAT 180. Techniques to economically evaluate major technical projects, rate of return and present worth, interest formulae; federal taxes, risk, inflation, and non-economic constraints. (T)

490. Guided Study. (Ind: 1). Cr. 1-6(Max. 6)

Prereq: consent of instructor. Supervised study and instruction in field selected by student. (I)

495. Special Topics in Engineering Technology I. Cr. 1-4

Prereq: consent of instructor. Topics to be announced in *Schedule of Classes*. (I)

499. (WI) Senior Project. (Lab: 3; Dsc: 2). Cr. 3

Prereq: successful completion of English Proficiency Examination, SPB 101. 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)

200. Electrical Principles. (Lct: 2; Dsc: 1). Cr. 3

Prereq: MAT 180; coreq: PHY 214. 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)

210. Principles of Digital Design. (Lct: 3). Cr. 3

Applied Boolean algebra and number systems. Logic families, K-mapping; combinational logic, multiplexers and demultiplexers, readouts and displays, flip flops. (Y)

272. Microprocessor Fundamentals. (Lct: 2; Lab: 2). Cr. 3

Coreq: CSC 105. No credit after EET 372. Material fee as indicated in *Schedule of Classes*. Use of microprocessors as interface devices,

including software, interfaces, memory, registers, and microcomputer system architecture, computer programming design projects. (Y)

301. Instrumentation. (Lct: 1; Lab: 3). Cr. 2

Prereq: EET 200 and PHY 214. Material fee as indicated in *Schedule of Classes*. Theory and use of various instruments and measurement techniques; power supplies, bridges, potentiometers, oscilloscopes; transducers for temperature, pressure, flow, strain, thermocouples, etc.; signal conditioning. (F,W)

310. Digital Design. (Lct: 3). Cr. 3

Prereq: EET 210. Continuation of combinational logic, multiplexers and demultiplexers, flip flops, counters, shift registers, arithmetic circuits, memory systems, introduction to sequential logic systems, analog to digital and digital to analog converters. Hardware design project. (F,W)

315. Network Analysis. (Lct: 3; Lab: 2). Cr. 4

Prereq: EET 200, PHY 214; coreq: E T 345. Voltage-current relationships for inductors and capacitors, independent and dependent sinusoidal sources, phasors, impedance, power, reactive power, power factor, power-factor correction, complex power, frequency response and resonance, three-phase systems, two-port networks, hybrid parameters, magnetically-coupled circuits. (F,W)

318. Analog Electronics I. Cr. 3

Prereq: CHM 102. Material fee as indicated in *Schedule of Classes*. Characteristics and applications of diodes, bipolar and field effect transistors, solid state devices. Design of power supply circuits for transistors, biasing; high and low frequency equivalent circuits, tuned amplifiers. Component tolerances, temperature considerations. Multi-stage amplifiers, input and output impedances. (F,W)

372. Microprocessor Programming and Interfacing.

(Lct: 1; Lab: 2). Cr. 2

Prereq: EET 272. Material fee as indicated in *Schedule of Classes*. Hardware and software aspects of microprocessor systems; assembly language programming; hardware skills in interfacing and debugging; current application programs. (F,W)

415. Advanced Network Analysis. (Lct: 2). Cr. 2

Prereq: EET 315. Student computer account required. Transient response of electric circuits to periodic and nonperiodic forcing functions, impulses, wave form and special analysis, complex frequency, Bode plots, frequency response, computer solutions. (F,W)

418. Analog Electronics II. (Lct: 3). Cr. 3

Prereq: EET 318. Coupled multistage RF amplifiers and stability considerations, feedback and operational amplifiers, DC format, oscillators, modulators, and demodulators. Design of Class B and C amplifiers, power handling, efficiency, and distortion. (F,W)

420. Control Systems. (Lct: 3; Lab: 2). Cr. 4

Prereq: E T 303, E T 345; EET 301 or EET 315. Material fee as indicated in *Schedule of Classes*. Feedback control systems with topics in time response, stability criteria, system representation, frequency response, compensation. Simulation of electrical and mechanical systems. (F,W)

430. Electromagnetic Fundamentals and Design. (Lct: 3). Cr. 3

Prereq: E T 345, EET 315. 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, tractive magnets. Earth conductivity and method of images as related to transmission lines and short antennas. (I)

440. Electronic Transmission Technology. (Lct: 3). Cr. 3

Prereq: E T 345, EET 315. Free space wave propagation. Transmission line parameters, transmission equations, terminations; discontinuities, reflections, and loading. Smith chart. Waveguides. Antennas. Metallic reflectors and horns. Power, telegraphy, telephony, video, digital data, and high frequency transmission. (I)

450. Energy and Electrical Machines. (Lct: 2; Lab: 2). Cr. 3
Prereq: E T 345; EET 315. 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)

460. Power System Performance. (Lct: 3). Cr. 3
Prereq: EET 315, E T 345. Electric power plants, three-phase systems, generation, transmission and distribution of electric power, power system apparatus, efficiency and economics of power system operation, per-unit notation, power network analysis and reduction, load-flow studies. (Y)

472. Microcomputer Hardware Design. (Lct: 2; Lab: 2). Cr. 3
Prereq: EET 310, 372. Material fee as indicated in *Schedule of Classes*. Structural organization and hardware design of digital computers. Processing and control units, arithmetic algorithms, input-output systems, and memory systems.. (Y)

490. Guided Study. (Ind: 1). Cr. 1-6(Max. 6)
Prereq: consent of instructor. Supervised study and instruction in field selected by student. (I)

MANUFACTURING/INDUSTRIAL ENGINEERING TECHNOLOGY (MIT)

335. Applied Human Factors. (Lct: 3). Cr. 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)

350. Machine Tool Laboratory. (Lab: 3). Cr. 1
Prereq: E T 114. Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. (F,W)

351. Manufacturing Processes. (Lct: 2; Lab: 3). Cr. 3
Prereq: CHM 102, E T 220, E T 114. No credit for MIT students. 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)

360. Process Engineering. (Lct: 3). Cr. 3
Prereq: MIT 351. Processing functions. Methods of manufacturing analysis. Manufacturing sequence, mechanization. Selection of tooling and equipment. Planning the process of manufacture. (Y)

422. Methods Analysis and Time Study. (Lct: 3). Cr. 3
Prereq: MIT 351. Development of the fundamental concepts and approaches of time and motion study; application of the principles of motion economy. (I)

432. Production and Inventory Management. (Lct: 3). Cr. 3
Prereq: E T 385, MIT 351. Basic production scheduling and inventory management. Production planning, project management, inventory functions, and inventory costs. (Y)

470. Computer-Aided Design and Manufacturing. (Lct: 2; Lab: 2). Cr. 3
Prereq: E T 214, MIT 351. Student computer account required. Material fee as indicated in *Schedule of Classes*. Fundamentals of computer-aided manufacturing using computer software. Two- and three-dimensional applications programming, numerical control and programming. (Y)

480. Quality Control. (Lct: 4). Cr. 4
Prereq: E T 385. Introduction to total quality systems design and to basic analytical techniques for quality control. (I)

490. Guided Study. (Ind: 1). Cr. 1-6(Max. 6)
Prereq: consent of instructor. Supervised study and instruction in the field selected by the student. (I)

495. Special Topics in Manufacturing/Industrial Engineering Technology I. Cr. 1-4

Prereq: consent of instructor. Topics to be announced in *Schedule of Classes*. (I)

550. Machine Tool Laboratory. (Lab: 3). Cr. 1

Prereq: E T 114. Laboratory experiences in manufacturing processes, machine tools, and mechanization; calibration and part-setup. (F,W)

MECHANICAL ENGINEERING TECHNOLOGY (MCT)

310. Mechanics of Materials. (Lct: 3; Lab: 3). Cr. 4

Prereq: E T 303; coreq: E T 343. Material fee as indicated in *Schedule of Classes*. The elastic behavior of load bearing materials. Tension, compression, shear, combined stress, bending, torsion and columns. Failure analysis. (F,W)

315. Applied Thermodynamics. (Lct: 3; Lab: 2). Cr. 4

Prereq: E T 343, PHY 213, CHM 102. Material fee as indicated in *Schedule of Classes*. 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. (Y)

318. Fluid Mechanics. (Lct: 3; Lab: 2). Cr. 4

Prereq: E T 303. 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)

341. Kinematics and Dynamics of Machines. (Lct: 2; Lab: 2). Cr. 3

Prereq: E T 214, E T 303. 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)

421. Heat Transfer. (Lct: 3; Lab: 2). Cr. 4

Prereq: MAT 345, PHY 214. 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)

423. Heating, Ventilation, and Air Conditioning. (Lct: 3). Cr. 3

Prereq: MCT 315, 318, or 421. 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)

440. Design of Machine Elements. (Lct: 3). Cr. 3

Prereq: MCT 310, 341. 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)

490. Guided Study. (Ind: 1). Cr. 1-6(Max. 6)

Prereq: consent of instructor. Supervised study and instruction in the field selected by the student. (I)

495. Special Topics in Mechanical Engineering Technology I. Cr. 1-4

Prereq: consent of instructor. Topics to be announced in *Schedule of Classes*. (I)

**COLLEGE OF FINE, PERFORMING
and COMMUNICATION ARTS**

DEAN: David J. Magidson

Foreword

The College of Fine, Performing and Communication Arts at Wayne State University has as its mission the provision of the highest quality education for practitioners, scholars and consumers in art, art history, communication, dance, music and theatre. This education leads to careers, uses for the arts in other disciplines, enhanced critical abilities, the enrichment of everyday life and the building of new generations of artists, professionals and scholars.

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. Cultural, racial, ethnic and gender diversity is an important commitment 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 Community Arts Gallery exhibitions 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, the Center for Creative Studies, and Orchestra Hall, among other institutions) provides further unique and enriching benefits for students; professional staff members of these institutions often serve as adjunct faculty in College 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 yet 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
	speech communication

BACHELOR OF FINE ARTS—with majors in

art	theatre
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BACHELOR OF MUSIC—with concentration in

church music	music industry management
composition	music technology
jazz studies and contemporary media	music therapy
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 concentration in*

composition	performance
choral 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
radio-television-film	

**CERTIFICATE IN MUSEUM PRACTICE*

* For specific requirements, consult 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 25) 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 101 (110, 111), 102, and 201 in the following subject areas: ARB, ARM, FRE, GER, GRK, HEB, ITA, LAT, POL, RUS, SPA, SWA, and UKR; as well as GRK 111, 112, and 211. 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.

NOTE: The same language may *not* be used to fulfill *both* the College Foreign Language Requirement and the Foreign Culture Group Requirement of the University General Education Requirements

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, pages 26 and 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.

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 honor 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, 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 (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 Manoojian 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 160.)

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.

—*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 an honor 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 300 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 honor point average may take more than eighteen credits only when the proposed program carries the written approval of the adviser and the Dean.

Honor Point Average

All students are required to maintain an over-all honor point average of C (2.0) for all degree work elected. See 'Honor Point Average' in the General Information section of this Bulletin, page 42.

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 21), 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 h.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

Students with a 3.0 honor 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 257.

Students enrolled in the College of Fine, Performing and Communication Arts who are interested in pursuing a University Honors degree should refer to page 36 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

Effective Fall Term 1986, Wayne State University will bestow upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative honor 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 honor 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 honor 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 honor point average distributions of the previous year's senior class, the honor 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 honor 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 honor 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 honor point average for students registered for full-time programs of twelve credits or more which contribute to the honor point base; and a 4.0 honor 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 42.)

Academic Probation

Low Honor Point Average: If a student's work averages below 2.0, the student will be placed on academic probation; see 'Undergraduate Academic Probation,' page 40. 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 Honor 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 Honor 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 h.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 461.

100. Art Works: Topics in the Fine, Performing, and Communication Arts. Cr. 3

Multidisciplinary course designed to introduce students to the ways artist work, and to investigate how the arts shape our perception of the world around us. (Y)

502. 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)

DIRECTORY OF THE COLLEGE

Dean

David J. Magidson 5104 Gullen Mall; 577-5342

Associate Dean

Richard J. Bilaitis 5104 Gullen Mall; 577-5747

Assistant Dean

Joan M. Ferguson 5104 Gullen Mall; 577-5362

Budget

Jeri L. Gleichauf 5104 Gullen Mall; 577-5206

Development Officer

Diane M. Shane 5104 Gullen Mall; 577-5363

Assistant to the Dean

Robert E. Quinney 5104 Gullen Mall; 577-5337

Degree Certification

Susan T. Tamm 5104 Gullen Mall; 577-5364

Personnel Records

Eunice Pappas 5104 Gullen Mall; 577-5365

Public Relations

Roger D. Wareham 5104 Gullen Mall; 577-5448

Departmental Offices

Art and Art History

Joseph B. Zajac 150 Art Building; 577-2980

Communication

Jack Kay 585 Manoogian Hall; 577-2943

Dance

Eva Jablonowski Powers 125 Matthaei Building; 577-4273

Music

Dennis J. Tini 105 Schaver Music Building; 577-1795

Theatre

James Thomas 95 W. Hancock; 577-3508

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: Joseph B. Zajac

Associate Chairperson: Carolyn J. Hooper

Exhibitions and Programs Curator: John Slick

Slide Collection Curator: Terry Kerby

Professors

Richard J. Bilaitis, Phillip G. Fike, John G. Hegarty, James Nawara, Thomas C. Parish, Melvin Rosas, Horst Uhr

Emeritus/Emerita Faculty

William A. Allen (Emeritus), Mary Jane Bigler (Emerita), Robert Broner (Emeritus), Olga Constantine (Emerita), Jeanne Galloway (Emerita), Peter J. Gilleran (Emeritus), Bernard M. Goldman (Emeritus), Joseph Gutmann (Emeritus), David A. Mitchell (Emeritus), Louise J. Nobili (Emerita), William E. Pitney (Emeritus), Patricia A. Quinlan (Emerita), Robert J. Wilbert (Emeritus)

Associate Professors

Jeffrey Abt, Phyllis A. Ashinger, Pamela DeLaura, Thomas P. Fitzgerald, Urban Jupena, Brian Madigan, Robert J. Martin, John C. Mills, James M. Raymo, Stanley L. Rosenthal, Joseph B. Zajac, Marilyn Zimmerman

Assistant Professors

Russel Hamilton, Carolyn J. Hooper, Nancy Locke, Janice Mann, Judith Moldenhauer, Irena Nahkova, Peter Williams

W. Hawkins Ferry Endowed Chair in Twentieth Century Art History and Criticism

Jane Blocker

Degree Programs

BACHELOR OF ARTS with a major in art, art history, fashion design and merchandising.

BACHELOR OF FINE ARTS with a major in art and a concentration in one of the following: ceramics, design, drawing, fibers, graphic design, industrial design, 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, design, 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.

***CERTIFICATE** in Museum Practice

* For specific requirements consult 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.

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 25), College degree requirements (see page 159), 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 159). 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 105—Drawing I	3
ADR 106—Drawing II	3
ADE 120—Design I	3
ADE 121—Design II	3
A H 111—(VP) Paleolithic Through Gothic Art Survey	3
A H 112—(VP) Renaissance Through Modern Art Survey	3

DEPARTMENTAL REQUIREMENTS

ADR 207—Beginning Life Drawing	3
APA 210—Basic Painting	3
ASL 215—Introduction to Sculpture	3
ADE 220—Design III: Three Dimensional (or craft course)	3
One three-credit course in printmaking (APR) or photography (APH)	3
Art History (A H) elective (200 level or above)	3
Art History (A H) elective (300 level or above)	3
PHI 370—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 25), College degree requirements (see page 159), and the major requirements listed below. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 159). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15–43 and 159–162, 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 pages 205–210.

Major Requirements: Students must complete a minimum of thirty-three credits in art history, which includes six credits in the basic surveys (A H 111, 112), 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 500 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. It is recommended that students who intend to pursue graduate work in Art History elect A H 509. 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 one foreign language (a minimum of four semester courses; German or French is preferred).

Bachelor of Arts 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 the Bachelor of Arts degree must complete 120 credits including satisfaction of the University General Education requirements (see page 25), College degree requirements (see page 159), 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. Students pursuing a bachelor of arts degree must also fulfill the foreign language requirement (see page 159). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15–43 and 159–162, respectively.

CORE REQUIREMENTS	credits
AFA 241—Textiles I	3
AFA 242—Clothing Selection and Construction	3
AFA 340—Clothing and Culture	3
AFA 346—Introduction to Merchandising	3
AFA 543—History of Costume	3
AFA 597—(W) 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 patterning, 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 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 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 the Bachelor of Science degree must complete 120 credits including satisfaction of the University General Education requirements (see page 25), College degree requirements (see page 159), 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. Students pursuing a bachelor of science degree 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. All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15-43 and 159-162, respectively.

Students are responsible for meeting program requirements as outlined in curriculum guides available from the Department of Art and Art History office.

CORE REQUIREMENTS

	<i>credits</i>
AFA 241 — Textiles I	3
AFA 242 — Clothing Selection and Construction	3
AFA 340 — Clothing and Culture	3
AFA 346 — Introduction to Merchandising	4
AFA 543 — History of Costume	3
AFA 597 — (W) 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 25) and College degree requirements (see page 159). 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 15-43 and 159-162, respectively.

Major Requirements: Students must complete twenty-one to fifty-one credits (depending on areas of specialization) in art courses, eighteen of which must be at the advanced level (from courses numbered 300 or above). Specialization requirements for the B.F.A. degree may also be met by combining a minimum of twenty-four credits at an advanced level in two specializations. 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. Metal Arts |
| b. Drawing | h. Painting |
| c. Fibers | i. Photography |
| d. Graphic Design | j. Printmaking |
| e. Industrial Design | k. Sculpture |
| f. Interior Design | |

Required courses in each B.F.A. concentration are given below; exceptions may be made with consent of adviser.

CERAMICS

ACR 255 — Ceramics and Pottery Design I*	3
ACR 256 — Ceramics and Pottery Design II*	3
ACR 355 — Beginning Ceramics	3
ACR 400 — Ceramics: Wheel Throwing	3
ACR 455 — Intermediate Ceramics	3
ACR 555 — Advanced Ceramics	12

DESIGN

ADE 220 — Design III: Three-Dimensional	3
ADE 522 — Computer Art	3-15
ADE 583 — Directed Projects: Design	9-15

DRAWING

ADR 207 — Beginning Life Drawing	3
ADR 307 — Intermediate Life Drawing	3
ADR 506 — Advanced Drawing	3
ADR 508 — Landscape Drawing and Painting	3
Drawing Electives	12

* Students who have completed first year core program may start with ACR 355/455, and repeat ACR 555.

FIBERS

	credits
AFI 265 or AFI 266	
—Beginning Weaving	3
—Introduction to Fibers	3
AFI 365 or AFI 366	
—Intermediate Weaving	3
—Intermediate Fibers	3
500-level AFI courses (Junior year)	9
500-level AFI courses (Senior year)	6

GRAPHIC DESIGN

AIA 161 — Drafting and Perspective	3
AGD 225 — Typography	3
AGD 325 — Graphic Design I	3
AGD 425 — Graphic Design II	3
AGD 525 — Graphic Design III	3
AGD 625 — Graphic Design IV	3
AGD 526 — Senior Seminar	3
Graphic Design Elective	3

INDUSTRIAL DESIGN

AID 330 — Introduction to Industrial Design	6
AID 331 — Basic Presentation	6
AID 530 — Industrial Design	12
AID 531 — Advanced Presentation	12
AID 630 — Transportation Design	6
AID 632 — History of Industrial Design I	3
AID 633 — History of Industrial Design II	3

INTERIOR DESIGN

AFA 241 — Textiles I	3
AIA 161 — Architectural Drafting and Perspective Drawing	3
AIA 260 — Interior Concepts	3
AIA 261 — Beginning Interiors Studio	3
AIA 360 — Interior Design Studio III	4
AIA 361 — Small Scale Design Studio	3
AIA 460 — Environmental Design Theory	3
AIA 461 — Recreation and Commercial Design Studio	3
AIA 560 — History of Interiors	3
AIA 561 — Interior Materials and Systems	3
AIA 562 — Construction Technology	3
AIA 563 — Lighting	3
AIA 564 — Interiors Construction Drawing	3
AIA 661 — Advanced Interiors Studio	3
AIA 665 — Interiors: Business Principles and Practices	2
AIA 685 — Senior Seminar: Contemporary Designers	2

METAL ARTS

AME 260 — Metal Arts and Jewelry Design	3
AME 360 — Intermediate Metal Arts and Jewelry Design	3
AME 560 — Advanced Metal Arts and Jewelry Design (Junior year)	6
AME 560 — Advanced Metal Arts and Jewelry Design (Senior year)	12

PAINTING

APA 211 — Beginning Painting: Water Media	3
APA 212 — Beginning Painting: Oil	3
300-level Painting Elective	3
APA 313 or APA 314	
—Figure Painting: Water Media	3
—Figure Painting: Oil and Other Media	3
APA 510 — Painting Seminar	3
500-level Painting Electives	9

PHOTOGRAPHY

APH 240 — Introductory Photography	3
APH 241 — Beginning Photography	3
APH 340 — Evolution of Photography	3
APH 341 — Intermediate Photography	3
APH 441 — Advanced Photography	3
APH 442 — View Camera	3
APH 443 — Color Photography	3
500-level Photography Electives	6

PRINTMAKING

300-level APR courses	6
500-level Printmaking courses	12
500-level Advanced Printmaking courses	6

SCULPTURE

ASL 316 or ASL 317	
—Intermediate Sculpture: Non-Figurative	3
—Intermediate Sculpture: Figurative	3
500-level Advanced Sculpture courses	15
ASL 616 or ASL 617	
—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 105), one Design course (ADE 120), one Art History course (A H 111 or 112), 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 111 and 112, and fifteen credits at the 200 level or above. A minor in art history will be granted upon completion of twenty-one credits in art history courses, including A H 111 and 112, and fifteen credits at the 200 level or above.

Departmental Scholarships

See the section on Scholarships and Financial Aid on page 161. Detailed information on all Department scholarships and awards is available in the Art and Art History office.

Arts Foundation of Michigan Scholarship: Award of \$2000 open to senior majoring in a studio art area.

Albert and Peggy deSalle Scholarship: Awarded to any undergraduate or graduate art student majoring in metals, photography, or a closely related field.

Mary Kirk Haggarty Memorial Scholarship: Awarded to any undergraduate or graduate student majoring in art history.

Marji Kunz Fashion Scholarship: Awarded to any art student (sophomore level or above) with aptitude in creative design, display work, writing, fashion retailing or modeling. Application deadline is October 31.

Willfred 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.

John and Irene Sowinski Scholarship: Awarded to any art student majoring in a studio art area.

Talent Award: Award of \$850 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

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)

**255. Ceramics and Pottery Design I. (ACR 256)
(ACR 355)(ACR 455)(ACR 555)(ACR 755). Cr. 3**

Material fee as indicated in *Schedule of Classes*. Introduction to basic clay-forming techniques including slab, coil, wheel throwing, and glazing. Primarily for non-art majors. (T)

**256. (ACR 255) Ceramics and Pottery Design II.
(ACR 355)(ACR 455)(ACR 555)(ACR 755). Cr. 3**

Prereq: ACR 255. Material fee as indicated in *Schedule of Classes*. Continuation of ACR 255. Further development of basic clay techniques. (T)

**355. (ACR 255) Beginning Ceramics. (ACR 256)
(ACR 455)(ACR 555)(ACR 755). Cr. 3**

Prereq: ADR 106 and ADE 121. Open only to art majors. Material fee as indicated in *Schedule of Classes*. Experiences in basic techniques, processes and ideas fundamental to the ceramic medium. (T)

400. Ceramics: Wheel Throwing. Cr. 3

Prereq: ACR 255 or 355 or consent of instructor. Material fee as indicated in *Schedule of Classes*. 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. (Y)

**455. (ACR 255) Intermediate Ceramics. (ACR 256)
(ACR 355)(ACR 555)(ACR 755). Cr. 3**

Prereq: ACR 355. Material fee as indicated in *Schedule of Classes*. Advanced building techniques; glaze and clay body calculation, mold-making and aesthetic evaluation. (T)

**555. (ACR 255) Advanced Ceramics. (ACR 256)
(ACR 355)(ACR 455)(ACR 755). Cr. 3-6(Max. 12)**

Prereq: ACR 455. Open only to art majors in ceramics. Election of more than 3 credits per semester requires consent of instructor. Material fee as indicated in *Schedule of Classes*. Individual research including kiln building, firing and studio management. Individual philosophy and group critiques emphasized. (T)

**588. Directed Projects: Ceramics.
Cr. 3-6(Undergrad. max. 15; grad. max. 30)**

Prereq: written consent of instructor. Material fee as indicated in *Schedule of Classes*. Individual problems. (F,W)

DESIGN (ADE)

120. Design I. Cr. 3

Foundation course for all visual communication. Two- and three-dimensional experimentation in various techniques with achromatic media. (T)

121. Design II. Cr. 3

Prereq: ADE 120. Continuation of ADE 120 with concentration on color theories and phenomena. Two- and three-dimensional concepts of structure with an emphasis on color. (T)

220. Design III: Three Dimensional. Cr. 3

Prereq: ADE 121. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

522. Computer Art. Cr. 3

Prereq: ADE 121. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Survey of use of computer in art history; artist's work preparation and the practical generation of computer-assisted imagery; painting systems; specific media. Experimentation with computer tools as aspect of creative effort. No prior computer experience necessary. (Y)

523. Advanced Computer Art. Cr. 3 (Max. 6)

Prereq: ADE 522. Study and synthesis of graphics, text, motion, and sound through the use of micro-processor systems to develop individual student projects. (Y)

583. Directed Projects: Design.

Cr. 3-6(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

DRAWING (ADR)

105. Drawing I. (ADR 106). Cr. 3

Introductory training in basic drawing skills: inanimate subject matter, perspective and composition, wet and dry media. (F,W)

106. (ADR 105) Drawing II. Cr. 3

Prereq: ADR 105. Experimental problems to encourage individual responses to subject matter. More complex drawing media and limited color. Studies of head emphasizing structure. (F,W)

207. Beginning Life Drawing. Cr. 3

Prereq: ADR 106. Material fee as indicated in *Schedule of Classes*. Graphic exploration of essential aspects of the human figure including structure, gesture, form and accuracy. Limited media employed. (F,W)

307. Intermediate Life Drawing. Cr. 3

Prereq: ADR 207. Material fee as indicated in *Schedule of Classes*. Continued systematic study of the human figure stressing more complex problems. Introduction of a broader range of media. (F,W)

506. Advanced Drawing. (ADR 706). Cr. 3-6(Max. 15)

Prereq: ADR 307. Election of more than three credits per semester requires written consent of instructor. Emphasis on individual direction and development in various media. (Y)

507. Advanced Life Drawing. Cr. 3-6(Max. 24)

Prereq: ADR 307. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continued study of graphic translation of the human figure. Individual directions and variety of problems encouraged. More complex subject matter, scale and composition. (F,W)

**508. Landscape Drawing and Painting. (ADR 708).
Cr. 3-6(Max. 12)**

Prereq: ADR 106. 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. (S)

509. Anatomy. Cr. 3

Prereq: ADR 207. Material fee as indicated in *Schedule of Classes*. Drawing the human anatomy through studies of visual structural form; the skeletal and muscular systems and superficial characteristics. (Y)

580. Directed Projects: Drawing.

Cr. 3-6(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

FASHION DESIGN and MERCHANDISING (AFA)

241. Textiles I. Cr. 3

Material fee as indicated in *Schedule of Classes*. Introduction to fibers, yarns, fabric construction, design and finishes and how they relate to selection, use and care of textile products. (F,W)

242. Clothing Selection and Construction. Cr. 3

Application of color and design principles in construction of structured and unstructured garments. (F,W)

340. Clothing and Culture. Cr. 3

Functions and meanings of dress in diverse cultures and contemporary society with an interdisciplinary approach. (F,W)

341. Textiles II. Cr. 3

Prereq: AFA 241. Material fee as indicated in *Schedule of Classes*. Recent technological developments; introduction to textile testing. (W)

346. Introduction to Merchandising. Cr. 3

Psychological, economic considerations. Terminology and structure of apparel trades and career opportunities. Field trips. (F,W)

347. Merchandise Information. Cr. 3

Quality and value in merchandising. Manufacturing processes, government regulations and selling points in hard and soft lines. (W)

443. Fashion Illustration. Cr. 3 (Max. 6)

Prereq: ADR 105. Basic fashion rendering techniques using a variety of media. (B)

490. Directed Study. Cr. 2-4

Prereq: written consent of instructor. (T)

542. Fashion Design: Tailoring. Cr. 3

Prereq: AFA 242. Tailoring techniques applied to coats and suits. (F)

543. History of Costume. Cr. 3

Prereq: one art history course. Survey of historic costumes from prehistoric to present. (F)

544. Fashion Design: Flat Pattern. Cr. 3 (Max. 6)

Prereq: AFA 242. Material fee as indicated in *Schedule of Classes*. Original designs from a basic sloper. (Y)

545. Fashion Design: Draping. Cr. 3 (Max. 6)

Prereq: AFA 242. Material fee as indicated in *Schedule of Classes*. Creation of an original garment by draping on a form. (I)

546. Merchandising II. Cr. 3

Prereq: AFA 346. Current trends in merchandising. Lectures by specialists. (F)

547. Visual Merchandising: Display. Cr. 3

Prereq: ADR 105 or ADE 120. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

549. 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)

592. Supervised Field Experience. Cr. 2-4

Prereq: senior standing. Supervised field experience designed to correlate classroom theory with practical work. (F)

597. Seminar. Cr. 3

Prereq: senior standing. Topics to be announced in *Schedule of Classes*. (F,W)

644. Computer-Aided Design for Apparel Design. Cr. 3

Prereq: AFA 544 or consent of instructor. Use of computer-aided design software applied to apparel design concepts; garment designing, grading, and marker-making. (W)

693. Study Tour. Cr. 3

Prereq: written 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)

265. Beginning Weaving. Cr. 3

Prereq: ADE 121 and ADR 106. Material fee as indicated in *Schedule of Classes*. Weaving techniques on a frame loom. Design concepts through application of tapestry, flossa, sumac, inlay and wrapping process. (T)

266. Introduction to Fibers. Cr. 3(Max. 6)

Material fee as indicated in *Schedule of Classes*. Emphasis on color, design and composition. Natural and chemical dyeing, block printing, resist methods, soft sculpture, basketry. (T)

**365. Intermediate Weaving. (AFI 565)(AFI 765).
Cr. 3-6(Max. 12)**

Prereq: AFI 265. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Designs done on four- and eight-harness looms. Pattern drafting, layer weaving, ikat, and rug techniques offered on a rotating basis. (T)

**366. Intermediate Fibers. (AFI 566)(AFI 766).
Cr. 3-6(Max. 12)**

Prereq: AFI 266. Material fee as indicated in *Schedule of Classes*. Concentration in one of the following areas: soft sculpture, fabric printing, dyeing, resist methods. Topics to be announced in *Schedule of Classes*. (T)

**565. (AFI 365) Weaving: Senior Project. (AFI 765).
Cr. 3-6(Max. 12)**

Prereq: AFI 365. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Directed project in weaving. Research and written evaluative statement required. (T)

**566. (AFI 366) Fibers: Senior Project. (AFI 766).
Cr. 3-6(Max. 12)**

Prereq: AFI 366. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Extensive project or series of works determined by student; research and written statement. (T)

587. Directed Projects: Fibers.

Cr. 3-6(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

GRAPHIC DESIGN (AGD)

225. **Typography. Cr. 3**

Prereq: ADE 120, ADE 121; coreq: AIA 161 or AGD 325. Material fee as indicated in *Schedule of Classes*. Fundamental understanding of structure, history, technology and application of typography, the visualization of language. Functional and experimental aspects of typography; typographic syntax and hierarchies. (F,W)

325. **Graphic Design I: Principles and Problem Solving. Cr. 3**

Prereq. or coreq: AGD 225, AIA 161. Material fee as indicated in *Schedule of Classes*. Visual communication issues and applications: design methodology, problem-solving, relation of form to meaning, type/image relationships. (F,W)

425. **Graphic Design II: Word, Image, and Visual Organization. Cr. 3**

Prereq: AGD 325, junior standing. Students apply knowledge of typography and visual design principles to specific design situations; emphasis on use of grid systems. (Y)

525. **Graphic Design III: Complexity and Variety In Design. Cr. 3 (Max. 18)**

Prereq: AGD 425, junior standing. Material fee as indicated in *Schedule of Classes*. Complex design situations. Research and methodology. Project may include package design, instruction manuals, book and brochure design, publication design. (F,W)

526. **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. (W)

570. **Special Topics. Cr. 3 (Max. 6)**

Prereq: AGD 425, 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. (Y)

589. **Directed Projects: Graphic Design. Cr. 3-6 (Undergrad. max. 9; grad. max. 18)**

Prereq: written consent of instructor. Individual problems. (F,W)

590. **Field Study: Internship. Cr. 3-6**

Prereq: AGD 525, 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)

597. **Graphic Design IV: Systems, Series, and Advanced Studies in Visual Communication. Cr. 3**

Prereq: AGD 525, senior standing. 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. (F)

626. **Advanced Graphic Design Concepts. Cr. 3 (Max. 6)**

Prereq: AGD 525. Problem/solution exercises addressing advanced design in the following areas: corporate identity, packaging, architectural, environmental, print advertising, publication, collateral, out-of-home, TV/video. (F,W)

627. **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. (Y)

INDUSTRIAL DESIGN (AID)

330. **Introduction to Industrial Design. (AID 530). Cr. 3 (Max. 9)**

Prereq: ADE 220, ADE 221, AID 331. Material fee as indicated in *Schedule of Classes*. Introduction to fundamental design methodology through problems involving two-dimensional presentation and three-dimensional form studies. (F,W)

331. **Basic Presentation. (AID 531). Cr. 3 (Max. 9)**

Prereq: AIA 235. 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)

430. **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)

460. **Transportation Design Engineering. Cr. 3**

Prereq: AID 430. Open only to College of Engineering students. Conceptual projects related to transportation design, utilizing skills developed in AID 430. (F,W)

530. **(AID 330) Industrial Design. Cr. 3-6 (Max. 15)**

Prereq: AID 330. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Product design problems with emphasis on workability and form design. Sketches and three-dimensional models. (F,W)

531. **(AID 331) Advanced Presentation. Cr. 3-6 (Max. 18)**

Prereq: AID 331. Election of more than three credits per semester requires written 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)

597. **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. (W)

630. **Transportation Design. (AID 730). Cr. 3-6 (Max. 18)**

Prereq: AID 330. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Materials fee announced in *Schedule of Classes*. Form and proportion investigations of various transportation systems. Repetition of course allows a more comprehensive development of a particular project. (F,W)

632. **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 substyles, Art Nouveau, Arts and Crafts movement, Beaux Arts, Vienna Secession. (F)

633. **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)

INTERIOR DESIGN (AIA)

161. Architectural Drafting and Perspective Drawing. Cr. 3

Prereq: ADR 105. Material fee as indicated in *Schedule of Classes*. Basic architectural drafting and dimensioning. Linework and lettering. Construction of one- and two-point perspective drawings. (F,W)

260. Interior Design Studio I. Cr. 3

Prereq: ADE 121, AIA 161. Functional, aesthetic, and psychological aspects of interior design. (F)

261. Interior Design Studio II. Cr. 3

Prereq: AIA 161 and 260. Material fee as indicated in *Schedule of Classes*. Presentation techniques; introduction to contemporary media and methods used in the preparation of presentation boards: layout, rendering, matting and lettering. (W)

360. Interior Design Studio III. Cr. 4

Prereq: AIA 261. Open only to interior design majors. Evaluation and development of the interior environment as it relates to the specific needs of the client and an existing architectural vernacular. (F)

361. Interior Design Studio IV. Cr. 3

Prereq: AIA 261 and 360. Open to CLL students with written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of graphic skill development including detailing and section drawing, two-point perspective, lighting, media experimentation, presentation board design. Residential and contract. (W)

460. Environmental Design Theory I. Cr. 3

Prereq: AIA 261. Open only to interior design majors. Theories of anthropometrics, human factors, thermal conditions; introduction to HVAC, electrical and acoustical engineering. (W)

461. Recreation and Commercial Design Studio. Cr. 3

Prereq: AIA 361 and ADE 220. Material fee as indicated in *Schedule of Classes*. Projects involving advanced graphic techniques, design motifs and logos, including barrier-free design, safety codes and adaptive use. (F)

490. Directed Study. Cr. 2-4

Prereq: written consent of instructor. (F,W)

560. History of Interiors. Cr. 3

Prereq: junior standing or consent of instructor. Material fee as indicated in *Schedule of Classes*. History of interiors from ancient periods to the present. (F)

561. Interior Materials and Systems. Cr. 3

Prereq: junior standing or above in interior design concentration. Material fee as indicated in *Schedule of Classes*. Estimating, specifying, and the techniques used in the application of materials and systems used in interior design. Lectures, guest speakers, and field trips. (F)

562. Building Construction Systems in Architecture I. Cr. 3

Prereq: AIA 261. Open only to interior design majors. Introduction to modern structural systems, basic documentation of architectural details. (Y)

563. Environmental Design Theory II: Lighting. Cr. 3

Prereq: AIA 360 and 460. Light sources, fixtures, selection and application in architectural interiors; energy efficiency, comfort, basic calculations. (W)

564. Building Construction Systems in Architecture II. Cr. 3

Prereq: AIA 460 and 562. Material fee as indicated in *Schedule of Classes*. Preparation of detailed architectural working drawings for interior spaces. (W)

566. Supervised Field Experience. Cr. 3

Prereq: written consent of program coordinator. Open only to interior design majors. Supervised field study experience designed to correlate classroom theory with professional practice. (F,W)

591. Directed Projects: Interior Design. Cr. 3-6(Max. 9)

Prereq: written consent of program coordinator. Open only to interior design majors. Individual problems. (F,W)

597. Senior Seminar. Cr. 3

Prereq: consent of instructor. Senior standing. Topics to be announced in *Schedule of Classes*. (F,W)

661. Advanced Interiors Studio. Cr. 3

Prereq: AIA 461 or equiv. Material fee as indicated in *Schedule of Classes*. Projects involving large-scale facilities, adaptive re-use, and retail spaces. Integration of human factors as they relate to specific environments. Portfolio development. (W)

665. Business Practicum. Cr. 2

Prereq: AIA 461. 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)

260. Metal Arts and Jewelry Design. Cr. 3

Prereq: ADR 106 and ADE 121 for art majors. Material fee as indicated in *Schedule of Classes*. Fundamentals of metal forming processes: fabrication and repousse. Lectures on technical, historical and contemporary information, twentieth century conceptual ideas. (T)

360. Intermediate Metal Arts and Jewelry Design. (AME 560)(AME 760). Cr. 3

Prereq: AME 260. Material fee as indicated in *Schedule of Classes*. Raising, stretching and forging and small form investment casting. Application of theory, principles and graphic techniques essential to creative design in metals. (T)

560. (AME 360) Advanced Metal Arts and Jewelry Design. (AME 760). Cr. 3-6(Max. 24)

Prereq: AME 360. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Comprehensive project development on an individual basis. Workshops in specialty areas. (F,W)

586. Directed Projects: Metal Arts.

Cr. 3-6(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

PAINTING (APA)

210. Basic Painting. Cr. 3

Prereq: ADR 106 and ADE 121. Material fee as indicated in *Schedule of Classes*. Introduction to oil, water color, gouache, acrylic and encaustic media, tools and surface preparation. Form observation and translation; inquiry into pictorial concerns. (T)

211. Beginning Painting: Water Media. (APA 311)(APA 511). Cr. 3

Prereq: APA 210. Material fee as indicated in *Schedule of Classes*. Exploration of aqueous media, transparent and opaque. Legacy, content and contemporary issues concerning water-based media. Simple problems of form translation using still life, nature, and/or abstraction. (Y)

212. Beginning Painting: Oil. (APA 312)(APA 512). Cr. 3

Prereq: APA 210. Material fee as indicated in *Schedule of Classes*. Exploration within media choices with emphasis on the structure of a painting and individual development. Still life, nature and/or abstraction. (T)

311. (APA 211) Intermediate Painting: Water Media. (APA 511). Cr. 3

Prereq: APA 211. Material fee as indicated in *Schedule of Classes*. Continuation of APA 211 with emphasis on the investigation of pictorial

space. Emotional and/or conceptual solutions to expression. Further work in aqueous media relative to individual needs. (Y)

312. (APA 212) Intermediate Painting: Oil and Other Media. (APA 512). Cr. 3

Prereq: APA 212. Material fee as indicated in *Schedule of Classes*. Continuation of APA 212 with emphasis on the structure of a painting and different attitudes of pictorial space. Emotional and/or conceptual solutions to paintings. Individual development encouraged. (T)

313. Figure Painting: Water Media. (APA 513)(APA 713). Cr. 3

Prereq: APA 211. Material fee as indicated in *Schedule of Classes*. Spontaneous and sustained paintings from direct observation of the human figure. Inquiry into the effects of scale, space and emotional responses are encouraged. (Y)

314. Figure Painting: Oil and Other Media. (APA 514) (APA 714). Cr. 3

Prereq: APA 212. Material fee as indicated in *Schedule of Classes*. Sustained studies in oil, acrylic or other media from direct observation of the human figure. Inquiry into the effects of scale. Pictorial space and emotional responses are encouraged. (T)

510. 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)

511. (APA 211) Advanced Painting: Water Media. (APA 311). Cr. 3-6(Max. 18)

Prereq: APA 311. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of APA 311. (T)

512. (APA 212) Advanced Painting: Oil and Other Media. (APA 312). Cr. 3-6(Max. 18)

Prereq: APA 312. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of APA 312. (T)

513. (APA 313) Figure Painting Advanced: Water Media. (APA 713). Cr. 3-6(Max. 12)

Prereq: APA 313. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of APA 313. (Y)

514. (APA 314) Figure Painting Advanced: Oil and Other Media. (APA 714). Cr. 3-6(Max. 12)

Prereq: APA 314. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of APA 314. (Y)

581. Directed Projects: Painting. Cr. 3-6(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

PHOTOGRAPHY (APH)

240. Introductory Photography. Cr. 3

Lectures, demonstrations, projects involving basic camera techniques using color slides. (T)

241. Beginning Photography. Cr. 3

Prereq: APH 240. Material fee as indicated in *Schedule of Classes*. Film processing, printing and presentation in black and white medium. Introduction to basic photographic vocabulary through problem-solving approach. Demonstrations and group techniques. (T)

340. Evolution of Photography. Cr. 3

Survey of photography from invention to contemporary times. Significant trends and developments in the medium as revealed in the work of major photographers. (I)

341. Intermediate Photography. Cr. 3

Prereq: APH 241. Material fee as indicated in *Schedule of Classes*. Further refinement of basic skills and concepts. More advanced techniques. Use of the camera's manipulative mechanisms. Emphasis on image and idea. (T)

441. Advanced Photography. Cr. 3

Prereq: APH 341. Material fee as indicated in *Schedule of Classes*. Individual projects using advanced methods and techniques. In-depth photographic investigations exploring the possibilities of personal expression. (T)

442. View Camera. (APH 542). Cr. 3

Open only to photography majors. Material fee as indicated in *Schedule of Classes*. Basic view camera techniques. Sheet film processing and printing. Studio lighting techniques. (Y)

443. Color Photography. (APH 543). Cr. 3

Prereq: APH 341. Open only to photography majors. Color film processing and printing. Basic color theory and use of filtration. Class projects and group techniques. (Y)

542. (APH 442) Advanced View Camera. Cr. 3-6(Max. 9)

Prereq: APH 442. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Refinement of view camera techniques and advanced lighting techniques. Projects include advertising, architectural, industrial and fashion photography. Preparation of a professional portfolio. (Y)

543. (APH 443) Advanced Color Photography. Cr. 3-6(Max. 9)

Prereq: APH 443. Election of more than 3 credits per semester requires written consent of instructor. Open only to photography majors. Use of color as an expressive medium through a variety of color materials and lighting situations, and non-traditional use of color materials. (Y)

544. Experimental Photography. Cr. 3-6(Max. 9)

Prereq: APH 441. Election of more than 3 credits per semester requires written consent of instructor. Open only to photography majors. Material fee as indicated in *Schedule of Classes*. Examination of various historic processes and their contemporary applications: Cyanotype, Gum-Bichromate, and Van Dyke Brown printing, toners, and hand-applied emulsions. (I)

545. Selected Topics in Photography. Cr. 3-6(Max. 9)

Prereq: APH 441. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Topics to be announced in *Schedule of Classes*. (I)

546. Photography Seminar. Cr. 3-6(Max. 9)

Open only to photography majors. Election of more than 3 credits per semester requires written consent of instructor. Independent work in advanced photography discussed in seminar format. Emphasis on major ideational concerns and execution and development of a critical vocabulary. (Y)

585. Directed Projects: Photography. Cr. 3-9(Undergrad. max. 15; grad. max. 30)

Prereq: written consent of instructor. Individual problems. (F,W)

PRINTMAKING (APR)

230. Introduction to Printmaking. Cr. 3

Prereq: ADR 105, ADE 120. Introduction to a variety of printmaking media including etching, monoprint, serigraphy and woodcut. (Y)

348. Beginning Intaglio Printmaking. Cr. 3(Max. 6)

Prereq: ADR 106 and ADE 121. Material fee as indicated in *Schedule of Classes*. Basic metal plate techniques: etching, aquatint, engraving, drypoint, soft ground, lift ground. (T)

**349. Beginning Lithography. (APR 549)(APR 749).
Cr. 3(Max. 6)**
Prereq: ADR 106 and ADE 121. Material fee as indicated in *Schedule of Classes*. Fundamentals of stone and plate lithography. Black and white prints made. (T)

350. Beginning Serigraphy. (APR 550)(APR 750). Cr. 3
Prereq: ADR 106 and ADE 121. Material fee as indicated in *Schedule of Classes*. Introduction to basic techniques of screen printing. (Y)

**351. Beginning Relief and Collagraph Printmaking.
(APR 551)(APR 751). Cr. 3**
Prereq: ADR 106, ADE 121. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Traditional relief methods: woodcut, linocut, wood engraving, and basic techniques of collage printmaking (black and white). (T)

**548. Advanced Intaglio Printmaking. (APR 748).
Cr. 3-6(Max. 21)**
Prereq: APR 348. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced problems in intaglio. Multiplate and rollup color printing. Photo intaglio techniques, experimental media. (F,W)

**549. (APR 349) Advanced Lithography. (APR 749).
Cr. 3-6(Max. 21)**
Prereq: APR 349. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced problems in lithography. Black and white, multicolor, transfer methods. (F,W)

**550. (APR 350) Advanced Serigraphy. (APR 750).
Cr. 3-6(Max. 15)**
Prereq: APR 350. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Advanced problems in screen printing. Photo transfer, multi-media approaches. (I)

**551. (APR 351) Advanced Relief Printmaking. (APR 751).
Cr. 3-6(Max. 21)**
Prereq: APR 350 and 549. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Specialized problems involving experimental use of various print media and technologies; relief, collagraph, intaglio. (I)

**584. Directed Projects: Printmaking.
Cr. 3-6(Undergrad. max. 15; grad. max. 30)**
Prereq: written consent of instructor. Individual problems. (F,W)

SCULPTURE (ASL)

215. Introduction to Sculpture. Cr. 3
Prereq: ADR 106, ADE 121. Material fee as indicated in *Schedule of Classes*. Sculptural forms using traditional and contemporary materials and techniques in problems involving figurative and non-figurative and environment space problems. (T)

**316. Intermediate Sculpture: Non-Figurative. (ASL 516)
(ASL 616)(ASL 716). Cr. 3**
Prereq: ASL 215. Material fee as indicated in *Schedule of Classes*. Emphasis on non-figurative forms employing wider range of techniques: welding, foundry and plastics. (T)

**317. Intermediate Sculpture: Figurative. (ASL 517)
(ASL 617)(ASL 717). Cr. 3**
Prereq: ASL 215. Material fee as indicated in *Schedule of Classes*. Problems in figurative sculpture using traditional and contemporary spatial and expressive concepts. Foundry, welding, plastics and mold-making. (I)

**516. (ASL 316) Advanced Sculpture: Non-Figurative.
(ASL 616)(ASL 716). Cr. 3-6(Max. 18)**

Prereq: ASL 316. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of ASL 316. Emphasis on advanced and self-directed problems in non-figurative sculpture. (T)

**517. (ASL 317) Advanced Sculpture: Figurative.
(ASL 617)(ASL 717). Cr. 3-6(Max. 18)**
Prereq: ADR 309 and ASL 317. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Emphasis on advanced and self-directed problems in figurative sculpture. (Y)

518. Sculpture: Advanced Technology. Cr. 3-6(Max. 18)
Prereq: ASL 516 or 517. Election of more than three credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. One major project which explores the application of non-traditional materials and technologies: research, industrial liaisons, equipment. (I)

**582. Directed Projects: Sculpture.
Cr. 3-6(Undergrad. max. 15; grad. max. 30)**
Prereq: written consent of instructor. Individual problems. (F,W)

**616. (ASL 316) Non-Figurative Sculpture. (ASL 516)
(ASL 716). Cr. 3-6(Max. 18)**
Prereq: ASL 516. Open only to sculpture majors. Election of more than 3 credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of ASL 516. Expansion of concepts and expressive form. Emphasis on portfolio of work and professional plans. (T)

**617. (ASL 317) Figurative Sculpture. (ASL 517)(ASL 717).
Cr. 3-6(Max. 18)**
Prereq: ASL 517 and 518. Open only to sculpture majors. Election of more than 3 credits per semester requires written consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of ASL 517. Emphasis on concepts and expressive form, portfolio of work and professional plans. (Y)

SPECIAL COURSES (ACS)

593. (WI) Writing Intensive Course in Applied Arts. Cr. 0
Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: AFA 685, AIA 685, or AID 530. 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)

595. Making Culture. Cr. 3
Prereq: senior or graduate standing; prior consent of instructor. Seminar devoted to questions about the interrelations of culture production, the history of artists' consciousness, personal freedom, and social responsibilities. Emphasis on close reading and discussion of seminal texts as a vehicle for stimulating informed consideration of the issues. (Y)

597. Senior Seminar in the Visual Arts. Cr. 3
Prereq: senior standing in a BFA degree program. Interdisciplinary seminar on contemporary issues in the visual arts including studio practices, history, and criticism. (F,W)

ART HISTORY (A H)

100. (VP) Introduction to Art. Cr. 4

Forms and functions of art; uses of art; roles of the artist; iconography and symbols. (T)

101. Great Art of the World. Cr. 3

Presentation and discussion of representative monuments and artists of the major periods and regions; artistic function and character of the works as a part of the continuum of civilizations. (T)

111. (VP) Paleolithic through Gothic Art Survey. Cr. 3

(T)

112. (VP) Renaissance through Modern Art Survey. Cr. 3-4

Offered for four credits to Honors students only. (T)

307. Art and Archeology of Ancient Egypt. Cr. 3

Prereq: A H 111, 112. 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)

310. Biblical Archaeology. Cr. 3

Prereq: A H 111, 112. Art and archaeology during the Biblical period with emphasis on the historical and cultural context. (B)

321. Greek and Roman Art. Cr. 3

Prereq: A H 111, 112. Painting, sculpture and architecture of ancient Greece and Rome. Form and meaning of the works and how they functioned within society. (I)

341. Medieval Art and Architecture. Cr. 3

Prereq: A H 111. Chronological survey of medieval art and architecture produced in Europe from the 4th through the 13th century. Emphasis on the significance of these works in their original cultural contexts. (I)

347. 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)

370. Modern Art: Nineteenth and Twentieth Centuries. Cr. 3

Prereq: A H 111, 112. Survey of the major periods and styles of nineteenth and twentieth century art; specific themes and concepts in modern art; relationships and contrasts between artists. (Y)

380. 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)

382. North American Indian Art. Cr. 3

Survey of the visual arts of North American Indian cultures. (B)

509. (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)

520. Early Greek Art. Cr. 3

Prereq: A H 111, 112. 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)

521. Hellenistic and Roman Art. Cr. 3

Prereq: A H 111, 112. Sculpture and painting in the Hellenistic kingdom and in Republic and Imperial Rome. (I)

522. Ancient Greek Architecture. Cr. 3

Prereq: A H 111. Architecture in the Greek world, c. 900 - 30 B.C. Design and function of buildings, sanctuaries and cities and how these relate to aesthetic, religious, political and social traditions. (I)

525. Ancient Rome. Cr. 3

Prereq: A H 111, 112. Development of Rome into an imperial capital. Design, function and political significance of public monuments in the city. (I)

526. Classical Greek Art. Cr. 3

Prereq: A H 111, 112. Greek painting, sculpture and architecture of the fifth and fourth centuries B.C. Emphasis on decorative programs of temples and cult statues. (I)

530. Early Christian and Byzantine Art. Cr. 3

Prereq: A H 111, 112. The evolution of Christian imagery. (B)

531. The Ancient City of Athens. Cr. 3

Prereq: A H 111, 112. The history of Athens as an urban center in antiquity. Public monuments, buildings and landscape as reflecting the city's aspirations and fortunes. (I)

532. Classical Architecture in Britain and the United States. Cr. 3

Prereq: A H 111, 112. 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)

538. Women and Visual Culture in the Middle Ages. Cr. 3

Prereq: A H 111, 112, 341, or consent of instructor. Role of women in production of medieval visual culture, and ways in which visual images reflect attitudes and beliefs about gender in the middle ages. (I)

541. 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)

542. Art and Architecture of Medieval Spain. Cr. 3

Prereq: A H 111, 112. Art and architecture of the Iberian Peninsula from sixth to 13th century: Christian, Jewish, Muslim; interplay between these cultures; impact on the visual arts will be stressed. (I)

545. Romanesque Art and Architecture. Cr. 3

Prereq: A H 111, 112. The arts in western Europe (France, Germany, Italy, England) between 1050 and 1150; origins and spread of the Romanesque style in the milieu of monasticism and the Crusades. Metalwork, ivories, book illumination, stained glass and sculpture in the monastic church and cloisters. (I)

550. 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)

551. High Renaissance and Mannerism in Italy. Cr. 3

The art of Leonardo, Raphael, Michelangelo, Titian, and their contemporaries. (I)

553. 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)

555. 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)

560. Baroque Art and Architecture in Italy, Spain and France. Cr. 3

Art and architecture in Papal Rome and at the courts of Madrid and Versailles, including Caravaggio, Bernini, Borromini, Velasquez, and Poussin. (B)

561. Flemish and Dutch Painting in the Seventeenth Century. Cr. 3

Netherlandish painting in the cultural context of Catholic, aristocratic Flanders and the Protestant, middle-class Dutch republic; Rubens, Van Dyck, Hals, Rembrandt and Vermeer. (I)

570. Nineteenth Century European Painting. Cr. 3

Prereq: A H 111, 112. Major styles, developments and masters. (B)

571. Trends in Nineteenth Century Art. Cr. 3

Prereq: A H 111, 112. Topics to be announced in *Schedule of Classes*. (B)

572. Twentieth Century Art. Cr. 3

Prereq: A H 111, 112. Specific topics to be announced in the *Schedule of Classes*. (B)

573. American Art from the Colonial Period to 1913. Cr. 3

Prereq: A H 111, 112. American painting, sculpture and architecture from its earliest appearance in Colonial times to the Armory Show of 1913. (Y)

575. Contemporary American Art. Cr. 3

Prereq: A H 111, 112. Major developments in American painting and sculpture from the Armory Show to the 1970s. (I)

576. German Expressionism. Cr. 3

German Expressionist painting and sculpture in Imperial Germany, the Weimar Republic, and the Nazi regime; members of *Die Brucke*, and *Der Blaue Reiter* and the independents such as Beckman, Kokoschka, and Barlach. (B)

577. Paris in the Nineteenth Century. Cr. 3

Prereq: A H 112. 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)

578. Seminar: Topics in Twentieth Century Art History. Cr. 3

Prereq: A H 572, 575. Current issues in history and criticism of twentieth-century art. (Y)

582. Precolumbian Art of South and Central America. Cr. 3

Prereq: A H 111, 112. 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)

589. Museums In Art History. Cr. 3

Prereq: A H 111, 112. 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)

590. Directed Study. Cr. 3

Prereq: consent of instructor. Open only to art history majors. Supervised advanced reading and research in the history of art. (F,W)

593. (WI) Writing Intensive Course In Fine Arts. Cr. 0

Prereq: junior standing, satisfaction of English Proficiency Requirement, completion of A H 111, 112 and one other A H course at 200-level or above; cooreq: A H course at 300-level or above. Offered for S and U grades only. No degree credit. Required for all majors. (F,W)

594. Seminar: Modern Art and the Unconscious. Cr. 3

Prereq: A H 112. Interest of modern artists in phenomena such as dreams and the unconscious. Discussion of readings (Freud, Foucault, Lacan) and on individual research on aspects of art, psychoanalysis, and sexuality. (B)

597. Undergraduate Seminar In Art History. Cr. 3

Prereq: A H 111, 112, junior or senior standing; or consent of instructor. Open only to students with senior standing in art history. Readings, discussion, and research paper on special topics in art history; topics to be announced in *Schedule of Classes*. (Y)

654. History of the Print. Cr. 3

Overview of the graphic arts from the fourteenth through the twentieth century; emphasis on the technical evolution of the medium as well as on the major artists who excelled in it. (F,W)

673. Contemporary Theory and the Visual Arts. Cr. 3

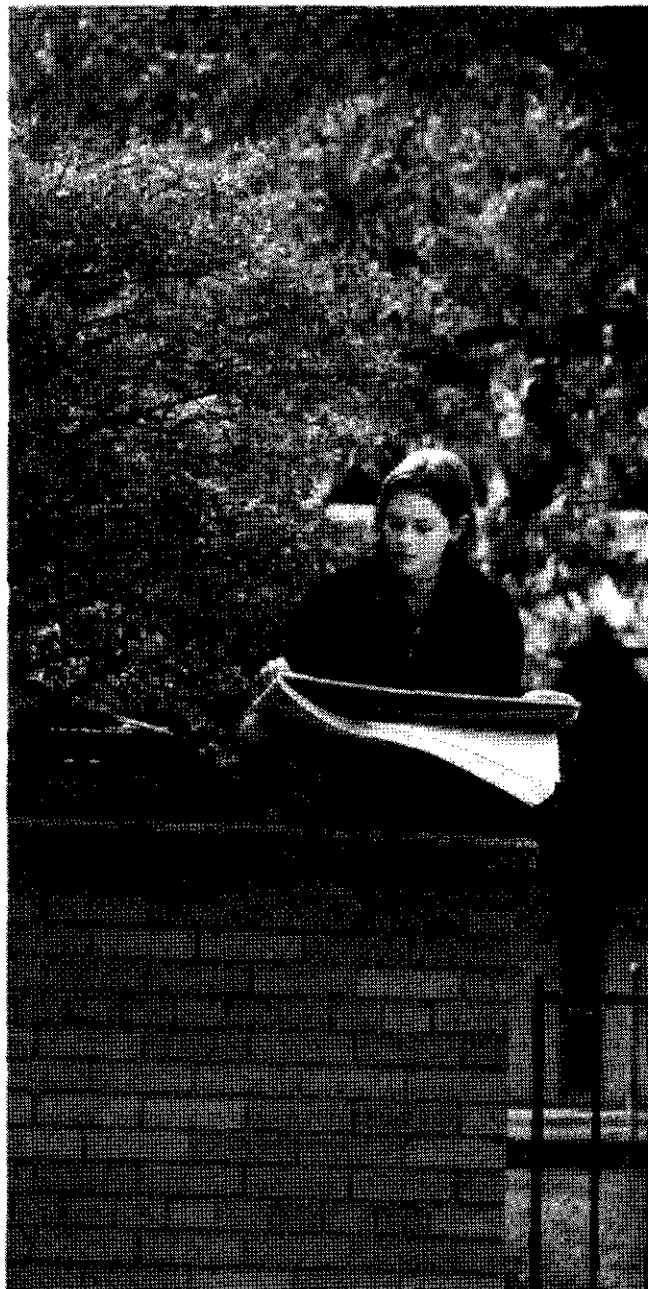
Undergrad. prereq: consent of instructor. Methodological application of post-structuralist critical theory to the study of art and art history. (Y)

693. Studies In Museum Theory and Criticism. Cr. 3-6

Prereq: prior consent of instructor. Open only to art history majors. Advanced studies of art museum and exhibition theory and criticism from the Renaissance to the present day; emphasis on discovering and interpreting primary evidence. (Y)

695. Museum Practices. Cr. 3

Prereq: admission to museum practice program or written consent of program director. Open only to art history majors. Introduction to public museum administration and management standards, procedures, and ethics. (Y)



COMMUNICATION

Office: 585 Manoogian Hall; 313-577-2943

Chairperson: Jack Kay

Academic Services Officer: Victoria Dallas

Professors

Bernard L. Brock, Benjamin Burns, Jack Kay, Edward J. Pappas, Raymond S. Ross (Emeritus), George W. Ziegelmueller

Associate Professors

Jackie Byars, J. Daniel Logan (Emeritus), James S. Measell, Larry D. Miller, Matthew W. Soeger, Lawrence Silverman (Emeritus), John W. Spalding (Emeritus), Jack W. Warfield (Emeritus)

Assistant Professors

Nancy Baym, Sandra Berkowitz, Theresa Jackson, Robert Steele, Ronald Stephens, Janet Walker, Richard A. Wright

Lecturers

Jack Lessenberry, Ruth Seymour, Michelle Vernon-Chesley

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 which 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, Sigma Delta Chi, Women in Communication, Forensic Union, Delta Sigma Rho-Tau Kappa Alpha, and the Public Relations Student Society of America. There are talent scholarships available to students interested in forensics or debate.

SPB 101—(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 101 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 25), College degree requirements (see page 159), 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 15-43 and 159-162, 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 321 (speech communication or public relations majors) or SPJ 410 (journalism majors) or SPR 421 (radio-television majors) as a corequisite with its designated WI course; the WI courses (SPC 593, SPJ 593, SPR 593) 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

The degree of Bachelor of Arts with a major in speech communication is offered in two concentrations — General Communication, and Speech Communication:

General Communication: This concentration allows students to examine communication as an integrated field of study with special emphasis on communication theory and criticism. Students must take at least three classes in each of the major divisions of the field: speech communication, radio-television-film, and journalism. Students must elect: SPC 219, SPC 321, SPC 503, SPR 201, SPR 301, SPJ 200, and SPJ 502. SPC 503 is the senior assessment capstone course and should be taken in the last twenty-one credits of the student's program. A total of thirty-seven credits in the department is required.

Speech Communication: There are two specializations available in this concentration: Speech Communication, and Speech Communication Education. All majors in this concentration must elect the following core courses: SPB 101, SPC 204, SPC 210, SPC 211, SPC 250, SPC 321, and SPC 503. SPC 503 is the senior assessment capstone course and should be taken in the last twenty-one credits of the student's program. In addition, majors must complete the requirements of one of the specializations listed below. Direct inquiries about this concentration to: 585 Manoogian Hall (577-2943).

1. **Speech Communication:** In addition to the above core requirements, undergraduate majors in this specialization must elect: SPC 219, SPC 220, and SPC 520. An additional nine credits in other courses in speech communication (SPC) are also required.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

2. Speech Communication Education: In addition to the above core requirements, undergraduate majors in this specialization must elect: SPR 201 and SPC 606. An additional twelve credits from the following must also be elected, in consultation with an adviser in the area: SPC 216, SPC 219, SPC 220, SPC 504, SPC 520, or SPC 607.

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 200, SPJ 201, SPJ 202, SPJ 210, SPJ 321, SPJ 410, SPJ 425, SPJ 502, and SPJ 525. Students must take an additional twelve to fifteen 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, 199 Manocogian, 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: Three Public Relations core courses are required: SPC 317, SPC 417, and SPC 516. The following courses are also required: SPC 210 or SPC 310; SPC 216, SPC 321; SPC 325; SPJ 210; SPJ 321; SPJ 521 or SPJ 530; SPR 201; SPR 421.

Recommended electives include an internship (SPC 619), as well as courses in Journalism (SPJ 200 and 410) and Speech Communication (SPC 220 and 520). An adviser should be consulted early in the student's program. Direct inquiries to 531 Manocogian Hall (577-2946).

— With a Major in Radio and Television

Undergraduate majors in this program must elect SPR 201, 211, 301, 421, 431, 441, 540 and 596. SPR 596 must be elected in the last twenty-one credits of a student's program of study. Students must elect an additional two courses in the department in consultation with an adviser in the Radio-Television-Film area. For a related major in Film, see Film Studies program in the College of Fine, Performing and Communication Arts, page 184.

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 honor 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 101, if the student has not already taken SPB 101; SPB 496, SPB 590, SPR 596, and SPC 521. By graduation, honors students are also required to take at least fifteen credits in departmental courses at the 500- and 600-level, including those courses required in the major, and SPR 596 and SPC 521. However, this requirement cannot be satisfied by taking SPB 590 or 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 400-level seminar offered through the Liberal Arts Honors Program (see page 256). 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 101; SPC 210, 216, 220, 321 and one additional SPC course selected in consultation with an adviser.

Minor in Journalism: A minor in this area requires: SPJ 200, 201, 202, 210, 321, 410, 500, and one additional course elected from among the following: SPJ 228, 322, 341, 400, 470, 521, 530, or 546.

Minor in Radio and Television: A minor in this area requires: SPR 201, SPR 301 and 10 credits elected from among the following courses: SPR 211, 421, 431, 441, 540, or 596.

Minor in Public Relations: A minor in this area requires: SPC 216, 317 and 325; SPJ 210 and 321; SPR 201.

Departmental Scholarships

See the section on Scholarships and Financial Aid on page 161. 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 \$1000 open to any outstanding journalism major having completed the junior year. Application deadline is April 30.

Journalism Institute for Minorities: Award of full resident tuition open to any high school senior or undergraduate student with minimum 3.0 h.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.

UNDERGRADUATE COURSES

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 463.

BASIC SPEECH (SPB)

101. (OC) Oral Communication: Basic Speech. Cr. 2–3

No credit after SPB 200. No new students admitted after third class meeting. 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)

360. Global Communication. Cr. 3

Culture—general instruction in intercultural communication skills and theory. Field trips, simulations and conversations between foreign and U.S. students provide intensive intercultural exposure and exploration. (F)

390. Directed Study. Cr. 1–4 (Max. 4)

Prereq: speech major with sixteen credits completed in the department; written consent of chairperson. Not open to journalism majors. (T)

460. Cultures in Communication. Cr. 3

Culture—specific approach to intercultural communication instruction, focusing on communication behavior in five area cultures: Mexican, North American, Chinese, Arab and African/African American. EU international students combined with W.S.U. undergraduates in term-long classroom setting. (Y)

491. Honors Seminar in Speech Communication. Cr. 3

Prereq: admission to department honors program. Overview of theory and research in speech communication. Design of individual research topics. (Y)

496. Honors Seminar in Speech Communication. Cr. 3

Prereq: admission to department honors program. Overview of theory and research in speech communication. Design of individual research topics. (Y)

590. Honors Directed Study. Cr. 3

Prereq: admission to department honors program; SPB 491. Writing of senior honors essay under direction of faculty adviser. (I)

SPEECH COMMUNICATION (SPC)

204. 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)

210. Persuasive Speaking. Cr. 3

Prereq: SPB 101 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)

211. (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)

216. 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)

219. Rhetoric in Western Thought. Cr. 3

Prereq: sophomore standing, SPB 101 or equiv. Major trends in rhetorical theory from classical times to the present; analysis and criticism of theoretical concepts in speechmaking and persuasion pedagogy. (Y)

220. Interpersonal Communication. Cr. 3

Introduction to theory and research on interpersonal communication; analysis of everyday communication situations; practice in interpersonal communication. (T)

224. Forensics Practicum. Cr. 1–2(Max. 6)

Prereq: SPC 211 or consent of instructor. Two credits only with consent of instructor. Training and participation in debate and contest speaking. (T)

250. 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)

310. Business and Professional Presentations. Cr. 3

Prereq: SPB 101 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)

317. (CL) Fundamentals of Public Relations. Cr. 3

Prereq: SPB 101 or SPC 210 or equiv. No undergraduate credit after SPC 516. 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)

321. 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)

325. Introduction to Organizational Communication. Cr. 3

Introduction to major theories and principles used to guide the effective practice of communication within organizations. (F)

401. Special Topics. Cr. 3 (Max.9)

Selected topics in speech communication to be announced in Schedule of Classes. (B)

403. Gender and Communication (W S 403). Cr. 3

Analysis of gender communication issues within interpersonal, group, organizational, intercultural, public, and mass mediated contexts. (Y)

417. Public Relations Writing. Cr. 3

Prereq: SPC 317. Coreq. for public relations majors: SPC 593. Writing for a variety of public relations purposes: backgrounders, fact sheets, press releases, brochures, newsletters. (Y)

501. 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)

503. Communication Ethics. Cr. 3

Issues of responsible communication in a variety of contexts including mass, organizational, and interpersonal communication. (B)

504. The Rhetoric of Racism. (S E 537)(AFS 504). 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)

505. Advanced Voice and Articulation. Cr. 3

Prereq: SPC 204 or equiv. Intensive individual vocal drill on the development of vocal quality, strengthening the breathing muscles, development of pitch range and inflection, projection, rate, and articulation as used in mass communication, theatre, public address, and oral interpretation. Second half of course devoted to voice qualities and dialects for performance. Emphasis on individual attention. (B)

510. Speech Writing. Cr. 3

Prereq: SPC 210 or 211 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)

511. Studies of Argument. Cr. 3

Prereq: SPC 211 or graduate standing. Used of argument in a variety of fields and contexts including: public and interpersonal contexts; law, religion and politics. Different methods of studying argument will be examined. (B)

512. Great Speakers. Cr. 3

Prereq: SPC 210 or consent of instructor. Analysis of speech texts and history with emphasis on various dimensions of rhetorical communication. Issues related to such topics as war/peace, church/state, political reform/civil rights, law/morality and wealth/poverty. Specific focus determined each term. (B)

516. Public Relations Campaigns. Cr. 3

Prereq: SPC 317 and 417 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)

517. Human Communication and the Aged. Cr. 3

Training in communication theories and skills relevant to the aged, current literature reviewed in preparation for devising strategies for improving interpersonal and institutional communication. (B)

520. 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)

521. Theories of Persuasion. Cr. 3

Prereq: SPC 210. Survey of theory and research on communication as social influence. (I)

522. 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)

530. Women's Rights/Suffrage Rhetoric. Cr. 3

Prereq: SPC 210 or 216 or 219 or graduate standing or consent of instructor. Analysis of speeches and writings of eighteenth through early twentieth century U.S. women's rights and woman suffrage activists. (B)

555. Performance Workshop. Cr. 1-3(Max. 6)

Prereq: SPC 250 or equiv. Workshop in conjunction with oral interpretation activities: festivals, contests, public performances such

as Interpreters Theatre productions and Readers' Bureau programs. (B)

593. (WI) Writing Intensive Course in Speech Communication. Cr. 0

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: SPC 321 for speech communication majors; SPC 417 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)

601. 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)

604. Cultures and Rhetorics. Cr. 3

Prereq: SPC 210, 216 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)

606. Teaching Communication at the Secondary Level. (S E 606). Cr. 3

Prereq: fifteen credits in speech. Philosophy, pedagogical issues, and methods for teaching speech in secondary schools. (I)

607. Directing Forensics. Cr. 3

Prereq: SPC 211. 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)

617. 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)

619. Internship in Organizational Communication and Public Relations. Cr. 1-4(Max. 6)

Prereq: written consent of instructor. Open only to majors. On-the-job observations and work experience in business, service, social, governmental, and industrial organizations. Emphasis on public relations and organizational communication. (T)

620. Theories of Small Group Processes. Cr. 3

Prereq: SPB 101, SPC 520. Theory and research on communication in the small, task-oriented group. (B)

625. Organizational Communication. Cr. 3

Prereq: SPC 325 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)

635. Communication, Culture, and Conflict. (D R 635). Cr. 3

Prereq: SPC 625 or graduate standing. Overview of communication theory and practice as it relates to issues of culture, conflict and dispute resolution. (Y)

FILM (SPF)

502. Studies in Film History. Cr. 4(Max. 12)

Prereq: FLM 201 or FLM 202; junior standing or above. Material fee as indicated in *Schedule of Classes*. 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*. (Y)

506. Documentary and Non-Fiction Film. Cr. 4

Prereq: FLM 201 or FLM 202; junior standing or above. Material fee as indicated in *Schedule of Classes*. Study of the non-fiction film made

for a social, cultural, or political purpose; screening and analysis of selected films. (Y)

525. Screenwriting. Cr. 3

Prereq: SPR 421, ENG 301, 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)

540. (SPR 540) Techniques of Film/Video Production. Cr. 4

Prereq: completion of ten credits of film studies courses; junior standing or above. Material fee as indicated in *Schedule of Classes*. Experience with the preparation, shooting and editing of video projects in film-style production. (T)

544. Film Production. Cr. 4

Prereq: SPF 540, senior standing or above, production-ready script, consent of instructor. All aspects of 16mm sound motion picture production from scripting and budgeting through direction and cinematography to post-production AB roll editing and sound mixing. (B)

546. Motion Picture Animation Techniques. Cr. 3

Prereq: junior standing or above. Theory and application of various forms and styles of film animation. (B)

JOURNALISM (SPJ)

100. Journalism Practicum. Cr. 1

Prereq: written consent of instructor. Open only to students in Detroit Free Press Apprentices Program. For Detroit High School students in summer journalism apprenticeship job program. Students act as interns at Detroit Free Press. Apprentices write three stories, one profile, one article on Detroit, and an article on the apprenticeship. (S)

200. News Analysis and Criticism. Cr. 3

Insight into how contemporary journalism functions, how editorial decisions are made, impact of entertainment techniques on news presentation, importance of news in the media, imagery vs. words, objectivity and other myths of the press; evaluating newspapers, news magazines, and television news; radio news and National Public Radio. Eight to twelve guest appearances by media figures. (T)

201. Journalistic Grammar and Style. Cr. 1

Grammar use in journalism; Associated Press Style Book. (T)

202. (CL) Using Computers In Journalism. Cr. 1

Prereq: basic typing skills. Teaches students how to write on MAC system in journalistic style. (T)

210. News Reporting. Cr. 4

Prereq: sophomore standing; basic typing skills. Basic reporting: getting the facts and writing them well. Journalism skills course. (T)

228. Photojournalism. Cr. 3

A grade of C or better is required to elect additional coursework in journalism. 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)

321. (CL) News Editing. Cr. 4

Prereq: SPJ 210. Material fee as indicated in *Schedule of Classes*. Copy reading, proofreading, headline writing, AP style, familiarization with and use of VDTs. Journalism skills course. (T)

322. Newspaper Design and Layout. Cr. 4

Prereq: SPJ 210 with grade of C or better. Theory and practice of designing and layout of newspapers and newspaper pages. (Y)

341. Radio and Television News Reporting. Cr. 4

Prereq: SPJ 210; must have access to cassette tape recorder. Techniques of preparing news for broadcasting; practical experience in the studio presentation of news. Journalism skills course. (Y)

400. Journalism Internship. Cr. 3 (Max. 6)

Prereq: completion of fifteen credits in journalism major sequence; senior standing. Open only to journalism majors. Work assignments on daily or weekly newspapers, radio-television stations or public relations and advertising agencies. Journalism skills course. (T)

401. Special Topics In Journalism. Cr. 3

Prereq: consent of instructor. Special areas of interest, such as multicultural communication, sports writing, business writing, gender factors in journalism. (Y)

410. Feature Writing. Cr. 4

Prereq: SPJ 210. Advanced news reporting, focusing on feature writing. (T)

420. Intercultural Reporting. Cr. 3

Prereq: SPJ 210, 410. Analysis of media coverage of race, gender, and ethnic diversity; study of intercultural theory and skills; reporting on selected group. (T)

425. Reporting Race, Sex, and Culture. Cr. 3

Prereq: SPJ 210 and 410. 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)

441. Advanced Radio-Television Reporting. Cr. 4

Prereq: SPJ 210, 341. Advanced techniques of reporting for broadcast media; preparing feature stories; role of the anchor; news assignment; on-air and on-camera techniques. Journalism skills course. (Y)

445. Writing the Column, Editorial and Review. Cr. 4

Prereq: SPJ 210 with grade of C or better. The writing of newspaper opinion in its various forms. (Y)

490. Directed Study. Cr. 1-3 (Max. 4)

Prereq: SPJ 210; written consent of adviser and Journalism Area Head. Open only to journalism majors. Supervised individual research. (T)

502. 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)

521. Newsletters and Corporate Publications. Cr. 4

Prereq: SPJ 321. Material fee as indicated in *Schedule of Classes*. Editing journalism newsletter; field trips to area magazines; editing internal publications. Journalism skills course. (T)

525. Professional Issues in News Media Management. Cr. 4

Prereq: SPJ 410 or consent of instructor. Capstone course: key issues of ethics and management in journalism. (Y)

530. Publishing. Cr. 4

Prereq: SPJ 210, 321, 322, or consent of instructor. 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)

531. Investigative Reporting. Cr. 4

Prereq: SPJ 210 and 321. Advanced reporting techniques involving use of Freedom of Information Act and computer-assisted data base searches; accessing public records. (I)

546. Magazine Writing. Cr. 3

Prereq: SPJ 210 and 410 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)

570. Political and Governmental Reporting. Cr. 4

Prereq: SPJ 210, 410. Covering politics, governmental and public affairs in the media. (Y)

593. (WI) Writing Intensive Course in Journalism. Cr. 0
Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: SPJ 410. 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)

630. Corporate Publications. Cr. 3
Prereq: graduate standing, SPJ 521 or 530; or consent of instructor. 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)

631. Advanced Investigative Reporting. Cr. 4
Prereq: SPJ 531. Advanced use of Freedom of Information Act and computer-assisted reporting techniques in a major project. (Y)

RADIO and TELEVISION (SPR)

105. Topics In Entertainment. Cr. 1 (Max. 6)
Topics to be announced in *Schedule of Classes*. (S)

201. Survey of Mass Communications. Cr. 3
Grade of C or better required to use this course as prerequisite. An introduction to the broadcast, print, and film media, with emphasis on origins, structure, functions, social implications and economic significance of the channels of communications. (T)

211. Radio and Television Announcing. Cr. 3
Prereq: SPR 201. Material fee as indicated in *Schedule of Classes*. Theory and practice in broadcast media performance. (T)

267. Radio-Television-Film Laboratory. Cr. 1(Max. 4)
Prereq: SPR 201; written consent of instructor. Practical experience in workshop projects. (T)

301. Mass Media Analysis and Criticism. Cr. 3
Prereq: SPR 201. Material fee as indicated in *Schedule of Classes*. Formal properties and aesthetic considerations in media, especially film and television. (T)

311. Television Performance. Cr. 3
Prereq: SPR 211. Material fee as indicated in *Schedule of Classes*. Practical application of the principles and techniques of television performance. (T)

421. Writing for Radio-Television-Film. Cr. 3
Prereq: SPR 211 or SPC 317 and a second English writing course after ENG 102, with grades of C or above. Application of writing principles to various forms of copy; continuity, commercials, public service announcements, features, documentary, drama. (T)

424. (AFS 424) 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)

431. Audio Production. Cr. 4
Prereq: SPR 421; junior standing or above. Material fee as indicated in *Schedule of Classes*. Theory and practice in sound production techniques and experimentation with creative audio production. (T)

441. Television Production. Cr. 4
Prereq: SPR 421; junior standing or above. Material fee as indicated in *Schedule of Classes*. 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. (T)

501. Studies In Broadcast History. Cr. 3
Prereq: completion of Historical Studies and Social Science requirements, grade of 'C' or better in SPR 201; or consent of instructor. Analysis of history of broadcasting, or of an aspect such as a period, genre, or medium. (B)

503. Studies in Television Criticism and Theory. Cr. 3
Prereq: grade of 'C' or better in SPR 301, or consent of instructor. Analysis of development of a television genre, comparison of genres, or specific approach to television criticism. (B)

521. Advanced Radio-Television-Film Writing. Cr. 3(Max. 6)
Prereq: SPR 421, junior standing or above. Principles and practice in creating the full-length dramatic or documentary script for broadcast or film production. (Y)

540. Techniques of Film/Video Production. (SPF 540). Cr. 4
Prereq: SPR 431, 441. Material fee as indicated in *Schedule of Classes*. Experience with the preparation, shooting and editing of video projects in film-style production. (T)

542. Director's Workshop. Cr. 4
Prereq: SPR 431, 441, 540; senior standing or above; production-ready script; consent of instructor. Material fee as indicated in *Schedule of Classes*. Organization and execution of the film and video director's tasks through production of a major creative project. (Y)

553. Audience Measurement and Survey Techniques. Cr. 3
Prereq: completion of at least twelve credits in SPR courses; junior standing or above. Theory and application of quantitative research techniques in surveying audiences for electronic media. (B)

555. Electronic Media Management. Cr. 3
Prereq: completion of at least twelve credits in SPR courses; junior standing or above. Principles of broadcast station and cable management; emphasis on business management, marketing, sales and audience analysis. Business plan, including market and media survey, required. (Y)

557. International Communications. Cr. 3
Prereq: SPR 201; junior standing or above. World mass communications systems, organizations and objectives. Political, economic and legal foundations of international media systems. (B)

593. (WI) Writing Intensive Course in Radio/Television. Cr. 0
Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: SPR 421. 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)

596. Mass Communications and Society. Cr. 3
Theoretical and practical research on the social functions and effects of the mass media; capstone course for the undergraduate Radio-Television majors and required during the final twenty-one credits of enrollment prior to graduation. (T)

667. Internships in Radio-Television-Film. Cr. 1-4(Max. 8)
Prereq: SPR 531 or 540 or 541; senior standing or above; written consent of instructor. (T)

668. Individual Projects in Radio-Television-Film. Cr. 3 (Max. 6)
Prereq: SPR 531 or 540 or 541; senior standing or above; written consent of instructor. (T)

DANCE

Office: 125 Matthaei Building; 313-577-4273

Chairperson: Eva Jablonowski Powers

Associate Professors

Eva Jablonowski Powers, Ann Zirulnik (Emerita)

Assistant Professor

Georgia Reid

Lecturer

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 25), College degree requirements (see page 159), 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 15-43 and 159-162, respectively. Company members are required to take a technique class five 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 201 —Technique Laboratory I	4
DNC 221 —Intermediate Ballet	4
DNC 231 — (VP) Historical Perspectives of Dance	3
DNC 241 —Music and Dance Relationships	2
DNC 301 —Technique Laboratory II	4
DNC 311 —Social Dance Forms	2
DNC 318 —Movement Analysis I	2
DNC 331 —Dance Production	3
DNC 401 —Technique Laboratory III	8
DNC 455 —Choreography I	3
DNC 500 —Performance Tour	1
DNC 541 —Dance Notation I	2
DNC 555 —Choreography II	3
DNC 586 —Choreography III	3
DNC 561 —Dance Company I*	4
DNC 580 —Repertory	2
DNC 583 — (WI) Writing Intensive Course in Dance	0

Cognate Requirements

BIO 287 —Anatomy and Physiology	5
P E 358 —Kinesiology	3

Professional Education Sequence: required for teaching major in dance, K-12 certification:

DNE 441 — Student Teaching and Seminar I	5
DNE 442 — Student Teaching and Seminar II	5
DNE 481 — Methods in Modern Dance and Ballet	3
DNE 581 — Creative Dance for Children	3
DNC 398 — Assisting in Dance	1
DNC 583 — Field Work in Creative Dance	2-8
EDP 331 — Educational Psychology	3
H E 330 — Health of the School Child	3
RDG 443 — (WI) Teaching Reading in Subject Matter Areas	3

Minor in Dance Education: The dance education minor requires twenty-six credits to meet Departmental and State Certification requirements for teaching in grades K-12. Required courses include:

DNC 201 —Technique Laboratory I	4
DNC 221 —Intermediate Ballet	2
DNC 231 —(VP) Historical Perspectives of Dance	3
DNC 311 —Social Dance Forms	2
DNC 301 —Technique Laboratory II	4
DNC 455 —Choreography I	3
DNC 561 —Dance Company I	2
DNE 481 —Methods in Modern Dance and Ballet	3
DNE 581 —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.

* All majors are required to be members of the Dance Company for four semesters (one credit per semester) of DNC 561.

Departmental Scholarships

See the section on Scholarships and Financial Aid on page 161. Detailed information on all Department scholarships and awards is available in the department office.

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.

Academic Achievement Award: Award open to any full-time student majoring in dance.

Ruth Lovell Murray Tuition: Award open to any dance education major. Application deadline: August 1.

Talent Scholarship: Award of \$700 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 February.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

DANCE (DNC)

101. Contemporary Dance I. Cr. 2

Basic movement techniques and improvisational experiences in concert dance; films and concert viewing. (T)

102. Contemporary Dance II. Cr. 2(Max. 6)

Prereq: DNC 101 or equiv. Continuation of DNC 101 on an intermediate level. (T)

121. 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)

122. Fundamentals of Classic Ballet II. Cr. 2 (Max. 8)

Prereq: DNC 121 or equiv. Continuation of DNC 121. (T)

131. Jazz I. Cr. 2 (Max. 8)

Introduction to jazz dance technique; emphasis on alignment, movement isolation, rhythmic awareness, basic dance vocabulary, historical development. (F)

132. Jazz II. Cr. 2 (Max. 4)

Prereq: DNC 131, consent of instructor. Continuation of DNC 131 on a more advanced level. (T)

141. 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)

142. Afro-Haitian Dance II. Cr. 2

Prereq: DNC 141 or equiv. Continuation of DNC 141. (W)

200. (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)

201. Technique Laboratory I. Cr. 2(Max. 12)

Prereq: DNC 102 or equiv. Modern dance technique of increasing difficulty and complexity; experiences in improvisation, problem solving, and compositional studies in dance. (F,W)

221. Intermediate Ballet. Cr. 2 (Max. 16)

Prereq: DNC 122 or equiv. Continuation of DNC 122 on a more advanced technical level with emphasis on complex movement phrases and selections from classical repertory. (F,W)

231. (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)

240. 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)

241. 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)

301. Technique Laboratory II. Cr. 2 (Max. 8)

Prereq: DNC 201 or equiv. Continuation of DNC 201; modern dance technique at the intermediate level. (F,W)

311. Social Dance Forms. Cr. 2

Folk and social dances of selected historical periods; examination of the social organization of their original performance and their transformation into recreational forms. (B)

318. Movement Analysis I. Cr. 2

Prereq: DNC 102 or equiv. Introduction to basic concepts of innovative body therapies; practical experience in programs of body correctives. Exploration of relationships between neuromuscular reprogramming, alignment and technique. (B)

319. Movement Analysis II. Cr. 3

Prereq: DNC 318. Continuation of DNC 318; emphasis on analysis of dance movement from an anatomical and mechanical point of view; special attention given to problems of dance technique. (I)

331. 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)

382. (P E 341) Physical Education for Elementary School Children I. (DNE 382). Cr. 3

Prereq: admission to senior college. Developmental approach to elementary physical education for grades K-3. Beginning movement concepts and fundamental motor skills that are developmentally appropriate for young children to participate in games, gymnastics and creative dance. (F)

383. (P E 342) Physical Education for Elementary School Children II. (DNE 383). Cr. 3

Prereq: P E 341 or equiv. Continuation of DNC 382, focusing on developmentally appropriate activities in physical education for grades 4-6. Investigation of individual approaches which use sport-related movement themes, sport forms, gymnastic games analysis and physical fitness. Curriculum design and implementation of developmentally-appropriate activities in practicum application. (W)

398. Assisting in Dance. Cr. 1(Max. 4)

Prereq: consent of dance adviser. Assigned field work in assisting under faculty supervision. (F,W)

- 401. Technique Laboratory III. Cr. 2 (Max. 16)**
Prereq: DNC 201 or equiv. Continuation of DNC 301. Modern dance technique, advanced level. (F,W)
- 455. Choreography I. Cr. 3**
Prereq: DNC 102 or equiv. Construction of motifs and dance studies based on music, properties, nonliteral and literal thematic materials. Form and structural concepts. (B)
- 481. Methods in Modern Dance and Ballet. (DNE 481). Cr. 3**
Prereq: DNC 102 and 122 or equiv. Analysis of instructional methods and materials in modern dance and ballet, including technique, improvisation, composition, curriculum planning and evaluation. (W)
- 500. Performance Tour. Cr. 1 (Max. 8)**
Prereq: DNC 561 or 661. Open by audition only. Development and performance of informal concerts for elementary, middle and secondary schools. (W)
- 511. 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)
- 541. 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)
- 546. Music and Dance in the Music Class II. (TED 546) (MED 558). Cr. 1-2**
Prereq: consent of instructor. Continuation of DNC 544; added experience using the Orff instrumentation for accompaniment. (S)
- 555. Choreography II. Cr. 3**
Prereq: DNC 455 or equiv. Selection of dance themes, construction of dances, small group studies. Aesthetic considerations, form and elements of performance. (B)
- 561. Dance Company I. Cr. 1 (Max. 8)**
Prereq: admission by audition. Coreq: DNC 401 or 601. Performing company. Open to students interested in performing and/or choreographing. Four credits required for dance majors. (F,W)
- 571. 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)
- 580. Repertory. Cr. 1-4 (Max. 12)**
Prereq: DNC 401 or equiv.; admission by audition. Learning, for performance, of standard modern repertory, dances previously choreographed by instructor, Labanotated dance, or work of Artist-in-Residence. (F,W)
- 581. Creative Dance for Children. (TED 581)(DNE 581). 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)
- 582. Creative Dance Movement for the Pre-School Child. (TED 582). Cr. 3**
Creative dance activities; manipulative, musical, imaginative and kinesthetic approaches to movement. (W)
- 583. Field Work in Creative Dance. (TED 583). Cr. 2-8**
Prereq: DNC 581 or consent of instructor. Supervised professional study in field settings. (T)
- 590. Independent Study in Dance. Cr. 1-4 (Max. 12)**
Prereq: major or minor in dance. Independent work in dance under faculty guidance. (T)
- 593. (WI) Writing Intensive Course in Dance. Cr. 0**
Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: DNC 311 or 331. 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)

596. Choreography III. Cr. 3 (Max. 6)
Prereq: DNC 555, choreography selected and produced in three WSU concerts. Group and solo choreography, costume design and construction, notation of selected movement phrases and production of the solo work. (W)

601. Technique Laboratory III. Cr. 1 (Max. 8)
Prereq: DNC 401 or equiv. Modern Dance technique, advanced level. (F,W)

621. Advanced Ballet. Cr. 1 (Max. 8)
Prereq: DNC 221 or equiv. Continuation of study in ballet technique with emphasis on allegro and adagio work. (F,W)

661. Dance Company II. Cr. 1 (Max. 8)
Prereq: DNC 561 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)

382. (P E 341) Physical Education for Elementary School Children I. (DNC 382). Cr. 3

Prereq: admission to senior college. Developmental approach to elementary physical education for grades K-3. Beginning movement concepts and fundamental motor skills that are developmentally appropriate for young children to participate in games, gymnastics and creative dance. (F)

383. (P E 342) Physical Education for Elementary School Children II. (DNC 383). Cr. 3

Prereq: P E 341 or equiv. Continuation of DNE 382, focusing on developmentally appropriate activities in physical education for grades 4-6. Investigation of individual approaches which use sport-related movement themes, sport forms, gymnastic games analysis and physical fitness. Curriculum design and implementation of developmentally appropriate activities in practicum application. (W)

441. Student Teaching and Seminar I. (Fid:14). Cr. 2-6

Prereq: 2.5 h.p.a. in major; admission to student teaching. Offered for S and U grades only. First experience in student teaching. (F,W)

442. Student Teaching and Seminar II. (Fid:14). Cr. 2-6

Prereq: 2.5 h.p.a. in major; admission to student teaching; DNE 441. Offered for S and U grades only. Second experience in student teaching. (F,W)

481. (DNC 481) Methods in Modern Dance and Ballet. Cr. 3

Prereq: DNC 102 and DNC 122 or equiv. Analysis of instructional methods and materials in modern dance and ballet, including technique, improvisation, composition, curriculum planning and evaluation. (W)

581. (DNC 581) Creative Dance for Children. (TED 581). 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;
519 Manoojian, 313-577-4145

Co-Directors: Robert Burgoyne, Robert Steele

Advisory Committee

AFRICANA STUDIES: Michael Martin

COMMUNICATION: Jackie Byars, Adwa X. Muwzea, Robert Steele, Janet Walker

ENGLISH: Lesley Brill, Robert Burgoyne, Corey Creekmur, Cynthia Erb, Margaret Jordan

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, and Romance Languages) 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 three 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 25), College degree requirements (see page 159), 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 15-43 and 205-210, respectively.

Major Requirements: students majoring in film studies must complete a minimum of thirty-four credits, distributed as follows:

CORE COURSES (Fourteen Credits)	credits
FLM 201 —(VP) Introduction to Film	4
FLM 202 —(VP) History of Film	3
SPF 540 —Techniques of Film/Video Production	4
ENG 504 —Film Criticism and Theory	3
FLM 497 — Senior Assessment Essay	1

ELECTIVE COURSES (Twenty Credits)

AFS 320 — The African-American Cinematic Experience	3
AFS 580 — Third World Cinema	3
ENG 506 —Styles and Genres in Film	3 (Max. 9)
ENG 507 —Topics in Film	3 (Max. 9)
FLM 390 —Directed Study	1-3
SPF 502 —Studies in Film History	4 (Max. 12)
SPF 508 —Documentary and Non-Fiction Film	4
SPF 525 —Screenwriting	3
SPF 544 —Film Production	4
SPR 668 — 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 201 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 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

- 201. (VP) Introduction to Film. (ENG 245). Cr. 4**
Material fee as indicated in *Schedule of Classes*. Examination of film techniques and basic methods of film analysis. (T)
- 202. (VP) History of Film. (ENG 246). Cr. 3**
Material fee as indicated in *Schedule of Classes*. 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. (T)
- 320. (AFS 320) 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)
- 390. Directed Study. Cr. 1-3(Max. 6)**
Prereq: consent of adviser; completion of minimum of twelve credits in film courses from FLM, ENG, or SPF. (T)
- 497. 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)
- 504. (ENG 504) Film Criticism and Theory. Cr. 3**
Prereq: ENG 245 or another film course or consent of instructor. Material fee as indicated in *Schedule of Classes*. Survey of the major film theories from Munsterberg to contemporary film semiotics; examination of various attempts made at a systematic understanding of the cinema. (B)
- 506. (ENG 506) Styles and Genres In Film. Cr. 3(Max. 9)**
Material fee as indicated in *Schedule of Classes*. 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*. (Y)

507. (ENG 507) Topics in Film. Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. Topics (such as film and fusion of the arts) to be announced in *Schedule of Classes*. (Y)

580. (AFS 580) Third World Cinema. Cr. 4

Prereq: upper division standing. Study of the cinematic traditions and film practices in the Third World with emphasis on anticolonial and post colonial political cinema. (B)

593. (WI) Writing Intensive Course in Film Studies. Cr. 0

Prereq: junior standing, consent of instructor, satisfactory completion of English Proficiency Examination; coreq: ENG 504. 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: 105 Schaver Music Building; 313-577-1795

Chairperson: Dennis J. Tini

Associate Chairperson: Ray P. Ferguson

Academic Services Officer: Margot Demarais

Professors

Harold H. Arnoldi, Ray P. Ferguson, James J. Hartway, Joseph A. Labuta, Dennis J. Tini

Associate Professors

James P. Lentini, Kypros L. Markou, Matthew Michaels, Doris L. Richards, Deborah A. Smith, Mary A. Wischusen,

Assistant Professor

Michael Zelenak

Lecturers

Christopher Collins, Cheryl V. Harden

Adjunct Professors

Brazeal Dennard, David DiChiera, Neeme Jarvi

Emeriti Faculty

Lillian J. Cassie, Carol J. Collins, Angelo M. Cucci, Mark F. DeLeonard, Morris Hochberg, Malcolm M. Johns, Bohdan J. Kushnir, Harry Langsford, Robert F. Lawson, Frank Murch, Graham Overgard, C. William Young

Program Directors

Harold Arnoldi (brass), Frances Brockington (voice), Ray Ferguson (organ/piano), Paul Ganson (woodwinds), James Hartway (theory/composition), Joseph Labuta (music education), James Lentini (guitar), Kypros Markou (strings), Matthew Michaels (jazz studies), Dennis Tini (choral), Michael Zelenak (percussion)

Affiliated Faculty

Geoffrey Applegate (violin, DSO), Emily Austin (violin, former DSO), Gerrie Ball (accompanist), Clement Barone (flute, former DSO), George Benson (jazz saxophone), Gary Blumer (jazz piano), Emmanuelle Boisvert (violin, DSO), Jack Brokensha (vibes, studio recording), Steven Carryer (jazz guitar, ensembles), Marcy Chanteaux (cello, DSO), Keith Claeys (percussion ensemble), Chris Collins (jazz sax, jazz studies), Robert Conway (piano, DSO), Maurice Davis (jazz trumpet), Earl DeForest (jazz saxophone), Brazeal Dennard (choral), Lee Dyament (classical guitar), Kenny Everts (jazz percussion), Joe Fava (guitar), Gordon Finlay (voice), Paul Ganson (bassoon, DSO), Robert Gladstone (bass, DSO), Ken Glaza (music technology), Ed Gooch (trombone), Oliver Green (bass clarinet, DSO), Carolyn Grimes (voice), Morris Hochberg (violin, former DSO), William Homer (trumpet), Anna Speck Hull (voice), Wesley Jacobs (tuba, DSO), Max Janowsky (bass, DSO), David Jennings (trumpet), Malcolm Johns (choral), Marilyn Jones (music education), Ronald Kischuk (trombone), Vladislav Kovalsky (piano), Gale Kramer (organ), Oscar LaGasse (tuba, DSO), Harry Langsford (choral), Gary Leach (jazz bass), Min-Duo Li (piano), Lawrence Liberson (clarinet, DSO), Joseph LoDuca (jazz guitar, 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), Diana Munch (accompanist), Larry Nozero (jazz woodwinds), Ted Oien (clarinet, DSO), Dan Pliskow (jazz bass), Richard Rattner (business of music), Ernest Rodgers (jazz ensemble), Pat Terry-Ross (harp), Eddie Russ (jazz piano), James Ryan (jazz percussion), Ray Shuster (voice), Bruce Sininger (voice), Joseph Skrzynski (trombone, DSO), Michael Stockdale (guitar), Joseph Striplin (violin, DSO), Gordon Stump (trumpet), Darwin Swartz (piano), David Taylor

(jazz percussion), Larry Teal (saxophone), April Arabian Tini (vocal jazz), George Troia (trombone), John Trudell (jazz trumpet), Samuel Tundo (percussion, DSO), Brian Ventura (oboe, DSO), Joanne Vollendorf (choral), Eugene Wade (horn, DSO), Corbin Wagner (horn, DSO), Jim Wilhelmsen (piano)

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, music theatre, 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*

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 Department of Music students must secure a Department of Music adviser's signature approving the program request before pursuing registration for courses. Fees for applied lessons (MUP series) must be paid at time of registration.

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 15-43 and 159-162, 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 'D' is not an acceptable grade for degree credit. If grade of 'D' or 'F' 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. Symphony Band 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 Ensemble, and Women's Chorale. Concert Chorale is the Department's most select vocal ensemble; auditions are especially competitive.

JAZZ: Though music majors are given highest priority for jazz band positions, non-music majors are welcome to audition. Jazz Lab Band I is the Division's most advanced ensemble.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

ORCHESTRA: There are usually a number of openings for string players in the Orchestra. There are usually a number of openings, by audition, in all sections.

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 25), College degree requirements (see page 159), 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 159). 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 269, 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 101 (Introductory Psychology) or PSY 102 (Elements of Psychology), and PHY 310 (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 134 (Music Appreciation: World Music), MUH 135 (Music Appreciation: Popular music from the Renaissance to the Present), or MUH 137 (Music Appreciation: Beginnings to the Present); if MUH 137 is elected, it must be taken before MUH 331 or 332 (Music History and Literature I and II).

MUSIC CORE REQUIREMENTS

1. MUT 114, 115, 116, 117, 214, 215, 216, 217, 597
2. MUH 332, 333
3. MUA 179, 279, 379
4. MUA 269 (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 Performance Ensemble. Performance Ensembles for the Bachelor of Arts program are defined as MUA 280, 281, 282, 284, or 285 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 210
2. MUH 331
3. MUA 267
4. MUA 134

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 nine 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 25), College degree requirements (see page 159), 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 269, 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 101 (Introductory Psychology) or PSY 102 (Elements of Psychology), and PHY 310 (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 134 (Music Appreciation: World Music), MUH 135 (Music Appreciation: Popular music from the Renaissance to the Present), or MUH 137 (Music Appreciation: Beginnings to the Present); if MUH 137 is elected, it must be taken *before* MUH 331 or 332 (Music History and Literature I and II).

MUSIC CORE REQUIREMENTS

- MUT 114, 115, 116, 117, 214, 215, 216, 217, 597
(Note: MUT 216 and 217 are *not* required in the interdisciplinary curriculum in Music Theatre.)
- MUH 332, 333
- MUA 179, 279, 379
- MUA 269 (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. Specific requirements for the various concentrations offered under the Bachelor of Music are as follows:

- Bachelor of Music with a Concentration in Composition: Performance Ensemble of the principal instrument;
- Bachelor of Music with a Concentration in Instrumental Music Education:
 - Winds or percussion—MUA 280
 - Strings—MUA 281;
- Bachelor of Music with a Concentration in Vocal Music Education: eight semesters of MUA 284 or 285 (MUA 283 or 287 may be substituted for a maximum of four semesters);

- Bachelor of Music with a Concentration in Performance:
 - Organ—any Performance Ensemble (minimum four semesters of MUA 284 or 285)
 - Piano—any Performance Ensemble (minimum four semesters of MUA 284 or 285)
 - Voice—eight semesters of either MUA 284 or 285
 - Winds or percussion—minimum of two semesters of MUA 281 (except saxophone) and four semesters of MUA 280
 - Strings—MUA 281
 - Classic Guitar—any Performance Ensemble
 - Harp—any 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: 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:

- Eight semesters of MUA 282;
- Recommended elections from MUA 280, 281, 283, 284, 285, 286 or 287.

Chamber music ensemble requirements for specific Bachelor of Music curricula:

(Chamber music ensemble is defined as the appropriate section of MUA 288)

- Bachelor of Music with a Concentration in Performance—
 - Organ (one semester);
 - Piano (four semesters);
 - Winds, percussion, strings (four semesters);
 - Classic Guitar (four semesters);
- Bachelor of Music with a Concentration in Church Music (one semester);
- Bachelor of Music with a Concentration in Jazz Studies and Contemporary Media (two semesters).

— Bachelor of Music Concentrations

Church Music (123 Credits)

- MUT 204, 210;
- MUA 260, 261, 267;
- MUH 331, 535;
- Two semesters of MUA 573;
- Two semesters of MUP 221;
- Twenty-four credits of MUP 220;
- Performance of a half recital in the junior year; and a full recital in the senior year.

Theory (123 Credits)

Composition (120 Credits)

- MUT 204, 210, 212, 300, 310, 311, 506; MUH 331 and 335, and
 - For Composition majors—MUT 410, 411; MUA 173, 174, 175, 176; PHI 370
 - For Theory majors—Foreign Language Group Requirement (French or German recommended), PHI 370; MUT 504;
- Senior projects—
 - 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 267, and four semesters of piano in addition to MUA 379;

Instrumental Music Education (128 Credits)

- (a) Eight semesters of the principal instrument selected from MUP 223, 224, 225 or 226 at one credit per semester;
- (b) One semester of MUA 173; two semesters of MUA 174; one semester of MUA 175 and MUA 176, plus satisfactory proficiency on orchestra instruments as prescribed by the Music Education Division;
- (c) MUA 267, 268;
- (d) MED 350, 454, 455, 456, 457, 559;
- (e) MUT 300;
- (f) EDP 331, RDG 443;
- (g) MUH 331.

Vocal Music Education (126 Credits)

- (a) MUP 221—eight semesters at one credit per semester;
- (b) MUP 222—eight semesters at one credit per semester;
- (c) MUA 267;
- (d) MED 350, 451, 453, 456, 457, 555, 559;
- (e) Six credits selected from MUA 170, 173, 174, 175 or 176;
- (f) MUH 331;
- (g) EDP 331, RDG 443.

Performance (120 credits)

- (a) MUT 210;
- (b) MUH 331 and 535;
- (c) Twenty-four credits in MUP 220–228 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 204, 300; MUA 288 (four semesters);
 2. Organ—MUT 204; two semesters of MUA 573; keyboard section of MUA 379;
 3. Brass, woodwinds, percussion — MUT 300; performance ensemble must include a minimum of two semesters of MUA 281 (except saxophone) and four semesters of MUA 280; four semesters of MUA 288 (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 281 and four semesters of MUA 288.
- (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 520–529;
- (b) MUT 212, 300, 310, 511, 512, 513;
- (c) MUH 336, 337;
- (d) MUA 267, 560, 561, 563, 569;
- (e) 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 220–229 or MUP 521–529;
- (b) MUH 134 or 135; and MUH 331 (Jazz Studies majors may substitute MUH 336 for MUH 331);
- (c) MUA 240, 465, 560, 561, 563, 580;
- (d) ENG 301;

- (e) ECO 201, 202;
- (f) ECO 410 or FBE 530;
- (g) ACC 263, 301;
- (h) MAT 150;
- (i) MKT 530;
- (j) MGT 452;
- (k) Electives selected with assistance of the Divisional Director.

Music Technology (128 Credits)

- (a) Four semesters of the principal instrument selected from: MUP 220–228 or MUP 521–529 at one credit per semester;
- (b) MUA 561, 563, 564, 565, 566;
- (c) CSC 105,
- (d) EET 200, 210, 272, 310, 372;
- (e) MAT 180, 343;
- (f) MUH 331.

Music Theatre (128 Credits)

- (a) MUA 28x (ensemble or musical course: six semesters), 286;
- (b) MUP 222 (8 credits);
- (c) MUH 134 or 135; and 232, 532, 533;
- (d) THR 102, 104, 105, 201, 202, 203, 302, 305, 505, 518, 520;
- (e) Electives selected with assistance of the Divisional Director.

Music Education Programs

Candidates in music education programs must complete the professional education requirements of the College of Education for secondary certification; see page 99. 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 114, 115, 116, 117, 214, and 215;
- (b) Two Music History courses selected from: MUH 331, 332, 333, and MUH 134 or 135;
- (c) Four semesters of a performance ensemble selected from: MUA 280, 281, 282, 284, and 285.

Departmental Financial Aid

See the section on Scholarships and Financial Aid on page 161. Detailed information on all Department scholarships and awards is available in the department office.

The following scholarships are awarded by the music faculty during the winter semester:

Sophie Angelescu Scholarship: Award of \$800, in memory of Valter Poole, open to an outstanding music major.

Avery Crew Scholarship: Award of \$250; open to music major studying voice, when funding exists.

Detroit Symphony Orchestra — Bradlin Scholarship: Award of \$500 open to any outstanding music major who plays an orchestral instrument.

Friends of Music Scholarship: Award of \$1000 open to any music major who is an outstanding performer; available when funding exists.

Froman Piano Scholarship: Award of \$500 open to an outstanding piano student.

Industry Sings Scholarship: Award of \$500, when funding exists, open to an outstanding music major.

Harry M. Langsford Scholarship: Award of \$250, available when funding exists to an outstanding choral or vocal student.

LeFevre Scholarship: Award of \$250 open to any music major

Liberace Scholarship: Award of \$3500 open to full-time music majors in jazz or classical curriculum.

Christopher Mac Scholarship: Award of \$250 open to outstanding member of the Men's Glee Club, when funding exists.

Mu Phi Epsilon Scholarship: Award of \$350 open to a Mu Phi Epsilon member with h.p.a. above 3.0, for musicianship.

Nicks Memorial Scholarship: Award of \$500, when funding is available; open to any music major concentrating in sacred music; preference given to student with gospel music background.

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.

Presser Foundation Scholarship: Award of \$2250 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.

Tuesday Musicale Scholarship: Award of \$500, when funding exists, open to an outstanding performer; performance required.

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 — Hobel Scholarship: Award of \$750, when funding is available, open to an outstanding music student pursuing a degree in composition.

Evangeline Dumesnil Memorial Scholarship: Award open to any music major; amount depends on funds available.

Albert Feigenson Scholarship: Award open to any full-time undergraduate music or English major with a minimum 3.0 h.p.a. and demonstrable financial need. Application deadline is April 30. Amount depends on funds available.

UNDERGRADUATE COURSES

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

MUSIC EDUCATION (MED)

250. Piano Skills for the Music Classroom. Cr. 2

Prereq: MUA 179, MUA 279, MUA 379 or equiv. Open only, by audition, to students in the vocal music education curriculum. Continuation of MUA 379: Additional practice with functional skills needed in music classroom. Students acquire a repertoire of musical selections commonly used in the educational setting. (W)

350. Aesthetic and Cultural Foundations of Music Education. Cr. 2

Historical, philosophical, professional, legal and ethical considerations. (W)

390. Directed Study. Cr. 1–3(Max. 6)

Prereq: consent of adviser. (F,W)

451. General Music in the Schools. Cr. 3

Prereq: MED 350. Methods, materials and techniques for teaching general music in the schools. (F)

453. Vocal Music in Secondary Schools. Cr. 3

Prereq: MED 451. 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)

454. Instrumental Music in the Schools I. Cr. 3

Prereq: MUA 173, MUA 174, MUA 175, MUA 176, MED 350. Teaching techniques, materials and organization of instrumental music in elementary schools. (F)

455. Instrumental Music in the Schools II. Cr. 3

Prereq: MED 454. Teaching techniques, materials and organization of instrumental music in secondary schools. (W)

456. Practicum in Music Education. Cr. 2

Prereq: MED 350. Offered for S and U grades only. Observation and participation in music education programs in area public schools. (F,W)

457. Student Teaching and Seminar. Cr. 8

Prereq: 2.5 h.p.a. in major; admission to student teaching. Offered for S and U grades only. Directed teaching in school music. (F,W)

552. Marching Band Techniques. Cr. 3

Planning, charting, and rehearsal techniques for marching band; emphasis on contemporary, computer-generated drill designs; practical projects in developing a complete marching band program. (Y)

555. Choral Conducting and Rehearsal Techniques. Cr. 3

Prereq: MUA 267 or equiv. Conducting and rehearsal methods and materials for secondary schools. (W)

556. 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)

- 558. (DNC 546) Music and Dance in the Music Class II. (TED 546). Cr. 1-2**
Prereq: MED 554. Continuation of MED 554; added experience using the Orff instrumentation for accompaniment. (S)
- 559. Computer Applications in Music Teaching. Cr. 2**
Presentation of techniques and strategies for utilizing computer music software programs and MIDI equipment in music instruction. (S)
- 652. 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)
- 653. Conducting and Operating the School Band. Cr. 2-3(Max. 6)**
Individual instruction correlated with actual administration and direction of summer youth band. (S)
- 654. 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)
- 655. 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)

- 105. Topics in Entertainment. Cr. 1 (Max. 6)**
Topics to be announced in *Schedule of Classes*. (F,W)
- 170. Guitar Proficiency Class. Cr. 2(Max. 8)**
Prereq: music major; others by consent of instructor. Functional guitar for music therapists and teachers. (Y)
- 171. Piano Class. Cr. 2 (Max. 8)**
Not open to music majors after MUA 179. Rudiments of rhythmic and staff notation, beginning keyboard technique, hand positions, scales, simple compositions. (F,W)
- 172. Voice Class. Cr. 2 (Max. 6)**
Fundamentals in voice training. Correct breathing: tone placement: articulation vocalises. (F,W)
- 173. String Class. Cr. 2(Max. 6)**
Prereq: MUT 110 or equiv. Techniques and fundamental problems in the playing and teaching of stringed instruments. (F,W)
- 174. Woodwind Class. Cr. 2(Max. 6)**
Prereq: MUT 110 or equiv. Techniques and fundamental problems in the playing and teaching of woodwind instruments. (F,W)
- 175. Brasswind Class. Cr. 2(Max. 6)**
Prereq: MUT 110 or equiv. Techniques and fundamental problems in the playing and teaching of brasswind instruments. (F,W)
- 176. Percussion Class. Cr. 2**
Prereq: MUT 110 or equiv. Techniques and fundamental problems in the playing and teaching of percussion instruments. (F)
- 179. Piano Proficiency: Level I. Cr. 2**
Coreq: MUT 114. Open only to music majors. Repertoire, scales, sight reading, harmonization, simple transposition. Certification of undergraduate core piano requirement on satisfactory completion of MUA 379. (F,W)
- 240. Introduction to the Music Business. Cr. 2**
Open to all university students; required for Music Management curriculum. Overview of the music profession; introduction to specific concerns of management in the music business. (Y)
- 260. Church Music and Materials I. Cr. 2**
Prereq: MUA 267 and major in organ or church music. Practical application of material used in churches of various faiths. For choir directors and organists. (B:F)

- 261. Church Music and Materials II. Cr. 2**
Prereq: MUA 260. Continuation of MUA 260. (B:W)
- 267. Conducting Techniques I. Cr. 2**
Prereq: MUT 216, MUT 217 or equiv. Rudiments of conducting; special attention to baton techniques. (F)
- 268. Conducting Techniques II. Cr. 2**
Prereq: MUA 267. Continuation of MUA 267. Score reading and rehearsal techniques. (W)
- 269. General Lectures and Concerts. Cr. 0**
Offered for S and U grades only. Lectures by visiting scholars; recitals and concerts by guest artists; student and faculty recitals, concerts and convocations. (F,W)
- 279. Piano Proficiency: Level II. Cr. 2**
Prereq: MUA 179 or equiv.; MUT 114 or equiv. Open to music majors. Continuation of MUA 179. (W,S)
- 280. 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)
- 281. University Symphony Orchestra. Cr. 1**
Prereq: consent of director. (F,W)
- 282. Jazz Lab Band. Cr. 1**
Prereq: consent of director. (F,W)
- 283. Men's Glee Club. Cr. 1**
Prereq: consent of director. (F,W)
- 284. Choral Union. Cr. 1**
Prereq: consent of director. (F,W)
- 285. Concert Chorale. Cr. 1**
Prereq: consent of director. (F,W)
- 286. Opera Workshop. (THR 286). Cr. 1 (Max. 8)**
Prereq: consent of director. (F,W)
- 287. Women's Chorale. Cr. 1**
Prereq: consent of director. (F,W)
- 288. Chamber Music and Special Ensembles. Cr. 1**
All forms including: Collegium Musicum, jazz improvisation, percussion ensemble, trios and quartets, and wind ensemble. (F,W)
- 379. Piano Proficiency: Level III. Cr. 2**
Prereq: MUA 279 or equiv.; MUT 116 or equiv. Open only to music majors. Continuation of MUA 279. Satisfactory completion of MUA 379 leads to fulfillment of the undergraduate core piano proficiency requirement and to certification. (F,W)
- 465. 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)
- 560. Business of Music I. Cr. 2**
Scope of the industry, including survey of careers in music; marketing music; basic concepts of copyright law; licensing; publishing; songwriting and recording contracts. Research projects and/or readings. (W)
- 561. (CL) Introduction to Music Technology. Cr. 3**
Prereq: consent of instructor. Offered for undergraduate credit only. Material fee as indicated in *Schedule of Classes*. 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. (F)

562. Voice Class II. Cr. 2 (Max. 4)
Prereq: MUA 172 or equiv. Voice building and repertoire; simple art songs. (W)

563. Introduction to Recording Techniques. Cr. 3
Prereq: MUA 561. 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. (W)

564. Electronic Music Synthesis I. Cr. 3
Prereq: MUA 561. Introduction to analog synthesizer programming, equipment, and techniques. Students required to design sounds for use in a final project. (F)

565. Electronic Music Synthesis II. Cr. 3
Prereq: MUA 564. Digital synthesis methods including software-based, FM and other synthesis types. Assignments leading to a final project. (W)

566. 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. (F)

568. Introduction to Music Therapy. Cr. 2
Survey of the field of music therapy: qualifications and skills required to become a Registered Music Therapist; observation of music with retarded, mentally ill, and physically handicapped clients. (W)

569. Stage Band Direction. Cr. 1 (Max. 3)
Prereq: MUA 267. Offered for undergraduate credit only. Techniques of big-band direction in a jazz medium. (F,W)

570. Business of Music II. Cr. 2
Prereq: MUA 560, 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)

573. Harpsichord Class. Cr. 2 (Max. 8)
Prereq: MUA 379 or equiv. (F,W)

574. Foundations of Musical Behavior. Cr. 3
Prereq: PHY 310, junior standing. No graduate credit. Research methods in musical ability, functional music, musical learning, musical preferences, aural responses. (W)

579. Piano Class. Cr. 2 (Max. 8)
Prereq: MUA 379 or equiv. Fundamental instruction in pianism up to the intermediate level. (F)

580. 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. (W)

MUSIC HISTORY (MUH)

134. (VP) Music Appreciation: World Music. Cr. 3
Introduction to the musical styles of Africa, Asia, and South America. (F,W)

135. (VP) Music Appreciation: Popular Music from the Renaissance to the Present. Cr. 3
Survey of popular styles in Western music from the Renaissance to the present. Concentration on relationships between the past and contemporary popular music. (W)

137. (VP) Music Appreciation: Beginnings to the Present. Cr. 3

Not open to music majors. 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)

200. Music of Today. Cr. 3-9
Development of listening skills through historical study of a variety of non-classical musical styles including: country-western, gospel, and rock-and-roll. Topics may vary each semester. (F,W)

232. History of Opera. Cr. 3
Survey of opera, its history, development and literature. (B)

233. History of Oratorio. Cr. 3
Prereq: MUH 232. Survey of oratorio, its history, development and literature. (B)

331. Music History and Literature I. Cr. 3
Prereq: sophomore standing and MUT 116 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)

332. Music History and Literature II. Cr. 3
Prereq: MUT 116 or equiv.; MUH 331 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)

333. Music History and Literature III. Cr. 3
Prereq: MUT 116 or equiv.; MUH 331 (except jazz studies majors) and MUH 332, 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)

334. American and World Music. Cr. 2
Survey of important developments in history of American music, followed by survey of non-western musical styles including music of Africa, Asia and South America. (I)

335. Twentieth Century Composers. Cr. 2
Prereq: MUH 331, 332, 333. Study of important composers, schools and trends in twentieth century art music. (W)

336. History of Jazz I. (MUH 536). Cr. 3
Open only to undergraduate students. Survey of major developments in jazz from its beginnings to the present. (F)

337. History of Jazz II: 1950 to the Present. Cr. 3
Continuation of MUH 336. (W)

500. Music of Today. Cr. 2
Prereq: consent of instructor; post-bachelor of graduate standing. Development of listening skills through historical study of a variety of non-classical musical styles including: pop, jazz, country-western, gospel and rock and roll. Topics may vary. (F,W)

530. Music Research. Cr. 3
Prereq: graduate standing in music or consent of instructor. Music bibliography and research techniques. (F)

532. Music Theatre History I. Cr. 3
Grad. prereq. or coreq: MUH 530. Survey of music theatre history from 1900 to 1950; research paper required if elected for graduate credit. (B)

533. Music Theatre History II. Cr. 3

Grad. prereq. or coreq: MUH 530. Survey of music theatre history from 1950 to the present; research paper required if elected for graduate credit. (B)

534. 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)

535. 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)

536. (MUH 336) 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)

537. Diction and Song Literature I. Cr. 3

Singers' diction in Italian, Latin, French and Spanish; methodologies, solo and chamber repertoire in these languages. (B)

538. Diction and Song Literature II. Cr. 3

Prereq: MUH 537. Singers' diction in German, Hebrew, Russian and English; methodologies, solo and chamber repertoire in these languages. (B)

560. 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)

593. (WI) Writing Intensive Course in Music. Cr. 0

Prereq: MUT 216; junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: MUH 332 or MUT 597. 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)

631. Studies in Afro-American Music. Cr. 3

Contributions of Afro-Americans to the development of music in the United States. (Y)

632. Advanced History of Opera. Cr. 3

Prereq: graduate standing, MUH 530. Survey of opera, its history, development and literature; research paper required. (B)

633. Advanced History of Oratorio. Cr. 3

Prereq: graduate standing; MUH 530. Survey of oratorio, its history, development and literature; research paper required. (B)

MUSIC PRIVATE INSTRUCTION (MUP)

The following courses (22x 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 22x series. The election of two courses concurrently in the MUP 22x series must be a requirement of the student's curriculum and requires consent of a music counselor and written consent of the Department Chairperson. A jury examination is required each semester for all students entering 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 of department chairperson; and audition for the first election.

COREQUISITE: Additional credits in any subject equal to eight credits, including MUP election. Performance ensembles in the MUA 28x series are required by the student's curriculum.

FEES: Special fees payable at the time of registration are required for these courses and are indicated in the *University Schedule of Classes*.

220. Organ. Cr. 1 or 3

Coreq: performance ensemble in the MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in B.M. curriculum who elect 8 credits or more. (F,W)

221. Piano. Cr. 1 or 3

Coreq: performance ensemble in the MUA 28X series as required in the curriculum being pursued. Only open, by audition, to music majors in a B.M. curriculum who elect 8 credits or more. (F,W)

222. Voice. Cr. 1 or 3

Coreq: performance ensemble in the MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in a B.M. curriculum electing 8 credits or more. (F,W)

223. Stringed Instruments. Cr. 1 or 3

Coreq: performance ensemble in the MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in a B.M. curriculum electing 8 credits or more. (F,W)

224. Woodwind Instruments. Cr. 1 or 3

Coreq: performance ensemble in the MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

225. Brasswind Instruments. Cr. 1 or 3

Coreq: performance ensemble in MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

226. Percussion Instruments. Cr. 1 or 3

Coreq: performance ensemble in MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in B.M. curriculum electing 8 credit hours or more. (F,W)

227. Harp. Cr. 1 or 3

Coreq: performance ensemble in MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

228. Classic Guitar. Cr. 1 or 3

Coreq: performance ensemble in MUA 28X series as required in curriculum being pursued. Only open, by audition, to music majors in B.M. curriculum electing 8 credits or more. (F,W)

329. Bayan. Cr. 1 or 3

Prereq: major standing in B.M. curriculum for which MUP course is required, and audition for first election. Open only to students with less than 10 semesters in private performance course work including transfer credit. (F,W)

The following courses (52x series) are open only to jazz studies majors. One course per semester is the usual election for the 52x series; however, some students may elect MUP 521 and 522 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 282.

FEES: Special fees are assessed for three courses and are indicated in the *Schedule of Classes*.

521. Jazz Piano. Cr. 1

Coreq: MUA 282. Only open, by audition, to music majors in jazz studies. (F,W)

522. Jazz Voice. Cr. 1

Coreq: MUA 282. Only open, by audition, to jazz studies majors. (F,W)

523. Jazz Strings. Cr. 1

Coreq: MUA 282. Only open, by audition, to music majors in jazz studies. (F,W)

524. Jazz Woodwinds. Cr. 1

Coreq: MUA 282. Only open, by audition, to music majors in jazz studies. (F,W)

525. Jazz Brasswinds. Cr. 1

Coreq: MUA 282. Only open, by audition, to music majors in jazz studies. (F,W)

526. Jazz Percussion. Cr. 1

Coreq: MUA 282. Only open, by audition, to music majors in jazz studies. (F,W)

528. Jazz Guitar. Cr. 1

Coreq: MUA 282. Open only, by audition, to music majors in jazz studies. (F,W)

529. Jazz Accordion. Cr. 1

Coreq: MUA 282. Open only, by audition, to music majors in jazz studies. (F,W)

MUSIC THEORY (MUT)

110. Elementary Music Theory. Cr. 2

No degree credit for music majors. Terminology and standard notation, including intervals, triads, scales, rhythm and correlated ear training. (F,W)

114. Theory I. Cr. 3

Prereq: MUT 110 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)

115. 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)

116. Theory II. Cr. 3

Prereq: MUT 114. All seventh chord types, altered chords (tonicizing chords, modal mixing), and modulation. Binary design and correlated analysis. (W,S)

117. Ear Training II. Cr. 1

Prereq: MUT 115. A continuation of MUT 115. Sight-singing chromatic melodies, modal melodies, less common meter signatures and more complex rhythmic problems. (W,S)

204. Keyboard Harmony. Cr. 1

Prereq: MUA 379. Harmonic progressions applied to keyboard; figured bass; harmonization of soprano or bass; modulation transposition and score reading. (Y)

210. Counterpoint. Cr. 2

Prereq: MUT 214. Counterpoint of the Baroque period with emphasis on the style of J. S. Bach. (F)

212. Jazz Theory and Harmony. Cr. 3

Prereq: MUT 116. Harmonic, rhythmic and melodic concepts used in jazz including basic chord nomenclature, non-tertian sonorities and advanced improvisation. (W)

214. Theory III. Cr. 3

Prereq: MUT 116. Nineteenth century trends including chromatic harmony, species counterpoint, voice leading, structure and tonal organization. (F)

215. Ear Training III. Cr. 1

Prereq: MUT 117. Melodic dictation, simple and compound time, syncopation, interval and scale recognition and error detection. (F)

216. Theory IV. Cr. 3

Prereq: MUT 214. Twentieth century music; impressionistic techniques. Mainstream compositional devices of melody, harmony and rhythm; serial music, electronic music, aleatoric music, contemporary notation. (W)

217. Ear Training IV. Cr. 1

Prereq: MUT 215. Harmonic dictation, four-part dictation including recognition of common chord progressions, cadences, non-harmonic tones, chord color and seventh chords. (W)

300. Orchestration. Cr. 2

Prereq: MUT 216. 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)

310. Composition I. Cr. 2

Prereq: MUT 216. Introduction to creative writing. Creative properties of melodic line in relation to rhythm, tonality, cadence and form; aesthetic considerations. Writing for unaccompanied instruments. (F)

311. Composition II. Cr. 2

Prereq: MUT 310. Continuation of MUT 310. Emphasis on creative aspects of rhythm, cadence, tonal polarity, concepts of consonance and dissonance within framework of larger texture. (W)

410. Composition III. Cr. 2

Prereq: MUT 311 and 406. Creative writing in twentieth-century idioms. Aesthetic, stylistic and formal problems in composition employing contemporary techniques. (F)

411. Composition IV. Cr. 2

Prereq: MUT 410. Continuation of MUT 410. (W)

506. Advanced Orchestration. Cr. 3

Prereq: MUT 300. Arranging and scoring for orchestra in all forms of ensemble structure. (I)

511. Jazz Arranging and Composition I. Cr. 3

Prereq: MUT 216 and 217. Offered for undergraduate credit only. Creative writing for small jazz and pop ensembles. Arranging for three to five pieces including "head" arrangements, block chord technique and contrapuntal writing. (F)

512. Jazz Arranging and Composition II. Cr. 3

Prereq: MUT 511. Offered for undergraduate credit only. Creative writing for larger jazz and pop ensembles; jazz arranging for six to eighteen pieces combining various textures and timbres. (W)

513. Jazz Arranging and Orchestration. Cr. 3

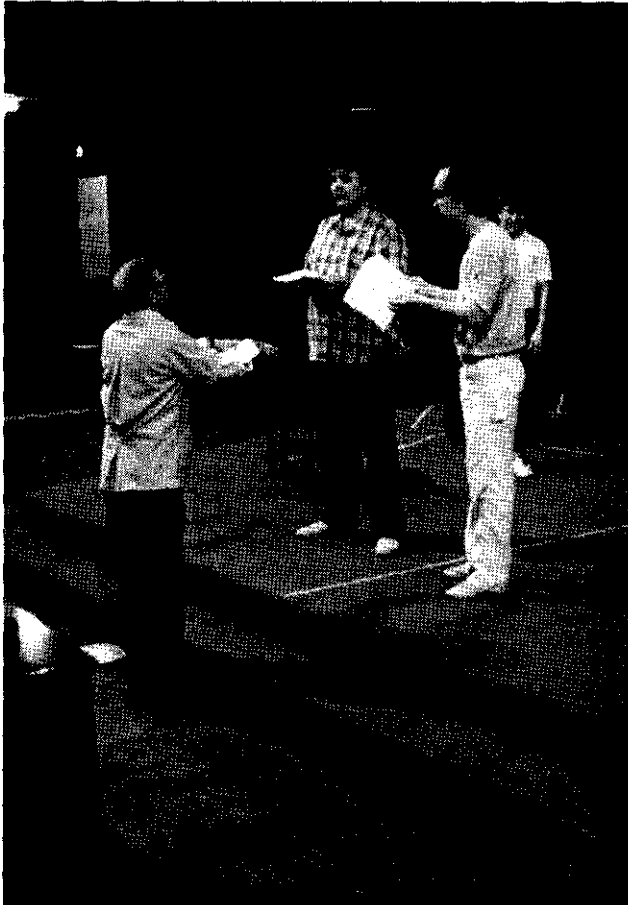
Prereq: MUT 300, 512. Offered for undergraduate credit only. Arranging pieces with concentration on orchestrating large jazz ensembles. (F)

560. Survey of Music Theory. Cr. 3

Open only to senior level and graduate students. General overview of the development of theoretical and formal structures. (F)

597. Analytic Technique. Cr. 4

Prereq: MUT 214, 215; MUH 332, MUH 333. Capstone course for Music Department. Structural analysis of tonal music in historical perspective. (W)



THEATRE

Office: 95 W. Hancock; 313-577-3508

Chairperson and Director, University Theatres: James Thomas

Professors

N. Joseph Calarco, Robert T. Hazzard (Emeritus), Leonard Leone (Distinguished Professor Emeritus), Robert E. McGill, Nira Pullin, Anthony B. Schmitt, Russell E. Smith (Emeritus), James Thomas

Associate Professors

Larry Kaushansky, Thomas H. Schraeder

Assistant Professors

Addell Austin Anderson, M. Reid Downey, John Woodland

Lecturers

Blair Anderson, Mary Copenhagen, Stephen Hurley

Theatre Support Staff

Wendy Evans, Philip Fox II, Mary Leyendecker

Degree Programs

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, directing, scenography, costume design, lighting design, and theatre management*

**DOCTOR OF PHILOSOPHY with a major in theatre*

The primary aim of the Theatre Department is to assist students in developing pre-professional training in theatre arts. Undergraduate majors may prepare for careers in acting, directing, technical theatre, and theatre education. To facilitate this instruction, the Department sponsors a large number of student activities and practicum experiences including Bonstelle Theatre, and Student Stage. Participation in these activities is available to all University students.

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/or directing; and the *production* curriculum, concentrating upon scenic and costume design and technical theatre.

Admission requirements for the program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Matriculation: For acting and directing students, the following sequence of courses must be taken in the freshman and sophomore years, as prerequisite to declaration of the fine arts major: THR 102, 104, 105, 201, 202, 203, 204, 208, 211, 213, 217, 305, 501. Students specializing in acting must audition at the end of their freshman year and secure approval of the theatre faculty in order to continue pursuit of the B.F.A. Therefore, it is essential that students considering this curriculum consult a B.F.A. adviser prior to their freshman year; transfer students should consult the B.F.A. adviser immediately. Because of the strict sequential nature of all theatre curricula, a student's progress towards a degree may be significantly delayed unless he/she consults with a B.F.A. adviser as soon as possible.

DEGREE REQUIREMENTS: Candidates must complete a minimum of 120 credits including the General Education Requirements (see page 25), College degree requirements (see page 159), and 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 15-43 and 159-162, respectively.

A minimum of seventy-nine 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.

ACTING: B.F.A. MAJOR REQUIREMENTS

Structure and Analysis	THR 102
Development of Drama I and II	THR 512, 612
Theatre History I and II	THR 510, 521
Acting I—VIII	THR 104, 105, 203, 204, 301, 303, 401, 403
Movement I—IV	THR 201, 202, 302, 304
Voice Lab I—IV	THR 211, 217, 308, 309
Technical Theatre	THR 213, 305, 501, 503 or 507
Technical Laboratory	THR 208 (Min. 4 credits)
Directing I	THR 505

DIRECTING: B.F.A. MAJOR REQUIREMENTS

Structure and Analysis	THR 102
Development of Drama I and II	THR 512, 612
Theatre History I and II	THR 510, 521
Acting I—V	THR 104, 105, 203, 204, 301
Voice I and II	THR 211, 217
Movement I and II	THR 201, 202
Playwriting	THR 525
Directing I and II	THR 505, 506
Technical Theatre	THR 213, 305, 501, 503, 507
Technical Laboratory	THR 208 (Min. 4 credits)
Stage Management Laboratory	THR 218 (Min. 4 credits)

DESIGN/TECHNICAL: B.F.A. MAJOR REQUIREMENTS

Structure and Analysis	THR 102
Development of Drama I and II	THR 512, 612
Theatre History I and II	THR 510, 521
Shakespeare	ENG 220
Acting I	THR 104
Directing I	THR 505
Technical Theatre	THR 213, 305, 501, 503, 507
Scene Painting I and II	THR 514, 515
Technical Theatre Problems	THR 216 (Min. 12 credits)
Stage Design	THR 508
Advanced Stage Lighting Design	THR 530

COSTUME: B.F.A. MAJOR REQUIREMENTS

Structure and Analysis	THR 102
Development of Drama I and II	THR 512, 612
Theatre History I and II	THR 510, 521
Shakespeare	ENG 220
Acting I	THR 104
Movement I	THR 201
Directing I	THR 505
Technical Theatre	THR 213, 305, 501, 502, 503, 508, 507, 514, 519, 608
Technical Theatre Problems	THR 216 (Min. 12 credits)
Textiles I	AFA 241
Clothing Selection and Construction	AFA 242
Directed Study	THR 390
Fashion Design	AFA 544, 545

CORE COURSES COMMON TO ALL B.F.A. PROGRAMS

Structure and Analysis	THR 102
Development of Drama I and II	THR 512, 612
Theatre History I and II	THR 510, 521
Acting I	THR 104
Directing I	THR 505
Technical theatre courses	THR 213, 305, 501, 503, 507

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.

REQUIRED CORE COURSES

Structure and Analysis	THR 102
Acting I	THR 104
Acting II	THR 105
Stagecraft	THR 213
Theatre History I	THR 510
Theatre History II	THR 521

ELECTIVES

One of the following:

Lighting I	THR 507
Costuming I	THR 501
Introduction to Design	THR 503

One of the following:

Acting III	THR 203
Directing I (Prereq: THR 503)	THR 505
(WI) Development of Drama I	THR 512

Departmental Financial Aid

See the section on Scholarships and Financial Aid on page 161. Detailed information on all Department scholarships and awards is available in the department office.

Arts Foundation of Michigan Scholarship: Award of \$2000 open to any senior in the theatre program.

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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

- 101. (VP) Introduction to the Theatre. Cr. 3**
Historical, critical and cultural aspects of theatre and drama discussed relative to play attendance. (T)
- 102. Structure and Analysis of the Drama. Cr. 3**
Reading and structural analysis of plays. Selected nineteenth and twentieth century plays. (W)
- 103. (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)
- 104. Acting I. Cr. 2**
An introduction to improvisation and the process of acting. (Y)
- 105. Acting II. Cr. 2**
Prereq: THR 104. Continuation of THR 104. (Y)
- 201. Stage Movement I. Cr. 2**
Material fee as indicated in *Schedule of Classes*. 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. (F)
- 202. Stage Movement II. Cr. 2**
Prereq: THR 201. Material fee as indicated in *Schedule of Classes*. Required of B.F.A. acting majors. Recommended for all second year acting students. Continuation of THR 201. Emphasis on character movement. (W)
- 203. Acting III. Cr. 3**
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)
- 204. Acting IV. Cr. 3**
Prereq: THR 203. Further development of the techniques covered in THR 203 and basic principles of character building. Emphasis on the development of a role through script, exercises and scene work. (W)

- 208. Technical Laboratory. Cr. 1-4 (Max. 8, B.F.A. technical students; max. 3, B.A. students)**
Supervised laboratory practice in all phases of technical theatre. (T)
- 211. Voice Laboratory I. Cr. 2**
Introduction to vocal production. Emphasis on relaxation, breathing techniques, and the production of vocal sounds. (F)
- 213. Stagecraft. Cr. 3**
Prereq: THR 101 or 103 recommended. Principles of scenic construction and painting. Types and utilization of stage scenery. Laboratory projects coordinated with University Theatre productions. (T)
- 214. Performance Laboratory. Cr. 1-3(Max. 6)**
Students participate as actors in University Theatre productions. (T)
- 216. Technical Theatre Problems. Cr. 2(Max. 18)**
Prereq: sophomore standing. Open only to B.F.A. technical theatre majors. Individually assigned and directed problems in technical theatre production and design. (T)
- 217. Voice Lab II. Cr. 2**
Prereq: THR 211. Continuation of vocal production work and an introduction to consonant sounds. (Y)
- 218. Stage Management Laboratory. Cr. 1-4**
Prereq: consent of adviser. Participation in theatre productions as stage manager, assistant director, choreographer, or writer. (T)
- 286. (MUA 286) Opera Workshop. Cr. 1 (Max. 8)**
Prereq: consent of director. (I)
- 301. Acting V. Cr. 3**
Prereq: THR 204. Required of all B.F.A. acting majors. An introduction to the theories and methods of acting verse drama. Emphasis on Shakespeare. (F)
- 302. Stage Movement III. Cr. 2**
Prereq: THR 202. Material fee as indicated in *Schedule of Classes*. Required of B.F.A. acting majors. Styles of stage movement: Commedia, Moliere, Restoration. Emphasis on period deportment, manners, and dance forms. (F)
- 303. Acting VI. Cr. 3**
Prereq: THR 301. Required of all B.F.A. acting majors. A continuing study of theory and methods of acting classic and modern theatrical styles of comedy. Major emphasis on the American musical theatre. (W)
- 304. Stage Movement IV. Cr. 2**
Prereq: THR 302. Material fee as indicated in *Schedule of Classes*. Required of B.F.A. acting majors. Styles of stage movement: Shakespeare. Emphasis on Renaissance deportment, manners, and dance forms. (W)
- 305. Principles of Makeup. Cr. 2**
Fundamentals of theatre makeup. Laboratory projects coordinated with University Theatre productions. (T)
- 307. WSU Movin' Theatre. Cr. 1-2(Max. 4)**
Admission by audition only. (T)
- 308. Voice Lab III. Cr. 2**
Prereq: THR 217. Continuation of vocal and articulation work and an introduction to rhythm and tempo in the speaking voice. (W)
- 309. Voice Lab IV. Cr. 2**
Prereq: THR 308. Continuation of vocal articulation and vocal music techniques; harmonizing them in performance. (Y)
- 310. Blacks and Hispanics in Theatre, Film and Television. Cr. 3**
Critical study of the image of blacks and Hispanics in popular film, television, and drama; screening and analysis of representative films to illustrate significant trends. (Y)

- 311. 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)
- 312. Black Musical Theatre. Cr. 3**
Origins, development, and current trends concerning black musical theatre. (F)
- 390. Directed Study. Cr. 1-4(Max. 4)**
Prereq: theatre major with 16 credits in the Department. (T)
- 401. Acting VII. Cr. 3**
Prereq: THR 303. Required of all B.F.A. acting majors. Studies and practice in audition techniques; the particular and individual acting problems of the class. (F)
- 402. Stage Movement V. Cr. 2**
Prereq: THR 304. Material fee as indicated in *Schedule of Classes*. Introduction to musical comedy theatre dance. Emphasis on performance techniques and styles of musical comedy theatre dance: tap and jazz. (F)
- 497. Acting VIII. Cr. 3**
Prereq: THR 401. Capstone course for all B.F.A. theatre majors in which students of all specializations meet together under faculty team representing each discipline. Students demonstrate acquired skills and improve interdisciplinary communication by collaborating on an original production. (W)
- 501. Theatre Costuming I. Cr. 3**
Prereq: THR 101 or 103 recommended. Material fee as indicated in *Schedule of Classes*. Introduction to costume design and construction. Laboratory projects coordinated with University Theatre productions. (F)
- 502. Theatre Costuming II. Cr. 3**
Prereq: THR 501. Advanced costume design projects concentrating on the expression of character through design principles. Further development of drawing and rendering skills. (W)
- 503. Introduction to Design for the Theatre. Cr. 3**
Prereq: THR 213 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)
- 505. Play Direction I. Cr. 3**
Prereq: THR 305. Principles and theories of stage movement, blocking, casting, rehearsing. Students required to direct scenes and one-act plays for class presentation. (F)
- 506. Play Direction II. Cr. 3**
Prereq: THR 505. Continuation of THR 505. Lectures on the history of play direction. Students required to direct a one-act play on the University Student Stage. (W)
- 507. 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)
- 508. Stage Design. Cr. 3(Max. 6)**
Prereq: THR 503. 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)
- 509. Advanced Stage Design. Cr. 3(Max. 6)**
Prereq: THR 508. Laboratory theory course in stylistic characteristics of modern stage designs. Advanced problems in scenic design. (I)
- 510. Theatre History I. Cr. 3**
Required of all B.A. and B.F.A. majors. Material fee as indicated in *Schedule of Classes*. 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. (F)
- 512. Development of the Drama I: Greek to Eighteenth Century. Cr. 4**
Plays from the Greek through the eighteenth century, including Shakespeare; relation of drama to an era and its theatre. (F)
- 513. (ENG 589) Writing for Theatre. Cr. 3(Max. 6)**
Prereq: ENG 383 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)
- 514. Introduction to Scene Painting. Cr. 3**
Prereq: THR 213. Material fee as indicated in *Schedule of Classes*. 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. (I)
- 515. Advanced Scene Painting. Cr. 3**
Prereq: THR 514. Material fee as indicated in *Schedule of Classes*. Laboratory and demonstration course for the design or technical theatre student. Materials, techniques, styles of scene painting. (I)
- 517. 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)
- 518. Advanced Musical Comedy I. Cr. 2**
Prereq: senior B.F.A. major. Material fee as indicated in *Schedule of Classes*. Musical comedy theatre dance; advanced performance techniques and styles of musical comedy theatre dance: tap and jazz. (W)
- 519. Costume History for the Theatre. Cr. 3**
Prereq: THR 501. Survey of historical trends and patterns in the development of costume as related to various periods and genres of theatre. (I)
- 520. Advanced Musical Comedy II. Cr. 2**
Prereq: junior or senior B.F.A., M.A. or M.F.A. standing. Material fee as indicated in *Schedule of Classes*. Continued study and practice of musical comedy dance styles. (I)
- 521. Theatre History II. Cr. 3**
Prereq: THR 510 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of THR 510. From English and continental eighteenth century to contemporary European and American theatres. (W)
- 522. Black Dramatic Literature. (AFS 522). Cr. 3**
Prereq: THR 103 recommended. 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)
- 525. Playwriting I. Cr. 3**
Introduction to the craft of writing for the stage. Students required to write a full-length dramatic script. (B)
- 530. Advanced Stage Lighting Design. Cr. 3**
Prereq: THR 507; graduate standing or consent of instructor. Material fee as indicated in *Schedule of Classes*. Examination of situations and responsibilities encountered in professional lighting design. Project work based on large-scale, complex requirements. (I)
- 531. Sound for the Theatre. Cr. 3**
Material fee as indicated in *Schedule of Classes*. Introduction to the practice of reinforcement and reproduction of sound within the theatrical context; artistic role of sound; equipment and use. (Y)
- 593. (WI) Writing Intensive Course in Theatre. Cr. 0**
Prereq: junior standing, consent of instructor, satisfactory completion of English Proficiency Examination; coreq: THR 510, 512, or 612.

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)

601. Studio I. Cr. 3

Prereq: graduate standing. Open only to members of Hilberry Acting Company and M.A., M.F.A., and Ph.D. candidates in direction. Examination and analysis of a specific dramatic genre, style or historic period as it relates to the arts of the actor and director. Correlative performance projects. Subject matter coordinated with the repertory of the Hilberry Theatre. (F)

602. Studio II. Cr. 3

Prereq: THR 601. Open only to members of Hilberry Acting Company and M.A., M.F.A., and Ph.D. candidates in direction. Continuation of THR 601. (W)

603. Creative Dramatics for Children. Cr. 3

Creative dramatics and formal playmaking for and by children. (I)

604. Children's Theatre Play Production. Cr. 3

Prereq: THR 603 recommended. Theory and practice of organization, selection, direction, production of plays for children's audiences in schools, churches and communities. (I)

606. Costume Design for the Theatre. Cr. 3(Max. 6)

Advanced phases of costume design and construction. Source material for historical and national costumes. (I)

608. Advanced Stage and Film Makeup. Cr. 2

Prereq: THR 305. Material fee as indicated in *Schedule of Classes*. Continuation of basic principles applied in THR 305; emphasis on new makeup materials; experimentation with prosthesis and design for problem makeup. (I)

609. Professional Lighting Design I. Cr. 3

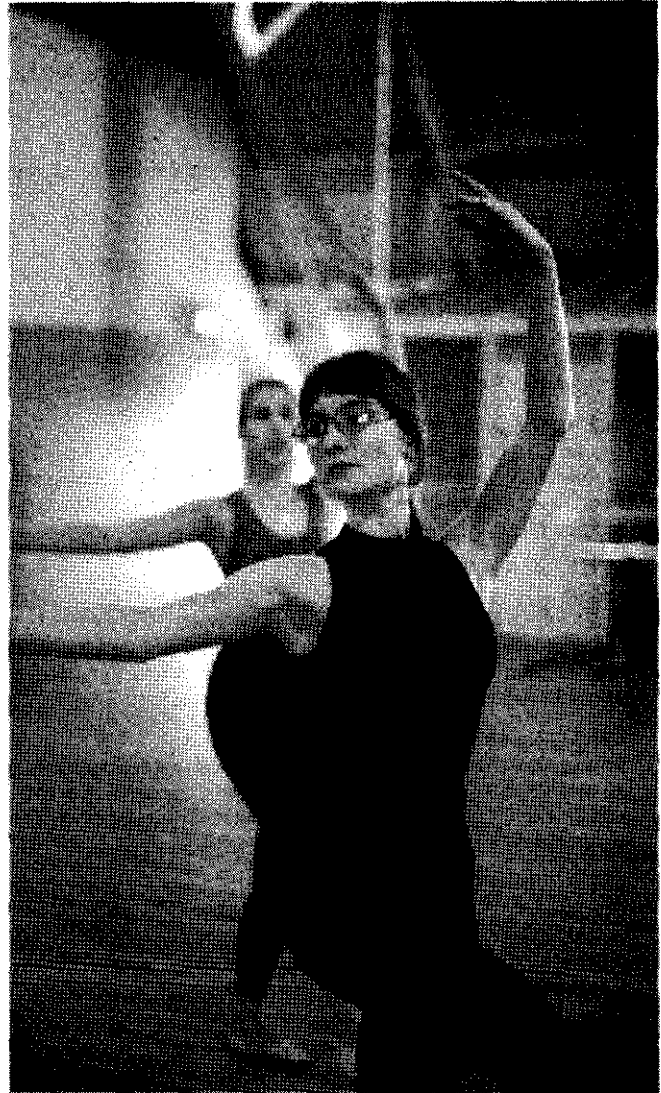
Prereq: THR 530 or consent of instructor. Examination of the responsibilities and skills needed to function as a professional lighting designer. Varied styles of theatrical production, the lighting designer's communication with other professionals, use of computers in lighting design process, graphic presentation of lighting design concepts. (Y)

612. Development of the Drama II: Nineteenth Century to Modern. Cr. 4

Plays and theories of the theatre from the nineteenth century to modern times; relation of drama to an era and its theatre. (W)

619. Professional Lighting Design II. Cr. 3

Prereq: THR 530 or consent of instructor, Continuation of THR 609. 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: James K. Robinson

The Study of Law at Wayne State University

The Law School of Wayne State University is a graduate school offering the Juris Doctor and Master of Laws degrees. A complete description of the programs leading to these degrees, as well as courses of instruction and academic matters relevant to law study may be found in the Graduate Bulletin. The following selections are presented here as an introduction to the Law School for undergraduate students and to provide information for those anticipating the study of law.

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 over sixty-five 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, prosecutors' and defenders' offices, 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.

Wayne State University has a Master of Laws (LL.M.) program. Designed for lawyers with some legal experience, it is a part-time evening program, intended to foster specialization in complex areas requiring education beyond the usual basic professional law degree. The curriculum combines courses taught by practicing specialists with seminars and courses taught by members of the full-time law faculty.

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 significantly 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 thirty-eight men and women who make up the full-time faculty include 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 and National Recognition

The Law School is accredited by both the major national accrediting agencies for legal education: the American Bar Association and the Association of American Law Schools.

Wayne State Law School has an established Chapter of the Order of the Coif, the national honorary society dedicated to the highest standards of legal scholarship. Only slightly more than one-third of American law schools have been selected for Coif chapters. Membership in the Order is limited to the top ten percent of each graduating class, elected by the faculty. In establishing its Chapter of Order of the Coif, Wayne State has joined other law schools in promoting exceptional accomplishment in legal studies.

Law School Setting and Facilities

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 at the north end of the main campus, at the intersection of 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 classrooms, seminar rooms, faculty and student offices, student lounge, and the Arthur Neef Law Library. 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.

The Arthur Neef Law Library is connected to the classroom building by an arcade. This building also contains seminar rooms, an appellate court room, a trial court room, faculty and administrative offices, and a faculty library and lounge. The offices of the student organizations, including *The Wayne Law Review*, Moot Court Board, and Student Board of Governors, Student Trial Advocacy Program, and the Miriam L. Barris Law Student Lounge are also located in this building.

The Annex Building houses the Recruitment and Admissions offices, faculty offices, the Career Services offices, Alumni Relations and Development offices, and the Supportive Services offices.

Arthur Neef Law Library

Wayne State's law library is the second largest in the State of Michigan. It is a major resource for faculty and students of the Law School, as well as for members of 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 and its collections may be found on page 56.

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 LAW in Corporate And Financial Law

MASTER OF LAW in Labor Law

MASTER OF LAW in Taxation

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 both the study and practice of law.

Excellent suggestions for prelaw preparation may be found in the *Official Guide to U.S. Law Schools*, published by the Law School Admission Council. This book contains material on the law, the legal profession and the study of law, together with individualized information on all ABA-approved American law schools. It may be ordered from the Law School Admission Services, and is available in most university bookstores and libraries.

Admission Policy

Admission to Wayne State University Law School is very competitive. The Law School received more than 1,600 applications for the 1993-94 academic year, and fewer than one-third of the applicants were offered admission. The median undergraduate honor point average of the 1993-94 entering class was 3.35 and the median LSAT score was 158. Applicants for admission to the first-year class are admitted to the fall term only.

To gain admission to the Wayne State University Law School J.D. program, an applicant 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 Admissions Test (LSAT).

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 and educational background, work 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. Additionally, any individual writing a letter of recommendation should address such factors as well.

Reconsideration: An applicant may request reconsideration of an adverse admission decision by writing a letter to the Director of 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 a new test score or additional grades.

Deferred Admissions: 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. Day students who have child care responsibilities or significant health care concerns may be permitted to take a slightly reduced course load. The applicant must submit a written request prior to registration to the Admissions Office 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 the School, and consult with a member of the Admissions Office staff about admissions policies, procedures and other concerns.

Application Procedure

Applicants for Admission to the First-Year Class: Although applications for admission are accepted up to April 15, applicants are encouraged to apply early. The Law School has a rolling admissions process and applicants who apply at or near the April 15 deadline may find that the class is already filled.

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; therefore, it is important for the applicant to include in his or her personal statement any special circumstances.

(4) The completed Law School Application Matching Form which is included in the Law Services Information Book. The Admissions Office sends the Matching Form to the Law School Data Assembly Service (LSDAS) to request the applicant's LSDAS Report.

(5) 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.

(6) 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 the Admissions Office by the recommender with the form provided. Only one letter of recommendation is required; however, 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 to wait list. Although we generally employ a rolling decision process, discretionary admit decisions are the most difficult, and frequently 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.

Applicants for Admission with Advance Standing: A student from another American Bar Association (ABA) accredited law school may apply for admission with advanced standing as either a transfer or a guest student. Applications for admission with advanced standing must be received by July 1.

Transfer Students: A transfer applicant must have completed at least all of the first-year day or evening courses required by his or her 'home' law school for the program in which the applicant was enrolled. Transfer students are admitted only to the fall term. Applicants must have superior academic credentials to be offered admission.

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 received permission from his or her 'home' law school. Application should be made on the Law School Summer Guest Application available from the admissions office.

Admission Deposit: An admission deposit of \$150 is required for each applicant admitted to the first-year program. The deposit reserves a place in the class for the entering student. The deposit amount will be applied against tuition if the applicant enrolls; it is refundable upon request prior to May 15.

Entrance Dates: First-year students are admitted only to the fall semester beginning in August or start in the Summer Institute beginning in June. Attendance at the Orientation program, as well as early sessions of Legal Writing and Research (JDC 640), is mandatory.

Foreign Law School Students: Admission with advanced standing may be granted to a graduate of, or a student attending, a foreign law school. Such an applicant must follow the normal admissions process, and must submit an LSAT score. Credit for foreign law study may be

allowed; the amount allowed, if any, will be determined on the facts of each case. A graduate of a foreign law school ordinarily will be required to complete the first year of course work at the Wayne State University Law School before a determination will be made about the amount of transfer credit, if any, to be allowed. In the case of a graduate of a foreign law school whose studies have been primarily in the common law, the Admissions Committee may waive completion of certain first-year courses.

All candidates for the J.D. degree with advanced standing must ordinarily complete a minimum of two years in residence and fifty-six credits at the Wayne State University Law School in order to qualify for a Wayne State Degree.

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 the required first-year courses. In the fall term, the curriculum consists of Contracts, Civil Procedure, Property, Torts, and Legal Research and Writing, for a total of fourteen credits. In the winter term, students complete the second half of these courses, as well as Criminal Law, for a total of sixteen credits. First-year day students are strongly discouraged from employment of any type during the first year.

First Year Summer Institute: The Summer Institute runs for eight weeks, beginning in June. Students are given the opportunity to focus on one substantive course, Torts. The Summer Institute includes a non-credit legal writing component, which develops skills in case briefing, class preparation and outlining. The session includes a mid-term and a final examination which provide experience in examination writing. Students who attend the Summer Institute have a lighter fall and winter class schedule allowing them more study time for other classes.

Evening Program: The Law School offers a part-time evening 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. Some elective classes are scheduled on Friday evenings, Saturday mornings, and from 4:00 to 6:00 p.m., to provide a wider selection for evening students. Class size is generally smaller in evening courses than in day classes.

Combined Day-Evening Program: The combined day-evening program is a relatively new option 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 elect to take both Property and Torts during the day of the first year.) Criminal Law will be taken in the evening of the second semester of the second year.

At the end of the first year, students in the combined program who have completed all five courses open to them will have twenty-seven credits, 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.

Upperclass Program: After completing the required first-year day 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 easily change from one program to the other as their schedules require. Upperclass students may elect courses in the eight-week summer term to accelerate or to accommodate individual needs. Students who have the necessary prerequisites may be permitted to take advanced courses in the LL.M. program.

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 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.

Graduate Program in Law and History

A formalized joint degree program in the study of law and history leads to the receipt of a J.D. from the Law School and an M.A. from the Department of History of the College of Liberal Arts. As a part of the M.A. program, students may focus on chronological history, including Roman, Byzantine, Western European, and American backgrounds of law, or on such subjects as labor, business, or urban history or history as it relates to the lawyer's role in public policy-making in domestic and international affairs. Students who have successfully completed their first year at the Law School may apply to the History Department for admission and to the Law School for permission to pursue this combined degree program. A brochure more fully describing the program is available from the Law School Admissions Office and the History Department.

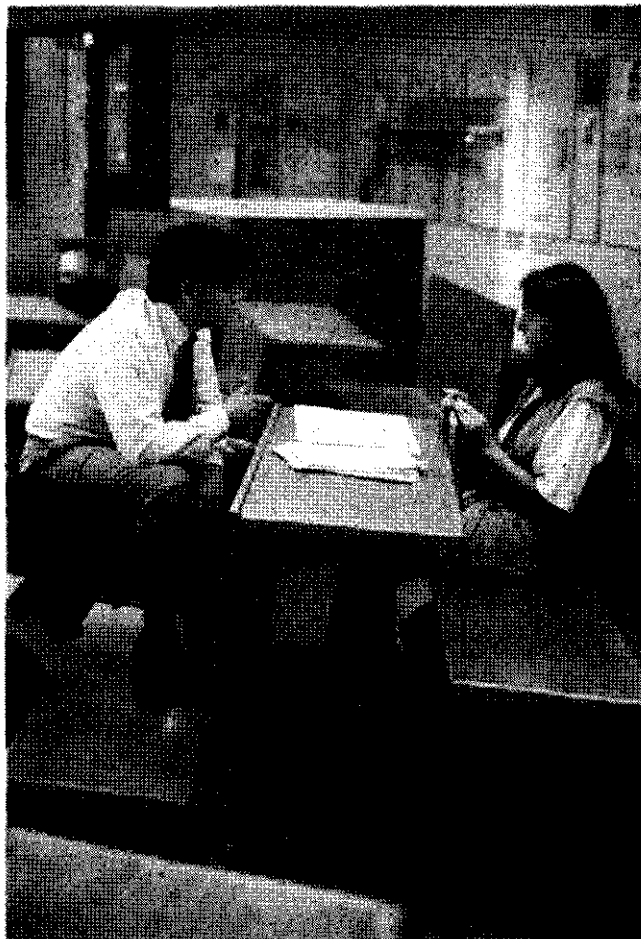
Graduate Program in Law and Political Science

A joint degree program in the study of law and political science allows students to obtain both the J.D. degree from the Law School and an M.A. degree from the Department of Political Science of the College of Liberal Arts. Admission to the joint degree program requires the separate approval of both the Law School and the Department of Political Science. As part of the M.A. program, students may take courses focusing on public policy, political institutions and processes, and economics. Both a master's essay and written comprehensive examination are required for the M.A. degree. The joint degree program requires four years of full-time study. Once admitted to the J.D. program, a student must successfully complete the first year of law studies before pursuing or continuing work on the master's degree.

LAW SCHOOL DIRECTORY

Admission — J.D. Program . . . 195 Law School Annex; 577-3937
Financial Aid 317 Law Library; 577-5142
Records and Registration, Law School . 311 Law Library; 577-3978
Supportive Services 169 Law School Annex; 577-3993

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: Sondra O'Neale

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. (Beginning Fall 1992, programs in laboratory sciences and mathematics are offered by the College of Science.)

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

NOTE: Students admitted to the College of Liberal Arts before Fall 1992 have the option of obtaining a bachelor's degree from the College of Science if they wish to major in any of the following fields: biological sciences, chemistry, communication disorders and sciences, computer science, geology, mathematics, nutrition and food science, physics and astronomy, and psychology.

BACHELOR OF APPLIED STUDIES

with a major in sociology

BACHELOR OF ARTS with majors in:

Africana Studies	German
American Studies	History
Anthropology	Italian
Anthropology and Sociology	Linguistics
Art History	Near Eastern Languages
Classical Civilization	Near Eastern Studies
Classics	Philosophy
Economics	Political Science
English	Russian
Film Studies	Slavic Languages
French	Sociology
Geography	Spanish

BACHELOR OF ARTS HONORS with majors in:

Anthropology Honors	Near Eastern Studies Honors
Classical Civilization Honors	Philosophy Honors
Classics Honors	Political Science Honors
Economics Honors	Romance Languages and Literatures Honors
English Honors	Russian Honors
Geography Honors	Slavic Honors
German Honors	Sociology Honors
History Honors	
Near Eastern Languages 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

***MASTER OF SCIENCE with a major in criminal justice**

* For specific requirements, consult the Wayne State University Graduate Bulletin.

***DOCTOR OF PHILOSOPHY with majors in**

Anthropology
Economics
English
History

Modern Languages
Philosophy
Political Science
Sociology

COLLEGE DIRECTORY

Dean:

Sondra O'Neale . . . 2226 Faculty/Administration Bldg.; 577-2522

Associate Dean:

Li Way Lee 2226 Faculty/Administration Bldg.; 577-2517

Donald Spinelli . . . 2226 Faculty/Administration Bldg.; 577-8895

Service Areas

Graduate Office 2155 Faculty/Administration Bldg.; 577-2690

Major/Curriculum Office 2155 Faculty/Administration Bldg.; 577-3117

College Grade Change Coordinator 2155 Faculty/Administration Bldg.; 577-8001

Undergraduate Degree Certification 577-3117

Educational Adjustment Committee 2155 Faculty/Administration Bldg.; 577-8001

Departmental Offices/Programs

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

Criminal Justice 2305 Faculty/Administration Bldg.; 577-2705

Comparative Literature Program Room 1200, 51 W. Warren; 577-2452

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

German and Slavic Studies 443 Manoogian; 577-3024

Greek and Latin 431 Manoogian; 577-3032

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 375 Law School; 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

Mailing address for all offices:

(Department Name), College of Liberal Arts, Wayne State University,
Detroit, Michigan 48202

* For specific requirements, consult the Wayne State University Graduate Bulletin.

BACHELOR'S DEGREE REQUIREMENTS

Credits

Candidates for the degrees Bachelor of Arts, Bachelor of Applied Studies, Bachelor of Science, or any Special Degree must complete at least 120 credits. Certain curricula may require additional credits above this minimum. (See 'Restrictions on Credit', below.)

Honor Point Average: All students are required to maintain an over-all honor point average of 'C' (2.0) for all degree work elected. See 'Honor Point Average,' page 42.

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 25) 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 25).

Group Requirements

Group Requirements for students in the College of Liberal Arts overlap considerably with those of the University General Education Program (see page 27). 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 Cultural Studies (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 33. 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 342 and GSS 151. 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 201 or 211) 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 101 (or 110 and 111), 102, and 201 in one of the following subject area codes: ARB, ARM, FRE, GER, GRK, HEB, ITA, JPN, LAT, POL, RUS, SPA, SWA, and UKR; as well as GRK 111, 112, and 211. 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 316. 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 211; BIO 103, 105, 151; PSY 101, 102.

PHILOSOPHY AND LETTERS (PL) The College list is the same as the University list, except that the College list does not include GUH 271. 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 100, 102, 105, 107, 131; PHY 102, 104, 213, 217, 310.

THIRD COURSE IN NATURALSCIENCE (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 202 and 242. Also, students may elect NFS

221 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 348 and GSS 271. 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 273. One course is required.

CULTURAL STUDIES

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 201; AFS 201; ARM (or GER, POL, RUS, SLA, UKR) 341, ARM (or POL, RUS, SLA, UKR) 371; CBS 210 (SPA 240), 211 (SPA 250); CLA 200; ENG 260, 360; FRE 271; GER 271, 272; GRK 371; HUM 301; ITA 271, 272; N E 200, 201; RUS 351.

Note: The Junior Year in Germany experience also meets the Cultural Studies requirement.

THE UNIVERSITY AND ITS LIBRARIES as specified in the University General Education Program (see page 29).

UNIVERSITY REQUIREMENT IN AMERICAN GOVERNMENT for students enrolled prior to Fall Term 1987: See General University Information, page 29 . .

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 212–214.

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 h.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, 2155 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 honor 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
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 90 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.

Advanced Course Requirements: At least fifteen credits in courses numbered 300 or above must be earned.

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 an honor 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

ACADEMIC REGULATIONS

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 280	University Bands
MUA 281	University Symphony Orchestra
MUA 282	Jazz Lab Band
MUA 283	Men's Glee Club
MUA 284	Choral Union
MUA 285	Concert Chorale
MUA 287	Women's Chorale
MUA 288	Chamber Music and Special Ensembles
SPR 267	Radio-Television-Film Laboratory
SPC 224	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.

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) honor 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 take, with the approval of their major departments, their junior year's work in Germany under the Junior Year in Munich or Freiburg Program. Four semesters of college German or the equivalent with an average of B or better are prerequisite. Participants will earn credit for one academic year (September through July) as fully enrolled (matriculated) students at the cooperating Universities of Munich or Freiburg. Interested students should contact the Junior Year in Germany offices at 473 or 471 Manoogian, or phone 577-4605.

The Wayne at Gordes Summer Camp Program offers up to twelve credits in advanced French, which may be earned during a six-week summer session in the Renaissance village of Gordes in the south of France. A grade of 'B' or above in French 201, French 210 or its equivalent is the prerequisite. Interested students should contact Professor Donald Spinelli at 467 Manoogian, or telephone 577-6241.

Regarding other opportunities for study abroad, students should contact the University Advising Center, 577-2680.

Honors Program

Students in the College are eligible to take honors courses if they have a cumulative honor point average of 3.0 or above. For a description of the Honors Program and a list of classes, see page 257.

'A GRADE'—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 honor point average at the 'Cum Laude' level (approximately 3.4) and not less than a 3.6 honor 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 (577-2690).

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 honor 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 honor points used to identify the lower limits for each designation will be based upon the honor 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 honor point average for students registered for full-time programs of twelve credits or more which contribute to the honor point base; A 4.0 honor 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 42.)

Academic Probation

Low Honor 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 Honor 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 h.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 21), and individual departmental sections below. The following scholarship is open to all liberal arts students:

Herman and Perry Feigenson Scholarship: Awarded to any full-time undergraduate major in liberal arts who demonstrates financial need and maintains a minimum 3.0 h.p.a. Application deadline is April 30; contact the Office of Scholarships and Financial Aid.



UNDERGRADUATE CURRICULA

Students who are uncertain of procedures in curricular planning should confer with an adviser. In all curricula, majors must be declared by the beginning of the 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

First Year

	<i>credits</i>
American Society and Institutions	0-3
Foreign Language	4-8
Humanities	3-7
Natural Science	3-7
Social Science	3-7
The University and Its Libraries (UGE 100)	1
Competencies/Electives	0-6

Second Year

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 61.

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 95 and 214.

Pre-Engineering

—See pages 120 – 125.

Pre-Law

—See page 201.

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 honor 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 310; Economics 101, 102; four courses in English; History 105, 204, 205, 310, 516, 517; Philosophy 101, 185; Political Science 101, 304, 511; Psychology 101; Sociology 200, 382. 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 349.

— Cytotechnology Concentration

—See page 351.

Pre-Mortuary Science

—See page 354.

Pre-Nursing

—See page 317.

Pre-Occupational Therapy

—See page 359.

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.

	<i>credits</i>
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 356.

Pre-Pharmacy

—See page 333.

Pre-Physical Therapy

—See page 362.

Pre-Radiation Therapy Technology

—See page 366.

Pre-Social Work

—See page 430.

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.

	<i>credits</i>
BIO 151 —(LS) Basic Biology I	4
BIO 105 —Basic Biology II	4
CHM 105 or CHM 107	
—(PS) Introductory Principles of Chemistry	6
—(PS) Principles of Chemistry I	4
CHM 108 —Principles of Chemistry II	5
CHM 224 —Organic Chemistry I	4
CHM 226 —Organic Chemistry II	4
CHM 227 —Organic Chemistry Laboratory	2
CHM 560 or CHM 662	
—Survey of Biochemistry	3
—Biochemistry I	3
MAT 180 —(MC) Elementary Functions	4
PHY 213 or PHY 217	
—(PS) General Physics	4
—(PS) General Physics	4-5
PHY 214 or PHY 218	
—General Physics	4
—General Physics	4-5
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 honor 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 secondary 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, Matthaai Building.

Students wishing to major in *Music Education* should consult an adviser in Room 105, Schaver Music Building.

Secondary Teaching

— See page 98.

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 general education requirements:

University General Education Requirements: see pages 25 – 35.

College of Education general requirements: PSY 101, HEA 231 (or equivalent).

English Speech Group: four courses, including ENG 102, a 200-level English course, SPB 101 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 101.

Mathematics Competency: See General Education Requirements, page 27.

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 104.

Elementary Teaching

— See page 95.

Pre-elementary majors should include the following requirements in their first two years' work:

University General Education Requirements: see pages 25 – 29.

College of Education general requirements: PSY 101, HEA 231 (or equivalent), and MAT 111 or MAE 505.

English/Speech Group: ENG 102, intermediate composition and SPB 101.

Social Studies Group: four courses: P S 101 or 103, PSY 101, GPH 110 and HIS 204 or 205.

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 489, Education Building.

Special Education

— See page 102.

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 25 – 29.

College of Education general requirements: PSY 101, HEA 233, MAT 111, or MAE 505.

Special Education requirements: BIO 105 and 287 and SED 600 with grades of 'C' or better are required of all students prior to admission to the College of Education.

SED 600, with the topic Critical Epochs and Child Development (Prerequisite: BIO 287), is to be taken in the spring semester prior to admission to the College of Education.

English/Speech Group: ENG 102, a 200-level English course and SPB 101.

A *Planned (non-teaching) minor* must be completed prior to admission to Education. Required courses include: ANT 210, BIO 287, P S 101, PSY 230, SOC 200, ELE 320, and SED 600.

Students can obtain major/minor worksheets for Special Education in Room 489, Education Building.

AFRICANA STUDIES

Office: Fourth Floor, 51 West Warren; 577-2321

Chairperson: Michael T. Martin

Professors

Eboe Hutchful, Michael T. Martin

Associate Professors

Melba J. Boyd, Perry Mars, Patrick Mason

Lecturer

Todd Duncan

Adjunct Professors

Michael Goldfield, Guerin Montilius, Alida Quick

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 25) and the College of Liberal Arts Group Requirements (see page 207), 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 15-43 and 207-212, respectively.

Major Requirements: Majors must complete at least thirty-six credits in a prescribed course of study, including:

1. Two introductory courses: AFS 101 and AFS 221 (seven credits).
2. Completion of study in an approved area of concentration (twenty-four credits).

3. Field Work (AFS 591) and/or Directed Study (AFS 690) (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 201, AFS (FLM) 320, AFS (GIS) 513, AFS 535.

2. Three courses from: AFS (SOC) 260, AFS 318, AFS 342 (P S 382), AFS 408, AFS (SPR) 424, AFS (W S) 430, AFS (W S) 511, AFS 531, AFS (FLM) 580.

3. Two cognates from: ENG (AFS) 239, AFS 347, AFS 548; MUH 336, 631; SPC (AFS) 504; A H 380, ANT (AFS) 526.

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) 314 or HIS (AFS) 315; AFS 318, AFS 321, AFS 342 (P S 382), AFS 548, AFS 660 (ULM 726).

2. Three courses from: AFS 260, AFS 386, AFS 408, AFS 440 (PSY 404), AFS (W S) 511, AFS (GIS) 513, AFS (HIS) 532, AFS (SOC) 558.

3. Two cognates from: ANT 311, 352, 623; GEG 615, 635; GIS (AFS) 361; HIS 396, 573; P S (AFS) 478, P S (AFS) 503, P S (AFS) 574, P S 605 (AFS 610); SOC (AFS) 557, SOC 694, SOC 732; S W 651.

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 101 and two of the following: AFS 201, 221, 318, 342. 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.

Coleman A. Young Scholarship Endowment Fund

Only Africana Studies majors are eligible for scholarship awards under this endowed fund. Majors eligible for awards must maintain a minimum h.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 090-699, are offered for undergraduate credit. Courses in the following list numbered 500-699 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 463.

Africana Studies (AFS)

101. 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)

201. 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)

221. (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)

239. (ENG 239) (IC) Introduction to African-American Literature: Literature and Writing. Cr. 4

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)

260. Race and Racism in America. (SOC 260). Cr. 3

Examination of the nature and practice of racism in American society from its historical foundations to its contemporary institutional forms. (B)

314. (HIS 314) 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)

315. (HIS 315) The Black Experience in America II: 1865 to the Present. Cr. 3-4

The black in national life since emancipation. (W)

318. Black Social Movements. Cr. 4

Prereq: AFS 221 recommended. Survey of mass or popular Black movements with emphasis on their political and cultural impact, historical continuity and organization. (Y)

320. The African-American Film Experience (FLM 320). Cr. 4

Prereq: upper division standing. 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, legitimization functions of film. (Y)
- 342. Pan Africanism: Politics of the Black Diaspora.** (P S 382). 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)
- 361. (GIS 361) (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans.** Cr. 4
Prereq: upper division standing. Examination of the contribution and impact of the three cultures which have shaped contemporary Africa: the indigenous inheritance, and Islamic and Western cultures. (Y)
- 386. Race, Class and the Criminal Justice System.** (SOC 386). 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)
- 408. 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)
- 424. African Americans in Broadcasting.** (SPR 424). 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)
- 478. (P S 478) Contemporary African Politics.** Cr. 4
Nature of African politics; impact of African politics on international relations. (B)
- 503. (P S 503) 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)
- 504. (SPC 504) The Rhetoric of Racism.** (S E 537). 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 like in African American communities. (Y)
- 511. Black Women in America.** (W S 511). 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)
- 513. The Black Family.** (GIS 513). Cr. 4
Prereq: upper division or graduate standing. Survey and analysis of historical and social forces relative to the study of the Black family. (Y)
- 522. (THR 522) Black Dramatic Literature.** Cr. 3
Prereq: THR 103 recommended. 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)
- 526. (ANT 526) The African Religious Experience: A Triple Heritage.** (GIS 526). 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)
- 530. African American Women's Literature.** (W S 530). Cr. 4
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)
- 531. 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)
- 532. Black Labor History.** (HIS 532). 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)
- 535. African American Religious History and Practice.** (ANT 535)(GIS 535). Cr. 3
Prereq: upper division standing. Offered for undergraduate credit only. 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)
- 548. African Americans in the U.S. Political Economy.** Cr. 4
Prereq: upper division or graduate standing. 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)
- 557. (SOC 557) 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)
- 558. Law and the African American Experience.** (SOC 558). Cr. 3
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)
- 560. The African American Community and Public Policy.** Cr. 4
Prereq: upper division or graduate standing. 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)
- 570. The Psychology of African Americans.** (PSY 570). Cr. 4
Prereq: upper division or graduate 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)
- 574. (P S 574) Ethnicity: The Politics of Conflict and Cooperation.** (PCS 550). 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)
- 580. Third World Cinema.** (FLM 580). Cr. 4
Prereq: upper division or graduate standing. Study of the cinematic traditions and film practices in the Third World with emphasis on anticolonial and post colonial political cinema. (B)
- 591. 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)

610. (ULM 610) Class, Race, and Politics in America.
(P S 605)(HIS 511)(SOC 733)(U P 703). Cr. 3

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

651. (S W 651) 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)

660. (ULM 726) Urban Poverty and Human Development.
(SOC 735)(U P 726)(P S 726)(ANT 726). Cr. 3

Prereq: graduate standing; open to undergraduates only with consent of instructor. Review of theories of urban poverty, impact of poverty on human development, analysis of current and proposed anti-poverty policies. (Y)

690. Directed Study. Cr. 3-8

Prereq: written consent of instructor. Open only to majors and minors. Reading and research projects. (Y)

Swahili (SWA)

101. Elementary Swahili I. Cr. 4

Material fee as indicated in *Schedule of Classes*. Training in pronunciation, aural comprehension, oral and written expression. Supervised laboratory period for part of class preparation. (F)

102. Elementary Swahili II. Cr. 4

Prereq: SWA 101 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of SWA 101. (W)

201. (FC) Intermediate Swahili. Cr. 4

Prereq: SWA 102 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Conversational Swahili and grammar review; reading of Swahili literature. Continuation of SWA 102. (S)



AMERICAN STUDIES

Office: 51 West Warren, Room 2001; 577-3067, 577-2450

Director: Jerry Herron

Advisory Committee

Chicano-Boricua: Jose Cuello; *English:* Corey Creekmuir, Henry Golemba, Jerry Herron, Kathryn Lindberg, Ross J. Pudaloff, George Tysh, Barrett Watten; *History:* Alan Raucher, Sandra VanBurkleo; *Philosophy:* William D. Stine; *Political Science:* Philip R. Abbott, Otto Feinstein

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 25) and the College of Liberal Arts Group Requirements (see page 207), 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 15-43 and 207-212, respectively.

Major Requirements: Major concentration in American studies consists of forty-five credits: twenty-seven credits in required courses, and eighteen credits in electives, distributed as follows:

American Studies: six credits, including A S 201 and 501 or A S 597.

English: at least nine credits, selected from among ENG 314 and 540 through 549.

History: at least ten credits, including HIS 204, 205, and 519.

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.

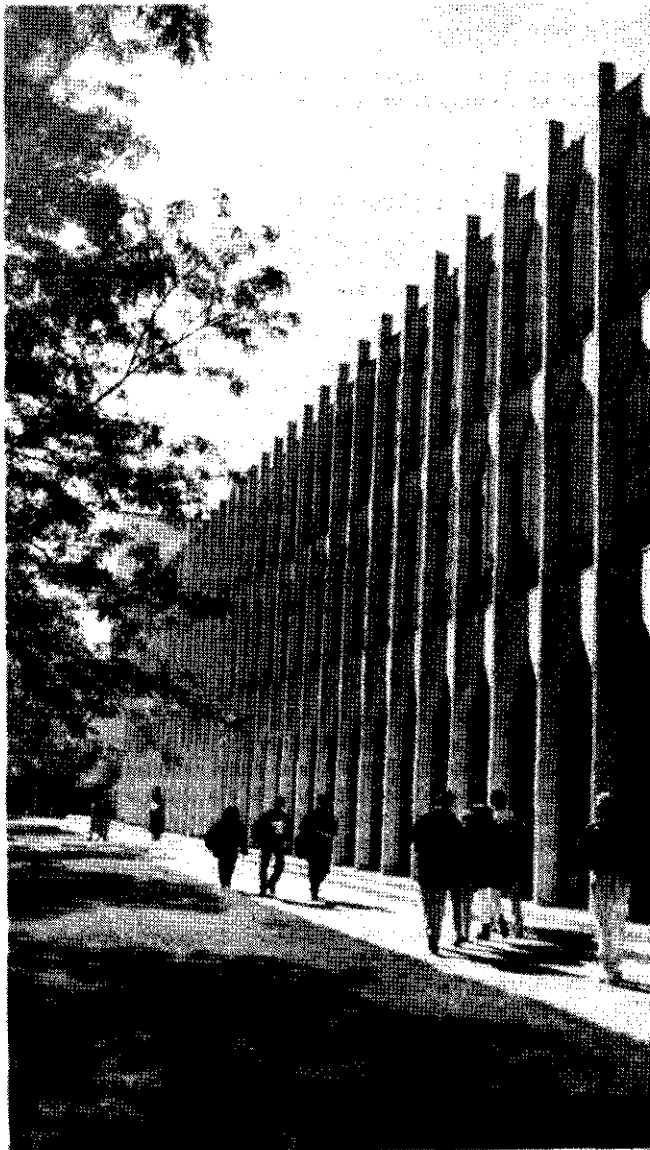
UNDERGRADUATE COURSES (A S)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses in the following list numbered 500-699 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 461.

201. Introduction to American Culture. Cr. 3 or 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)

501. Topics in American Studies. Cr. 3 or 4(Max. 12)
On 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)

597. Seminar in American Studies. Cr. 3 or 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: Mark L. Weiss

Professors

Barbara C. Aswad, Marietta L. Baba, James B. Christensen (Emeritus), John Friedl, Bernice A. Kaplan, Guerin Montilus, Bernard Ortiz de Montellano, Arnold R. Pilling, Mark L. Weiss

Associate Professor

Gordon L. Grosscup (Emeritus), Andrea Sankar

Assistant Professor

Frances Trix

Lecturer

Yun Lee

Adjunct Professors

Morris Goodman, Gabriel W. Lasker (Emeritus), Madeleine Leininger, Eugene Perrin

Adjunct Associate Professors

Elizabeth Briody, Dorothy Nelson

Adjunct Assistant Professor

Karen Davis

Degree Programs

BACHELOR OF ARTS with a major in anthropology

BACHELOR OF ARTS with a major in anthropology and sociology

**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, ethnohistory, medical anthropology, physical anthropology, historical archaeology, urban anthropology, industrial/business anthropology, applied anthropology and development 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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; (5) those seeking to enter the fields 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.

Bachelor of Arts Degrees

The Department offers the Bachelor of Arts degree with a major in anthropology or a major in anthropology and sociology, for both of which the following admission and degree requirements apply.

Admission requirements for these degree programs 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 25) and the College of Liberal Arts Group Requirements (see page 207), 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 15–43 and 207–212, respectively.

— With a Major in Anthropology

Major Requirements: Students majoring in anthropology are required to elect a minimum of thirty credits in anthropology, including Anthropology 210, 211, 520, 521 (or an acceptable alternative), 527, 531 or 532, 596, and either 638 or 639. 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.

— With a Major in Anthropology and Sociology

Major Requirements: Students majoring in anthropology and sociology are required to take Anthropology 210, 211, 520, 521 (or an acceptable alternative), 527, 531 or 532, 596, and either 638 or 639; Sociology 200, 330, 420, 410 and 405 or 605 or 606. They must complete a total of at least twenty-one credits in sociology and twenty credits in anthropology, but not more than forty-five credits in the two fields combined.

Honors Program

This program is open to students pursuing a bachelor's degree with a major in anthropology who maintain an overall cumulative honor point average of at least 3.3 and a similar h.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 h.p.a. of 3.3 or above;
3. Anthropology h.p.a. of 3.3 or above;
4. A minimum of three and a maximum of six thesis credits in anthropology (ANT 499);
5. An approved honors thesis;
6. One 400-level honors seminar (HON 420–428) offered by the Liberal Arts Honors Program.
7. A total of fifteen honors-designated credits including ANT 499, the 400-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 209.

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 210 (offered for three to four credits) and ANT 211 (three credits), as well as one of the following: ANT 520, 527, 531 or 532 (all offered for three credits). Students must take an additional nine credits in anthropology elective courses. Total credits, other than Anthropology 210, 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' — Accelerated Graduate Enrollment

The Department of Anthropology participates in the College of Liberal Arts 'AGRADE' Program. AGRADE 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 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 Chairperson of the Department of Anthropology (577–2935), or the Graduate Officer of the College of Liberal Arts.

UNDERGRADUATE COURSES (ANT)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

- 210. (SS) Introduction to Anthropology. Cr. 3-4**
Biological evolution, human variability, prehistoric humans and early cultures, ethnography, language and cultural growth, applied anthropology. (T)
- 211. (LS) Introduction to Physical Anthropology. Cr. 3**
Prereq: sophomore standing. Role of hereditary and environmental factors, human genetics, meaning of "race" and racial classifications, fossil records, non-human primate behavior and evolution. (T)
- 310. Cultures of the World. Cr. 3-4**
Prereq: sophomore standing. Only students in Honors Program may register for four credits. Selected representative cultures from Oceania, Islamic North Africa, Near East, Sub-Saharan Africa, Asia, American Indian. (T)
- 311. 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)
- 315. (FC) Anthropology of Business. Cr. 3**
Differences between American culture/business practice and the culture/business practice of other countries: assumptions, world view and family structure, organization and language. (T)
- 320. (HS) Prehistoric and Early Historic Civilizations. Cr. 3**
A world-wide survey of prehistoric cultures and the origins of civilization, with a broad overview of some basic theories about archaeology. (Y)
- 321. African Prehistory. Cr. 3**
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 and settled life. Emphasis on evidence for human origins, evolution and adaptation. (B)
- 325. Dealing With the Dead: The Anthropology of Mortuary Practices. Cr. 3**
Cross-cultural perspective of mortuary practices. Survey and comparison of various cultures' beliefs regarding dying, death, and disposal of the dead. (I)
- 352. (FC) Stability and Change in Contemporary Africa. Cr. 3**
Cultural and social change in Sub-Saharan Africa; impact of European and North African culture on the societies of the subcontinent. (T)
- 353. Native Americans. Cr. 3**
Survey of Native American and Inuit cultures north of Mexico; adjustment to environment; history of the several tribes. (I)
- 354. (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)
- 355. (FC) Arab Society In Transition. (N E 355). 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)

- 390. Directed Study. Cr. 2-6(Max. 6)**
Prereq: 16 credits in anthropology with grades of A or B; consent of instructor. (T)
- 391. 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 lower division coursework at the University of Salford, England, as part of WSU-Salford Exchange Program. (F,W)
- 490. Honors Program in Anthropology. Cr. 2-6(Max. 20)**
Prereq: junior standing; 3.3 h.p.a.; 3.3 h.p.a. in department; 18 credits in sociology and anthropology; consent of chairperson or dean. (T)
- 498. Honors Research Thesis. Cr. 2-6**
Prereq: admission to college and department honors programs; 3.3 h.p.a.; 3.3 h.p.a. in anthropology. Independent study under the direction of the honors adviser. Research will lead to the completion of an honors thesis. (T)
- 499. Honors 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 problem to be completed under the direction of a faculty member whose field or expertise is within the topic area. The thesis will be judged by the adviser and a second reader. (T)
- 506. Urban Anthropology. (SOC 554). Cr. 3**
Prereq: ANT 210 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)
- 514. Biology and Culture. Cr. 3**
Prereq: ANT 210 or 211 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)
- 518. Introduction to Forensic Science. Cr. 3**
Prereq: CRJ 101 or ANT 211 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)
- 520. Social Anthropology. Cr. 3**
Prereq: SOC 201 or ANT 210. Types of social organization and cultural heritage; ancient, primitive and complex cultures analyzed, compared, contrasted. (Y)
- 521. Methods in Anthropology. Cr. 3**
Prereq: ANT 210, 12 credits in anthropology, elementary statistics or consent of instructor. A survey of research techniques in anthropology. (Y)
- 524. Cross Cultural Study of Gender. Cr. 3**
Prereq: ANT 210 or consent of instructor. Evolutionary and cultural bases of female roles using a world sample, division of labor, marriage and sexual behavior, power and ideology. (I)
- 526. The African Religious Experience: A Triple Heritage. (AFS 526)(GIS 526). 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)
- 527. Introduction to Archaeology. Cr. 3**
Prereq: ANT 210. Archaeological methods and theory, artifact analysis and dating techniques. (Y)
- 528. Field Work in Archaeology of the New World. Cr. 5(Max. 10)**
Prereq: ANT 210 and consent of instructor; 527 recommended. Material fee as indicated in *Schedule of Classes*. Introduction to

reconnaissance and excavation of sites; preparation and cataloging of specimens; analysis of data. (F)

531. Language and Culture. (LIN 531). Cr. 3

Prereq: ANT 210 or 520 or SOC 201 or consent of instructor. Introduction to the structure of language and to the ways that humans use language in the construction of human worlds. Diversity of the world's languages and universal properties of language; theories of language change. (F)

532. Language and Society. (LIN 532). Cr. 3

Prereq: ANT 210 or 520 or SOC 201 or consent of instructor. An introduction to the functions of language in many kinds of human groups. Languages used to express social roles and statuses, caste, class, and ethnic diversity. Such aspects of language variability as "street" or vernacular languages, literary standard languages, pidgin and creole languages, and multilingualism. (W)

535. (AFS 535) African American Religious History and Practice. (GIS 535). Cr. 3

Prereq: upper division standing. Offered for undergraduate credit only. 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)

537. Magic, Religion and Science. Cr. 3

Prereq: ANT 210 or 520 or SOC 201 or consent of instructor. The nature and variety of religious belief and practice; theoretical interpretations. (B)

540. Anthropology of Health and Illness. Cr. 3

Prereq: ANT 210 or consent of instructor. An anthropological perspective on the study of health and illness. Folk medical beliefs and practices, cultural patterns for coping with illness, and organization of health institutions cross-culturally. (Y)

541. Anthropology of Age. Cr. 3

Prereq: ANT 210 or consent of instructor. Old age examined from a cultural perspective; social and political factors; cross-cultural consideration of values which affect the experience of old age and the status of the elderly. Role of ethnicity and minority status in aging. (Y)

551. Precolombian Mesoamerican Cultures. (CBS 351). Cr. 3

Prereq: ANT 210 or consent of instructor, or CBS 201. Survey of the history and characteristics of cultures in Mesoamerica prior to colonization, from the Maya and Olmec to the Aztec. (I)

560. Anthropological Museology. Cr. 3

Prereq: ANT 210 and 527 or consent of instructor. Introduction to specimen identification and care, cataloging procedure, display techniques and museums. (I)

570. Applied Anthropology. Cr. 3

Prereq: ANT 210 or 520 or consent of instructor. The application of anthropological concepts and methods to contemporary issues of public concern in the United States and developing nations. (I)

591. 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)

593. (WI) Writing Intensive Course in Anthropology. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: ANT 531, 532, 638, or 639, 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 593. (T)

596. Capstone Seminar in Anthropology. Cr. 3

Prereq: upper division standing as undergraduate anthropology major, or graduate standing with some anthropology background. Current analysis of theoretical issues in each of the four fields of anthropology. (Y)

608. (ENG 560) Studies in Folklore. Cr. 3

Prereq: ENG 228 or ENG 360 or ENG 465 or ANT 210 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)

617. Political Anthropology. Cr. 3

Prereq: ANT 210 or 520 or SOC 201 or consent of instructor. Comparative political systems of traditional societies. Government, the state, warfare, law, and social control. Theoretical approaches with analysis of representative societies. (I)

623. Cultures of Sub-Saharan Africa. Cr. 3

Prereq: ANT 210 or SOC 201 or consent of instructor. Sub-Saharan African cultures and societies; emphasis on both complex and simple political systems. (I)

629. Culture Area Studies. Cr. 3 (Max. 9)

Prereq: ANT 210 or 520 or SOC 201 or consent of instructor. Culture and social changes. Origins and functional interrelationships, regional variation in population, settlement, race contact, acculturation, migration, social institutions. Topics to be announced in *Schedule of Classes*. (I)

636. (HIS 786) Oral History: A Methodology for Research. (LIS 777). 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)

638. Anthropological Theory Before 1940. Cr. 3

Prereq: 21 credits in anthropology or consent of instructor. Theoretical analysis and explanation of anthropological problems as perceived in Europe and America before 1940. (F)

639. Contemporary Theory in Anthropology. Cr. 3

Prereq: ANT 638 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)

640. Ethnicity and Aging. Cr. 3

Prereq: SOC 501 or ANT 210 or ANT 520 or consent of instructor. An analysis of the position, function and role of the elderly in selected societies around the world. (I)

645. Culture, Health Policy and AIDS. Cr. 3

Prereq: ANT 210 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)

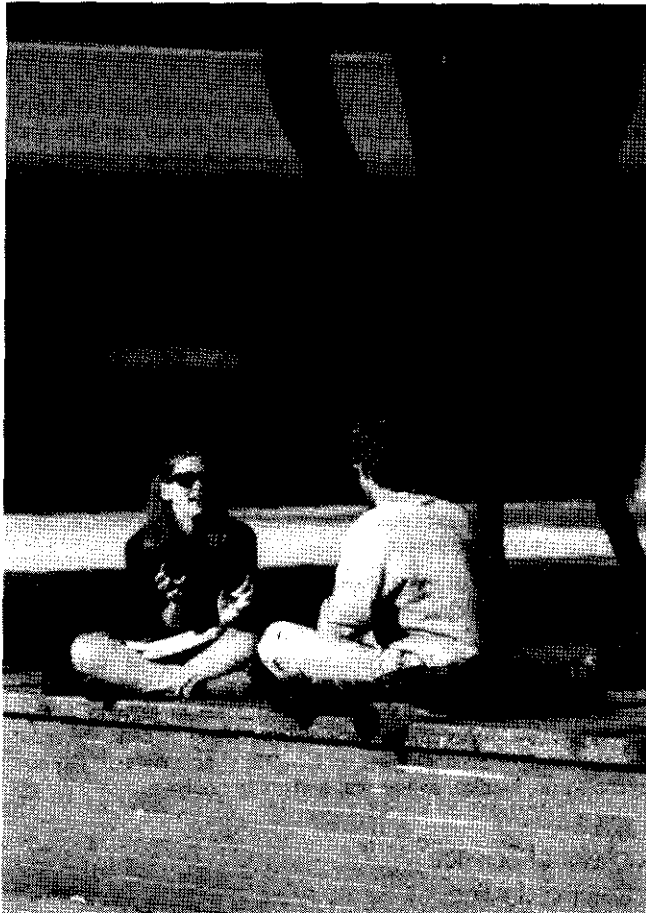
649. Historical Archaeology of North America. Cr. 3

Prereq: ANT 527 or consent of instructor. Archaeological techniques and their uses in augmenting the historical record of North America; types of historic sites; preparation of land use histories; artifact types; interpretation of excavations. (I)

650. North American Prehistory. Cr. 3

Prereq: ANT 210 or consent of instructor; 527 recommended. Prehistory of North America north of Mexico from the late Pleistocene to Euro-American contact. (I)

- 665. Studies in Physical Anthropology. Cr. 2-4 (Max. 12)**
Prereq: ANT 211 or consent of instructor. Selected topics in physical anthropology. Topics to be announced in *Schedule of Classes*. (I)
- 668. Studies in Cultural Anthropology. Cr. 2-4 (Max. 12)**
Prereq: ANT 210 or 520 or consent of instructor. Selected topics in cultural anthropology. Topics to be announced in *Schedule of Classes*. (I)
- 670. Topics in Medical Anthropology. Cr. 3**
Prereq: ANT 210 or consent of instructor. Selected topics in medical anthropology with relevance to theory, practice, and research. (B)
- 671. Medical Anthropology: Alcohol/Drug Use and Abuse. Cr. 3**
Prereq: ANT 210 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)
- 692. Field Practicum in Business/Industrial Anthropology. Cr. 2-8**
Prereq: ANT 720 or 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

Chairperson: Joseph B. Zajac

Associate Chairperson: Carolyn J. Hooper

Exhibitions and Programs Curator: John Slick

Slide Collection Curator: Terry Kirby

Professors

Bernard M. Goldman (Emeritus), Joseph Gutmann (Emeritus), Horst Uhr

Associate Professor

Brian Madigan

Assistant Professors

Nancy Locke, Janice Mann

W. Hawkins Ferry Endowed Chair in Twentieth Century Art History and Criticism

Jane Blocker

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 refract 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*

**CERTIFICATE in Museum Practice*

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 207-212).

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 163.

Students who elect to earn their degrees or certificates in the College of Liberal Arts should consult the Chairperson, Department of Humanities, Room 423, 51 West Warren (577-3035), for clarification and further information.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

CANADIAN STUDIES

Office: 225 State Hall; 577-0541

Director and Adviser: Bryan Thompson

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 Romance languages.

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 270 — Introduction to Canadian Studies (GPH 270, HIS 270, ENG 267)
2. Core electives (minimum of nine credits, three courses), from:
 - HIS 345 — Canadian American Relations
 - P S 375 — Government and Politics of Canada
 - GPH 232 — Historical Geography of the United States and Canada
 - GPH 570 — Urban Canada
 - GPH 575 — Social and Economic Geography of the United States and Canada
 - GPH 635 — Ethnic Groups in the United States and Canada
 - P S 551 — Canadian and American Political Thought
 - P S 637 — Comparative Public Administration
 - U P 640 — Planning Issues

Other cognates:

- ANT 353 — Native Americans
- ANT 649 — Historical Archaeology of North America
- ANT 650 — North American Prehistory
- ENG 260 — Introduction to Folklore
- GPH 613 — Advanced Urban Geography
- GPH 651 — Urban and Regional Systems
- P S 305 — Politics of the American Presidency
- P S 581 — American Foreign Policy and Administration

Please note that additional 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.

CRIMINAL JUSTICE

Office: 2305 Faculty/Administration Building; 577-2705

Interim Chairperson: Steven Stack

Professors

Steven Stack, Marvin Zalman

Assistant Professor

Thomas M. Kelley

Lecturer

Denis Hunter

Adjunct Faculty

William Brown, Ernest Costa, Michael Falvo, William Furtaw, R. John Kinkel, Daniel McCane, Kathleen O'Grady, John O'Neill, Pamela Reising, Barbara Sampson, Steven White

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 stresses a broad undergraduate education designed to enhance the student's liberal arts background in the social sciences and humanities. 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 field placement coordinator.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

The curriculum in criminal justice is multi-disciplinary with faculty drawn from different departments of the College. 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 (23–27 credits) include classes in a variety of disciplines comprising theories of criminal behavior, criminal law, criminal justice institutions, 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; analytic research methods used to better understand the social and behavioral realities of criminal justice.

Cognate areas: a minimum of fourteen credits in courses from two of the twelve cognate areas must be selected for concentrated work in the criminal justice field. The cognate areas 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 25) and the College of Liberal Arts Group Requirements (see page 207), 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 15–43 and 207–212, respectively.

Major Requirements: Students majoring in criminal justice must complete a minimum of thirty-seven and no more than forty-six credits. A minimum of twenty-seven credits must be completed in core courses, and a minimum of fourteen credits cognate area courses.

I. Core Courses (Twenty-three to twenty-seven credits total) credits

At least one from the following:

ANT 210 — (SS) Introduction to Anthropology	3
CRJ 101 — Introduction to the Criminal Justice System	4
PCS 200 — Introduction to Peace and Conflict Studies	3
P S 100 — (SS) Introduction to Political Science	3
PSY 101 — (LS) Introductory Psychology	4
SOC 200 — (SS) Understanding Human Society	3

Both of the following:

SOC 382 — Theories of Crime and Delinquency	3
CRJ 571 — Constitutional Criminal Procedure	4

At least two of the following four options:

Courts option:	
CRJ 240 or P S 310 or P S 311	
— Introduction to the Judicial Process	4
— American Legal Systems and Processes	4
— Politics and Local Justice	4

Juvenile justice option:	
CRJ 241 — The Juvenile Justice System	4
Police option:	
CRJ 260 — The Police in America	4
Corrections option:	
CRJ 230 — Penology	4

One of the following process courses:

AFS 386 — Race, Class and the Criminal Justice System	3
P S 312 — Politics of the Criminal Justice Process	4

At least one of the following research methodology or statistics courses:

Research methodology:	
P S 380 — Methods of Political Inquiry	4
P S 448 — Techniques of Policy Analysis	4
PSY 402 — Research in Psychology	3
SOC 420 — (WJ) Methods of Social Research	4
Applied statistics:	
ECO 410 — Economic and Business Statistics	3
P S 563 — Statistics and Data Analysis in Political Science I	4
PSY 301 — Statistical Methods in Psychology	4
SOC 628 — Social Statistics	4

II. Cognate and Elective Courses (Fourteen credits minimum)

A minimum of fourteen cognate credits must be elected; no more than twenty-three cognate credits may be from CRJ courses. They must be selected from at least two cognate areas; at least two courses must be elected from each area selected (Once the minimum number of credits to satisfy the cognate requirement has been elected, any of the courses listed below may be taken as criminal justice elective courses.)

The cognate areas listed below are suggested guides for concentrated study beyond the core. Other cognate areas may be pursued by students, subject to the approval of the Director of the Criminal Justice Program.

Criminal Justice Cognate

ANT 518 — Introduction to Forensic Science
CRJ 241 — The Juvenile Justice System
CRJ 260 — The Police in America
CRJ 326 — Investigation
CRJ 351 — Introduction to Security
CRJ 490 — Directed Study
CRJ 498 — Honors Thesis in Criminal Justice
CRJ 506 — Comparative Criminal Justice Systems
CRJ 570 — Understanding and Coping With Stress in Law Enforcement
CRJ 572 — Criminal Law
CRJ 595 — Special Topics in Criminal Justice
CRJ 600 — Internship in Criminal Justice
CRJ 623 — Advanced Law Enforcement Administration
CRJ 660 — Social and Legal Dynamics of Child Abuse
CRJ 675 — Administrative Law in Criminal Justice
PCS 500 — Dispute Resolution
SOC 501 — Selected Sociological Topics: White Collar Crime
SOC 587 — Violence in the Family
SOC 686 — Organized Crime: Its History and Social Structure

Correctional Counseling Cognate

CRJ 570 — Understanding and Coping With Stress in Law Enforcement
PSY 411 — Introduction to Psychological Tests

- PSY 432 — Introduction to Clinical Psychology
- PSY 437 — Behavior Modification
- PSY 528 — Psychoanalytic Theory

Collective Conflict and the State Cognate

- AFS 558 — Law and the African American Experience
- HIS 395 — Special Topics: The History of Terrorism
- HIS 552 — The Uses of Terror: History of the Police State
- PCS 200 — Introduction to Peace and Conflict Studies
- P S 351 — (PL) Law, Authority and Rebellion
- SOC 555 — Collective Behavior: Masses, Mobs, and Social Realities

History Cognate

- HIS 395 — Special Topics: History of Terrorism
- HIS 552 — The Uses of Terror: History of the Police State
- P S 353 — (HS) Community-Building in History of Western Political Thought

Ethical Issues Cognate

- PHI 232 — (PL) Introduction to Ethics
- PHI 233 — Introduction to Social and Political Philosophy
- PHI 528 — History of Ethics
- PHI 530 — Twentieth Century Analytic Ethics
- P S 242 — Ethics and Politics of Public Policy
- P S 351 — (PL) Law, Authority and Rebellion
- P S 352 — (PL) Justice
- P S 353 — (HS) Community-Building in History of Western Political Thought

Law and Legal Studies Cognate

- AFS 558 — Law and the African American Experience
- CRJ 572 — Criminal Law
- HIS 516 — Constitutional History of the United States to 1860
- HIS 517 — Constitutional History of the United States from 1860 to 1940
- HIS 528 — American Legal History
- PHI 527 — Philosophy of Law
- P S 310 — American Legal Systems and Processes
- P S 311 — Politics and Local Justice
- P S 511 — Constitutional Law
- P S 512 — Constitutional Rights and Liberties
- SOC 501 — Selected Sociological Topics: Law and Social Psychology
- SOC 581 — Law in Human Society

Individual Behavior Cognate

- AFS 558 — Law and the African American Experience
- ANT 520 — Social Anthropology
- PSY 260 — Psychology of Social Behavior
- PSY 338 — Human Sexuality
- PSY 437 — Behavior Modification
- PSY 568 — Social Psychology of Personality
- SOC 202 — (SS) Social Problems
- SOC 410 — (SS) Social Psychology

Deviant and Abnormal Behavior Cognate

- PSY 208 — Introduction to Drugs, Behavior and Society
- PSY 331 — Abnormal Psychology
- PSY 432 — Introduction to Clinical Psychology
- PSY 437 — Behavior Modification
- SOC 480 — Outsiders, Outcasts and Social Deviants
- SOC 587 — Violence in the Family

Domestic Relations Cognate

- CRJ 660 — Social and Legal Dynamics of Child Abuse
- PSY 338 — Human Sexuality
- SOC 340 — Exploring Marriage and Other Intimate Relationships
- SOC 448 — Women in Society
- SOC 540 — The Family

- SOC 541 — Marriage and Family Problems
- SOC 545 — Human Sexual Behavior and Society
- SOC 546 — Sex Roles
- SOC 587 — Violence in the Family

Urban Studies Cognate

- ANT 311 — Detroit Minorities: Arabs, Hispanics and Blacks
- ANT 506 — Urban Anthropology
- P S 224 — (SS) Introduction to Urban Politics and Policy
- P S 522 — Issues in Urban Policy and Management
- SOC 550 — Urban and Metropolitan Living
- SOC 557 — Race Relations in Urban Society

Group and Organizational Dynamics Cognate

- P S 343 — Bureaucracy and Public Policy
- PSY 583 — Group Dynamics
- PSY 588 — Social Psychology of Personality

Public Policy and Processes Cognate

- AFS 558 — Law and the African American Experience
- ANT 570 — Applied Anthropology
- ECO 520 — Regulation and Regulated Industries
- P S 241 — Introduction to Public Policy
- P S 242 — Ethics and Politics of Public Policy
- P S 522 — Issues in Urban Public Policy and Management

Total Degree Program Credits 37-46

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:

	<i>credits</i>
CRJ 101 — Introduction to the Criminal Justice System	4
CRJ 230 — Introduction to Corrections and Penology	4
CRJ 240 — Introduction to the Judicial Process	4
CRJ 260 — The Police in America	4
CRJ 571 — Constitutional Criminal Procedure	4
Criminal Justice Elective	3-4
TOTAL: 21-22	

Students wishing to minor in criminal justice are encouraged to visit the Departmental Offices for information and counseling. A minor may be declared when 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 101	Introduction to the Criminal Justice System
CRJ 240	Introduction to the Judicial Process
CRJ 326	Investigation
CRJ 571	Constitutional Criminal Procedure
CRJ 572	Criminal Law
CRJ 595	Special Topics in Criminal Justice

Also see pre-law courses in Undergraduate Curricula, page 213.

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 Senior Rule provision. Minimum requirements for Senior Rule study include: a 3.0 Honor 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 honor 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 400-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 Chairperson of the Department, or the Director of the Liberal Arts Honors Program (577-3030).

UNDERGRADUATE COURSES (CRJ)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

101. Introduction to the Criminal Justice System. Cr. 4
Survey of criminal justice system. Agencies and processes include: police, courts, bail, prosecution, defense, plea bargaining, trial, sentencing, community corrections, jails and prisons. (T)

230. Penology: Punishment and Corrections. (SOC 384). Cr. 4
No credit after former CRJ 270. 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)

240. Introduction to the Judicial Process. Cr. 4
An examination of the structure, powers, doctrines and judicial processes including the origin, nature and functions of judicial review in the criminal justice system. (T)

241. The Juvenile Justice System. Cr. 4
No credit after former CRJ 291. 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)

260. The Police in America. Cr. 4
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)

312. Politics of the Criminal Justice Process. (P S 312). 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)

326. Investigation. Cr. 3
Prereq: CRJ 101. Overview of the history of criminal investigation, the functions of police investigators, crime scene search and evidence processing, an introduction to criminalistics, locating and interviewing witnesses, examining the elements of proof required in specific criminal offenses and interrogation techniques (pre- and post-Miranda). (Y)

351. Introduction to Security: Persons and Property. Cr. 4
No credit after former CRJ 231. 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)

371. 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. (T)

480. (SOC 480) Outalders, 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)

490. 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)

498. Honors Thesis in Criminal Justice. Cr. 3-6
Prereq: senior standing; 3.3 h.p.a. Open only to criminal justice majors. Research problem to be completed under the direction of a faculty member. (I)

506. Comparative Criminal Justice Systems. Cr. 3
No credit after former CRJ 650. Selected criminal justice systems in other nations. (B)

570. 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. (Y)

571. Constitutional Criminal Procedure. Cr. 4
Prereq: minimum of 12 credits in criminal justice. Not for graduate credit without consent of graduate program director. 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)

572. Criminal Law. Cr. 4
Not for graduate credit without consent of graduate program director. 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)

579. Topics in Justice and Law. Cr. 4
Prereq: junior status; 3.0 h.p.a. or above, or honors student. Legal analysis of selected topics in justice and law; rotating topics including political trials. (Y)

ECONOMICS

Office: 2074 Faculty/Administration Building; 577-3345

Chairperson: Allen C. Goodman

Administrative Assistant: Delores G. Tennille

Professors

Timothy M. Bates, Ralph M. Braid, David I. Fand (Emeritus), Thomas J. Finn, Jr., Allen C. Goodman, I. Bernard Goodman (Emeritus), Mark L. Kahn (Emeritus), Jay H. Levin, Li Way Lee, John M. Mattila (Emeritus), John D. Owen, Karl Roskamp (Emeritus), Robert J. Rossana

Associate Professors

R. King Adamson (Emeritus), Gail A. Jensen, Stephen J. Spurr

Assistant Professors

Basma Bekdache, Kevin D. Cotter, John T. Durkin, Jr., Philip J. Grossman, Julie Hunsaker, Panagiotis Mavros, Robert W. Wassmer, Gawon Yoon

Adjunct Associate Professor

Patrick L. Mason

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 208). 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.

581. (SOC 581) 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)

586. Research 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. (Y)

593. (WI) Writing Intensive Course In Criminal Justice. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: CRJ 326, 351, 490, 498, 506, 570, 571, 572, 595, 600, 602, 623, 643, 660, 675. 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)

594. (PCS 500) Dispute Resolution. (P S 589)(PSY 571). Cr. 3

Overview of the processes and sectors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

595. Special Topics In Criminal Justice. Cr. 3 (Max. 9)

Prereq: CRJ 201. No credit for repeated section. (Y)

600. Internship. (U S 600). 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 state, county and local levels; work opportunities include agency procedure and policy, patrol, case analysis, report writing and research. (T)

623. Advanced Law Enforcement Administration. Cr. 3

Prereq: CRJ 101. Police-management problems; organization and objectives, planning and coordination, public relations and support. (B)

635. (P S 635) Judicial Administration. Cr. 3

Investigation of management of court processes and personnel; role of court administrators; financing, budgeting, speedy trial, indigent representation problems; alternatives to litigation; impact analysis. (B)

660. Social and Legal Dynamics of Child Abuse. Cr. 3

Prereq: CRJ 241. 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. (B)

675. 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. (I)

686. (SOC 686) Organized Crime: Its History and Social Structure. Cr. 3

Prereq: CRJ 385 or SOC 382. 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)

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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, respectively.

Major Requirements: Students considering an economics major should take ECO 201 and 202 as soon as possible. They should also pass MAT 150 or 180 prior to the junior year or demonstrate eligibility for MAT 201 in the mathematics qualifying examination.

A major consists of thirty credits in economics. These must include Economics 201 and 202 (Principles of Microeconomics and Macroeconomics), Economics 500 and 505 (Intermediate Microeconomics and Macroeconomics), and Economics 510 (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. As of January, 1992, the department will not count accounting courses as economics major credit. 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 fifteen credits of the thirty 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 honor 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 500, 505, and 510).

Writing Proficiency/Writing Intensive Requirement (Effective January 1993): To enable the Department to evaluate their writing proficiency, economics majors must register for ECO 593, 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 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 201 sequence as early as possible. Cognate credits contribute to the 120 credits required for graduation, but they do not count toward the required thirty 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 honor point averages of 3.3 or above.

Honors majors must take Economics 497, 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 400-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 497 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 honor 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 201, ECO 202, and any three elective courses at the 400-level or above. At least three courses must be taken in residency. Students must have a cumulative honor 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

Introductory Economics

100. (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)

130. Economic Issues of Canada, Mexico, and the United States. Cr. 3

Introduction and application of main tools used by economists in analyzing current issues in the North American economy. Differences in the labor market in the three countries and the effect of international trade on these labor markets. Special attention to the effect of this integration on economy of the Detroit area. (T)

201. (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)

202. (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

500. Intermediate Microeconomics. Cr. 4

Prereq: ECO 201, MAT 150 or MAT 180 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)

502. Fundamentals of Economic Analysis. (ECO 702). Cr. 4

Prereq: ECO 500 and MAT 201 or MAT 501 or equiv. ECO 502 offered for undergraduate credit only; ECO 702 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)

505. Intermediate Macroeconomics. Cr. 4

Prereq: ECO 202, MAT 150 or MAT 180 or equiv. based on satisfactory score on mathematics placement examination. Theory of national income determination. National output and income, saving and capital formation. (T)

600. Price and Allocation Theory. Cr. 4

Prereq: ECO 500 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)

605. Macroeconomics. Cr. 4

Prereq: ECO 505 or equiv. No credit after ECO 705. 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)

645. 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

410. Economics and Business Statistics. Cr. 3

Prereq: ECO 201 and 202; MAT 150 or MAT 180 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)

510. Introductory Statistics and Econometrics. Cr. 4

Prereq: ECO 201, 202; MAT 150 or MAT 180 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)

610. Introduction to Econometrics. Cr. 4

Prereq: ECO 505 and 510 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)

611. Applied Economic Analysis and Forecasting. Cr. 4

Prereq: ECO 610 or consent of instructor. Applications of econometrics in structural analysis. Use of econometric, extrapolative, and univariate time series models in forecasting. Examples may include forecasting interest rates, price levels, GNP, participation rates, and levels of demand. (W)

Field C: Industrial Organization

520. Regulation and Regulated Industries. Cr. 4

Prereq: ECO 201. Public regulation of prices, profits, service, and entry in industries such as electrical power, natural gas, telephones, broadcasting, and transportation; the rationale for having public regulation, and the analysis of its economic effects; reform of the scope and practice of regulation; public ownership; regulation of occupational and product safety standards and environmental standards. (Y)

521. Market Power and Economic Welfare. Cr. 4

Prereq: ECO 201. 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)

525. Economic Analysis of Law. Cr. 4

Prereq: ECO 201; MAT 201 or consent of adviser. Applied price theory; economic analysis of substantive and procedural issues of law. (Y)

Field D: International Economics

530. International Trade. Cr. 4

Prereq: ECO 201. 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)

531. International Finance. Cr. 4

Prereq: ECO 201. 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

441. Labor Institutions. Cr. 4

Prereq: ECO 201. The changing labor force; development, structure, and philosophy of United States unionism; collective bargaining; bargaining power and the role of the strike; substantive union-management issues; public labor policies. (Y)

549. American Labor History. (HIS 529)(HIS 729). Cr. 4
Prereq: ECO 201 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)

641. Labor Markets. Cr. 4
Prereq: ECO 201. 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)

642. Labor Relations Institutions and Public Policy. Cr. 3
Prereq: ECO 201 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

550. Public Finance: Taxation and Expenditure Theory. Cr. 4
Prereq: ECO 201 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)

551. Public Choice. Cr. 3
Prereq: ECO 201 or consent of instructor. Decision-making process of government; cost benefit analysis; voting rules—majority voting and alternatives; theories of representative democracy; theory of bureaucracy; theory of rent seeking; government as Leviathan. (W)

552. State and Local Public Finance. (U P 675). Cr. 4
Prereq: ECO 201 or consent of instructor. Theory and practice of state and local government taxation and expenditure. Attention devoted to State of Michigan and municipalities in Detroit metropolitan area. Topics include: government organization, voting and mobility models, property and sales taxes, user charges, grants, education expenditure, and economic development. (W)

555. Economics of Health Care. Cr. 4
Prereq: ECO 201. 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)

560. Introduction to Development Economics. Cr. 4
Prereq: ECO 201 or consent of instructor. National poverty and economic growth viewed from an historical and theoretical perspective; particular emphasis on national and international policies. (Y)

Field G: Economic History and Development

665. (ULM 621) Regional, State, and Urban Economic Development: Policy and Administration. (P S 644)(U P 655). Cr. 3
Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

Field H: Money and Banking

570. Money and Banking. Cr. 3
Prereq: ECO 201. 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

580. Urban and Regional Economics I. (U P 582). Cr. 3
Prereq: ECO 201 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)

681. (ULM 615) Political Economy of the Urban Ghetto. (U P 667)(SOC 685). 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

390. 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)

391. 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)

491. 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)

497. 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)

591. 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)

593. (WI) Writing Intensive Course in Economics. Cr. 0
Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: ECO 390, 520, 521, 549, 560, 570, or 580. 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

Interim Chairperson: Renata M. Wasserman

Associate Chairperson: Yates Hafner

Academic Services Officer: Margaret M. Maday

Professors

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Associate Professors

Ellen Barton, Robert Burgoyne, Jeanne A. Flood, William A. Harris, Terrance J. King, Gesa Kirsch, Janet C. Langlois, Bernard Levine, Kathryn Lindberg, Gerald MacLean, Ross J. Pudaloff, Martha Ratliff, Ruth E. Ray, Edward Sharples, Elizabeth S. Sklar, Anca Vlasopolos

Assistant Professors

Corey Creekmur, Cynthia Erb, Margaret Jordan, Richard C. Marback, Bruce S. Morgan, Ljiljana Progovac, Barrett Watten

Senior Lecturer

Michael L. Liebler

Lecturers

Marta O. Dmytrenko-Ahrabian, Todd Duncan, H. Douglas Farris, Jr., Anne S. Finger, Dorothy Huson, Gloria Lewis, Phoebe Mainster, Sara Tipton, Chris Tysh, George Tysh, Pauline Uchmanowicz, Barbara Van Camp

Director, English Language Institute

Bruce S. Morgan

Emeritus Professors

Alvin B. Aubert, Esther M. Broner, Samuel A. Golden, Arnold L. Goldsmith, Orville F. Linck, Ralph L. Nash, Joseph Prescott, Herbert M. Schueller, Alfred Schwarz, Beongcheon Yu

Emeritus Associate Professors

Bradford S. Field, Alva A. Gay, Isabel Graham, David S. Herreshoff, Jay W. McCormick, William E. Mockler, Amy K. Richards, Paul Sporn, Travis E. Tritschuh

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*

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 designated members of the Department provide advising to English majors. As soon as possible, and no later than the completion of sixty credits, the prospective major should consult an adviser in the Department to discuss a course of study.

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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, 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 590 (Directed Study) credit may count toward a major.

Major Requirements consist of eleven English courses beyond the University General Education Competency Requirement (see page 26), and Liberal Arts Group Requirements (see page 207). Nine of these courses must be beyond the 200 level. (For exceptions in combined degree programs, see below.) Specific requirements are as follows:

1. 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 504, 508, 509, 560, 570, 574, 575, or 579).
2. 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 503, 506, 507, 548, 558, 559, 565, 567, 587, 588, or 589).
3. Three courses in English and American literature as listed below:
 - One course in English literature to 1700 (either English 311 or a course numbered English 510 to 519)
 - One course in English literature from 1700 to the present (either English 312 or a course numbered English 520 to 532)
 - One course in American literature (either English 314 or a course numbered English 540 to 549).
4. English 592, English Majors' Seminar. This course with co-registration in ENG 593 fulfills the General Education Writing Intensive requirement. With the consent of the associate chairperson and the appropriate instructor, students may substitute a 500-level course with ENG 593 co-registration for the Majors' 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 33 credits (46 credits maximum). Three of these five courses must be at the 500 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 220 or 515), courses in 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:

- a) complete a minimum of fifteen credits in Honors-designated courses, nine of which may be in any department;
- b) earn a grade of at least 'A-minus' in ENG 492, the English Honors Project;
- c) complete one of the interdisciplinary 400-level seminars offered by the Liberal Arts Honors Program (HON 420 through 428);
- d) satisfy all requirements for the major in English (for this purpose, ENG 492 may count as a 500-level elective; ENG 491, taken for four credits, will substitute for ENG 592); and
- e) have at least a 3.5 h.p.a. in the major at the time of graduation.

Candidates for honors in English are encouraged to take advantage of the Honors-option coursework provision (see page 257) by contracting with any professor teaching a 500-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 Liberal Arts 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 honor point average at the 'cum laude' level (approximately 3.4) and not less than a 3.6 h.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 214.

Combined Curriculum with Dentistry, Law, or Medicine: (See page 209.) 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 200 level.

Cognate Study in English

College and University Requirements: All students in the University must pass English 102 (Introductory College Writing), and all students in the College of Liberal Arts must pass one designated writing-emphasis literature course at the 200 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 101 (Basic Writing) before they take English 102. (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 29).

Courses at the 200 and 300 level are open to all undergraduates who have completed 102. Courses at the 500 level are open to both undergraduates and M.A. students. Senior standing is prerequisite to undergraduates' admission to all 600-level courses. Only graduate students may register for 700-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 311 (or English 510-519), English 312 (or English 520-532), English 314 (or English 540-549)
- b. at least one course from ENG 508 through 559
- c. four electives in English, provided that at least two are selected from ENG 220, 311, 312, 314, and 500-level courses.

No 100-level course and not more than two 200-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, though not required, to discuss the minor 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 260, 360, 560, 565, and 567, 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 200 level will count toward the minor, and no 100-level course will count.

Scholarships

Also see page 212, above, and the section on the Office of Scholarships and Financial Aid, page 21. For further information, contact the Department Office.

Loughead-Eldredge Endowed Scholarships in Creative Writing: Award of \$1500 open to an undergraduate in good academic standing and registered for at least six credits per term, who is pursuing a B.A. in English with a concentration in creative writing.

Albert Feigenson Endowed Memorial Scholarship: Awards open to full-time students majoring in music or English, with high scholastic standing and demonstrated financial need. Application deadline is April 30; 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. Application deadline is April 30; 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. Application deadline is April 30; contact the English Department for details.

UNDERGRADUATE COURSES (ENG)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 463.

NOTE: ENG 102 or its equivalent is prerequisite to all English courses numbered above 199.

010. Developmental English. Cr. 3

Prereq: admission to Project 350. No degree credit. Offered for S and U grades only. Intensive work in reading and writing. Emphasis on production of paragraphs and short essays which use the reading matter both for content and models. Emphasis on recognition and use of Standard English. (S)

050. 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)

052. 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)

101. Basic Writing. Cr. 4

Prereq: placement through English Qualifying Examination. Offered for S and U grades only. No credit toward English group requirement. Only two degree credits. One hour arranged. Extensive practice in fundamentals of college writing and reading in preparation for ENG

102. Required of students qualifying on the basis of the English Qualifying Examination. (T)

102. (BC) Introductory College Writing. Cr. 4

Prereq: placement through English Qualifying Examination or passing grade in ENG 101. A course in writing and critical reading, including at least one appropriately documented paper based upon outside sources. (T)

105. (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)

108. (EP) Writing Workshop. Cr. 2

Prereq: ENG 102 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)

110. Good Books. Cr. 4

For the general reader interested in exploring and appreciating a variety of good books from the past and present. Emphasis on various imaginative responses to human experience. (Y)

170. English Grammar. (LIN 170). 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)

205. (IC) Freshman Honors: English II. Cr. 4

Open only to Honors Program students. Continuation of ENG 105. (W)

210. (IC) Introduction to Poetry: Literature and Writing. Cr. 3

Prereq: ENG 102 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)

211. (IC) Introduction to Drama: Literature and Writing. Cr. 3

Prereq: ENG 102 or equiv. Introduction to techniques and forms of drama through critical reading of, and writing about, representative plays from various traditions and periods. (Y)

212. (IC) Introduction to Fiction: Literature and Writing. Cr. 4

Prereq: ENG 102 or equiv. Introduction to techniques and forms of fiction through critical reading of, and writing about, short stories and novels. (T)

216. (PL) European Literature I: Classical Through Renaissance. Cr. 3

Prereq: ENG 102 or equiv. Comparative approach to European national literatures in the historical periods from 500 B.C. to 1650 A.D. From Homer, Vergil, and Beowulf, to Dante, medieval romances, Spenser, Shakespeare, and Milton. (Y)

217. (PL) European Literature II: Renaissance to Modern. Cr. 3

Prereq: ENG 102. Comparative approach to European national literatures in the period 1650 A.D. to the present. (Y)

220. (PL) Shakespeare. Cr. 3

Prereq: ENG 102 or equiv. Emphasis on the dramatic and literary qualities of the plays: representative comedies, tragedies and histories. (T)

221. (IC) Great English Novels: Literature and Writing. Cr. 3

Prereq: ENG 102 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)

- 231. (IC) Major American Books: Literature and Writing. Cr. 3**
Prereq: ENG 102 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)
- 239. (IC) Introduction to African-American Literature: Literature and Writing. (AFS 239). Cr. 4**
Prereq: ENG 102 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)
- 245. (FLM 201) (VP) Introduction to Film. Cr. 4**
Material fee as indicated in *Schedule of Classes*. Examination of film techniques and basic methods of film analysis. (T)
- 246. (FLM 202) (VP) History of Film. Cr. 3**
Material fee as indicated in *Schedule of Classes*. 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. (T)
- 250. (PL) The English Bible as Literature. Cr. 4**
Prereq: ENG 102 or equiv. The King James text as a literary masterpiece. (Y)
- 257. (IC) Literature By and About Women: Literature and Writing. Cr. 3**
Prereq: ENG 102 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)
- 260. Introduction to Folklore. Cr. 3**
Prereq: ENG 102 or equiv. Introduction to the study of the oral literatures, customs, traditional beliefs and practices of selected folk communities. (Y)
- 267. (P S 270) Introduction to Canadian Studies. (HIS 270)(GPH 270). 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)
- 272. (PL) Basic Concepts in Linguistics. (LIN 272). Cr. 3**
Prereq: ENG 102 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)
- 273. Languages of the World. (LIN 273). Cr. 3**
Prereq: ENG 102. 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)
- 280. Techniques of Imaginative Writing. Cr. 4**
Prereq: ENG 102 or equiv. Writing in various creative forms. Frequent individual conferences and student readings for class criticism. (T)
- 301. (IC) Intermediate Writing. Cr. 3**
Prereq: ENG 102 or equiv. Intermediate course in writing and critical reading, building upon skills taught in ENG 102. 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)
- 303. (IC) Writing the Research Paper. Cr. 3**
Prereq: ENG 102 or equiv. Instruction in methods of academic research, including evaluation of sources and appropriate documentation. Requires at least one substantial research paper. (T)
- 305. (IC) Technical Communication I: Report Writing. Cr. 3**
Prereq: ENG 102 or equiv.; coreq: 050 (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)
- 306. (OC) Technical Communication II: Writing and Speaking. Cr. 3**
Prereq: grade of C or better in ENG 305; coreq: 050 (1 credit) required for international students with serious ESL writing problems. Continuation of technical reporting techniques introduced in ENG 305, 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)
- 308. Writing from Evidence. Cr. 3**
Prereq: ENG 102 or equiv. Argumentative and persuasive writing; analysis and evaluation of factual and inferential proof. (I)
- 311. (PL) English Literature to 1700. Cr. 3**
Prereq: ENG 102 or equiv. Selected works from such writers as Chaucer, Spenser, Shakespeare, Donne, Milton. Required of English majors. (T)
- 312. (PL) English Literature after 1700. Cr. 3**
Prereq: ENG 102 or equiv. Selected works from such writers as Swift, Pope, Wordsworth, Dickens, Tennyson, Eliot, Hardy. Required of English majors. (T)
- 314. (PL) Survey of American Literature. Cr. 3**
Prereq: ENG 102 or equiv. Historical survey of American literature from the colonial period through the twentieth century with emphasis on nineteenth and early twentieth centuries. (T)
- 340. Literary Themes and Genres. Cr. 3(Max. 12)**
Prereq: ENG 102 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)
- 347. Survey of African-American Literature. Cr. 3**
Prereq: ENG 102 or equiv. Historical survey of African-American literature from Colonial times through the twentieth century. (B)
- 360. Survey of American Folklore. Cr. 3**
Prereq: ENG 102 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)
- 381. Poetry Writing. Cr. 3**
Prereq: ENG 280. Instruction and practice in the art of English and American poetic forms: patterns of sound, quantitative values, diction, metaphors and images. (Y)
- 382. Fiction Writing. Cr. 3**
Prereq: ENG 280. Fundamentals of fiction, mainly the short story. Analysis of stories by established writers and by students. Frequent individual conferences. (T)
- 383. Play Writing. Cr. 3**
Prereq: ENG 280. Basic instruction in the development of plays for stage and television, or of movie scenarios. Attention to the writing of dialogue. (B)
- 391. Directed Study: Salford - W.S.U. Exchange. Cr. 3-9**
Prereq: 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)
- 490. Directed Study: Honors Program. Cr. 3-6(Max. 24)**
Prereq: consent of English Honors Committee. (T)
- 491. Honors Seminar. Cr. 3-6(Max. 24)**
Prereq: consent of instructor or English Honors Committee. Honors seminar. (T)

- 492. 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)
- 501. 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)
- 503. Topics in Women's Studies. (W S 503). Cr. 3(Max. 9)**
Thematic, critical or generic study of women and literature. Topics to be announced in *Schedule of Classes*. (Y)
- 504. Film Criticism and Theory. (FLM 504). Cr. 3**
Prereq: ENG 245 or another film course or consent of instructor. Material fee as indicated in *Schedule of Classes*. Survey of the major film theories from Munsterberg to contemporary film semiotics; examination of various attempts made at a systematic understanding of the cinema. (B)
- 506. Styles and Genres in Film. (FLM 506). Cr. 3(Max. 9)**
Material fee as indicated in *Schedule of Classes*. 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*. (Y)
- 507. Topics in Film. (FLM 507). Cr. 3(Max. 9)**
Material fee as indicated in *Schedule of Classes*. Topics (such as film and fusion of the arts) to be announced in *Schedule of Classes*. (Y)
- 508. Topics in Cross-Disciplinary and Cultural Studies. Cr. 3 (Max. 9)**
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)
- 509. Topics in Literary and Cultural Theory. Cr. 3(Max. 9)**
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)
- 510. Literature of the Middle Ages. Cr. 3**
Major works and genres of Old and Middle English; mostly in translation. (I)
- 511. Chaucer. Cr. 3**
Readings from *The Canterbury Tales* and from Chaucer's other works. Aspects of medieval life and thought which illuminate Chaucer's work. (I)
- 512. Topics in Medieval Literature. Cr. 3(Max. 9)**
Selected themes, genres, techniques in medieval English literature, such as heroic literature, narrative technique, cycle drama, lyric poetry. Topics to be announced in *Schedule of Classes*. (I)
- 514. Introduction to Old English. Cr. 3**
The fundamentals of language and grammar and the literary analysis of Old English texts. (Y)
- 515. Shakespeare. Cr. 3**
For English majors and others interested in more intensive study than is offered in ENG 220. Some attention to Shakespearean scholarship. (Y)
- 516. Studies in Old English. Cr. 3-4(Max. 12)**
Selected topics such as *Beowulf*, poetry of the *Exeter Book*, gnomic literature, saints' lives. Topics to be announced in *Schedule of Classes*. (Y)
- 517. Literature of the English Renaissance: 1500-1660. Cr. 3**
Survey of literature in all genres from Skelton through Milton, with an emphasis on non-dramatic poetry and prose. (B)
- 518. Milton. Cr. 3**
Emphasis on Milton's major poems, with some attention to his prose and to backgrounds. (I)
- 519. Topics in Renaissance Literature. Cr. 3(Max. 9)**
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)
- 520. Restoration and Eighteenth Century Literature. Cr. 3**
A survey of English literature from 1660 to 1784. Readings from the major works of Dryden, Pope, Swift, Thomson, and Johnson. Emphasis on intellectual milieu of the period. (B)
- 524. Topics in Restoration and Eighteenth Century Literature. Cr. 3(Max. 9)**
For students familiar with literary history of the period. Special topics for in-depth study of a genre, a movement or an author to be announced in *Schedule of Classes*. (B)
- 525. Nineteenth Century Literature. Cr. 3**
A survey of nineteenth century British literature, with works selected from such authors as Wordsworth, Keats, Dickens, Carlyle, Tennyson, Swinburne and Hardy. (Y)
- 526. Literature of the Romantic Period. Cr. 3**
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)
- 527. Literature of the Victorian Period. Cr. 3**
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)
- 529. Topics in Nineteenth Century Literature. Cr. 3(Max. 9)**
Readings emphasize thematic, generic, historic or aesthetic concerns in literature of the period. Topics to be announced in *Schedule of Classes*. (B)
- 530. Twentieth Century British Literature. Cr. 3**
Selected works in all genres from 1900 to the present. (B)
- 532. Topics in Twentieth Century British Literature. Cr. 3(Max. 9)**
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)
- 540. American Literature to 1900. Cr. 3**
A survey of American literature from the beginning through the Federalist period; transition from English/European heritages to ideas uniquely American. (B)
- 541. American Literature: 1800-1865. Cr. 3**
A survey of the major writers, themes and movements: Irving, Cooper, Emerson, Thoreau, Hawthorne, Melville, Whitman; Federalism and Jacksonian literature; transcendentalism, romanticism. (Y)
- 542. American Literature: 1865-1914. Cr. 3**
A survey of the major writers, themes, movements: Dickinson, Twain, Crane, Howells, James; the local colorists, social critics, early pragmatists. (Y)
- 545. Modern American Literature. Cr. 3**
A survey of major writers, themes, movements since 1914: Stevens, Frost, Eliot, O'Neill, Anderson, Hemingway, Faulkner; the world wars, modernism and post-modernism. (Y)

- 546. Topics In American Literature of the Twentieth Century. Cr. 3 (Max. 9)**
Twentieth century literature from specific perspectives, such as generic, historical, thematic. Topics to be announced in *Schedule of Classes*. (I)
- 548. Topics in African-American Literature. Cr. 3(Max. 9)**
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)
- 549. Topics in American Literature. Cr. 3 (Max. 9)**
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)
- 550. Topics In English and American Literature. Cr. 3(Max. 9)**
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)
- 552. Irish Literature. Cr. 3**
Major twentieth century Irish writers in the context of Irish history and politics: W.B. Yeats, James Joyce, major dramatists. (I)
- 558. 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)
- 559. Topics in Comparative Literature. Cr. 3(Max. 9)**
The study of literary texts from an international point of view. Topics to be announced in *Schedule of Classes*. (B)
- 560. Studies In Folklore. (ANT 608). 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)
- 565. Folklore and Literature. Cr. 3**
Identification and analysis of the interrelations of folklore and literature. (B)
- 567. 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)
- 570. Introduction to Linguistic Theory. (LIN 570). 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)
- 571. Phonology. (LIN 529). Cr. 3**
Prereq: ENG 570. 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)
- 572. Topics In Language. (LIN 572). 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)
- 573. Traditional Grammar. (LIN 573). Cr. 3**
Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (T)
- 574. Theory of Syntax. (LIN 530). Cr. 3**
Prereq: LIN 570. 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)
- 575. Theory of English as a Second Language. (LIN 575). Cr. 3**
Detailed examination of theories of language and language acquisition relevant to the non-native speaker of English. Review of research in language acquisition and language learning. (B)
- 576. American Dialects. (LIN 576). Cr. 3**
Survey of chief social and geographic dialects of American English and introduction to theory of language variation. (I)
- 577. Sociolinguistics. (LIN 577). 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)
- 578. Approaches to Technical and Professional Writing. Cr. 3**
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)
- 579. 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)
- 582. 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)
- 583. Introduction to Technical and Professional Writing. 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. (Y)
- 587. Poetry Writing Workshop. Cr. 3(Max. 6)**
Prereq: ENG 381, 382, or 383; 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)
- 588. Fiction Writing Workshop. Cr. 3(Max. 6)**
Prereq: ENG 381, 382, or 383; 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. (T)
- 589. Writing for Theatre. (THR 513). Cr. 3 (Max. 6)**
Prereq: ENG 383 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)
- 590. Directed Study. Cr. 1-3 (Max. 6)**
Prereq: Undergrad., 3.0 h.p.a.; proposal submitted in preceding term; cons. of instr. & chrn.; Grad., cons. of advs. & grad. officer. Advanced

work for superior students whose program cannot be adequately met by scheduled classes. Course requires substantial written work. (T)

591. Directed Study: Salford-W.S.U. Exchange. Cr. 3-9

Prereq: consent of departmental adviser. Open only to students admitted to Salford-W.S.U. Exchange Program. (F,W)

592. English Majors' Seminar. Cr. 4

Open only to undergraduate English majors; should be taken in last year of course work. 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. (Y:F,W)

593. (WI) Writing Intensive Course in English. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: ENG 592 or any 500-level course below 580. 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)

601. English Institute for Teachers of Language and Literature. Cr. 1-4(Max. 12)

Prereq: bachelor's degree with a concentration in English. For prospective and in-service teachers. Topics to be announced in *Schedule of Classes*. (S)

610. Introduction to Old English. Cr. 3

The fundamentals of language and grammar and the literary analysis of Old English texts. (I)

680. Advanced Creative Writing. Cr. 3(Max. 6)

Prereq: grade of B or better in any 500-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;
519 Manoogian, 313-577-4145

Co-Directors: Robert Burgoyne, Robert Steele

Advisory Committee

AFRICANA STUDIES: Michael Martin

COMMUNICATION: Jackie Byars, Adwa X. Muwzea, Robert Steele, Janet Walker

ENGLISH: Lesley Brill, Robert Burgoyne, Corey Creekmur, Cynthia Erb, Margaret Jordan

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, and Romance Languages and Literatures) continue historical and aesthetic studies, but they are also concerned with theories of film, particular genres and directoral 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 four 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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, respectively.



Major Requirements: students majoring in film studies must complete a minimum of thirty-four credits, distributed as follows:

CORE COURSES (Fourteen Credits) credits

FLM 201 —(VP) Introduction to Film	4
FLM 202 —(VP) History of Film	3
FLM 497 —Senior Assessment Essay	1
SPF 540 —Techniques of Film/Video Production	4
ENG 504 —Film Criticism and Theory	3

ELECTIVE COURSES (Twenty Credits)

AFS 320 — The African American Cinematic Experience	3
AFS 580 — Third World Cinema	3
ENG 506 —Styles and Genres in Film	3 (Max. 9)
ENG 507 —Topics in Film	3 (Max. 9)
FLM 390 —Directed Study	1-3
SPF 502 —Studies in Film History	4 (Max. 12)
SPF 506 —Documentary and Non-Fiction Film	4
SPF 525 —Screenwriting	3
SPF 544 —Film Production	4
SPR 668 — 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 201 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 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

201. (VP) Introduction to Film. (ENG 245). Cr. 4
Material fee as indicated in *Schedule of Classes*. Examination of film techniques and basic methods of film analysis. (T)

202. (VP) History of Film. (ENG 246). Cr. 3
Material fee as indicated in *Schedule of Classes*. 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. (T)

320. (AFS 320) 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)

390. Directed Study. Cr. 1-3(Max. 6)
Prereq: consent of adviser; completion of minimum of twelve credits in film courses from FLM, ENG, or SPF. (T)

497. 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)

504. (ENG 504) Film Criticism and Theory. Cr. 3
Prereq: ENG 245 or another film course or consent of instructor. Material fee as indicated in *Schedule of Classes*. Survey of the major film theories from Munsterberg to contemporary film semiotics; examination of various attempts made at a systematic understanding of the cinema. (B)

506. (ENG 506) Styles and Genres in Film. Cr. 3(Max. 9)
Material fee as indicated in *Schedule of Classes*. 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*. (Y)

507. (ENG 507) Topics In Film. Cr. 3(Max. 9)
Material fee as indicated in *Schedule of Classes*. Topics (such as film and fusion of the arts) to be announced in *Schedule of Classes*. (Y)

580. (AFS 580) 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 anticolonial and post colonial political cinema. (B)

593. (WI) Writing Intensive Course in Film Studies. Cr. 0
Prereq: junior standing, consent of instructor, satisfactory completion of English Proficiency Examination; coreq: ENG 504. 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

Interim Chairperson: Robert Sinclair

Professors

Robert M. Boyle, Fred E. Dohrs (Emeritus), Robert J. Goodman (Emeritus), George J. Honzatzko (Emeritus), Robert Sinclair

Associate Professors

Eugene D. Perle, Laura Reese, Gary Sands, Robert D. Swartz, Bryan Thompson

Lecturer

Susan Turner

Adjunct Faculty

John Baran, Margaret Crawford, Daniel Snyder

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.

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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, 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 110, 200 or 313, 301 or 665, 302, 642 and four other courses selected in consultation with a Departmental adviser.

* For specific 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 an honor 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 400-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 (Geography 490). For information about other honors-designated coursework available each semester, including the required 400-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 110 and 302.

Internships

Students pursuing a Bachelor of Arts degree in geography and having at least twelve credits in geography may participate in an internship program: approximately fifteen to eighteen hours per week of work, for four credits. Students must register for GPH 660. For details, contact the department chairperson.

UNDERGRADUATE COURSES (GPH)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

110. (SS) World Regional Patterns. Cr. 4-5

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. (1)

- 200. (U S 200) (SS) Introduction to Urban Studies.**
(SOC 250)(P S 200)(HIS 200). 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)
- 220. Geography of Michigan. Cr. 3**
The spatial physical, social, environmental, settlement and developmental patterns and problems of the State of Michigan. (I)
- 230. Soviet Union. Cr. 4**
Problems of location and environment; production problems in agriculture and industrial development; transportation difficulties; national minority issues; the Soviet Empire and global goals and confrontations. (I)
- 232. Historical Geography of the United States and Canada.**
Cr. 3
Analysis of factors underlying the settlement and development of the United States and Canada through to the early twentieth century. Themes include the spread of European settlement, emergence of cultural regions and diffusion of cultural traits, growth of regional economies and inter-regional trade, and the emergence of national urban systems. (I)
- 270. (P S 270) Introduction to Canadian Studies.**
(HIS 270)(ENG 267). 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)
- 275. (FRE 275) Introduction to Quebec Studies.**
(HIS 275)(P S 275). Cr. 3
Survey of the French-speaking Province of Quebec in its cultural, literary, historical, geographical, and political aspects; key concepts and cultural patterns defining the Quebecois identity. Team taught in English. (B)
- 281. Geography of Latin America. Cr. 4**
Variation in human and physical geographic phenomena and implications for conflict and coordination of interests (for example, trade interests, economic development, agricultural competition). (B)
- 301. Thematic Cartography. Cr. 4**
Introduction to mapping skills in a series of exercises plus development of map compilation skills and techniques for portraying spatial data. (B)
- 302. (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)
- 311. (U P 311) Urban Community. Cr. 3 or 4**
Aspects of community growth and expansion, functions of cities, planning proposals, and social and physical development policy. (I)
- 313. (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)
- 320. (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)
- 340. 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)
- 390. Directed Study. Cr. 1-3(Max. 9)**
Prereq: consent of adviser. Readings and research. (T)
- 391. 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)
- 490. Directed Study: Honors Program. Cr. 2-12(Max. 16)**
Prereq: consent of chairperson. (T)
- 565. (GEG 565) 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)
- 570. (GEG 570) Urban Canada. (U P 570). 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)
- 575. (GEG 575) 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)
- 581. (GEG 581) Locational Issues in Hazardous Waste Management. (HWM 581). Cr. 3**
Analyses of spatial aspects of hazardous waste sites; corporate and public considerations and reactions; regulatory impacts. (B)
- 591. (GEG 591) 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)
- 613. (GEG 613) Advanced Urban Geography. (U P 601). Cr. 4**
Urbanization in its broader spatial context: theoretical and conceptual approaches to urban systems. City systems in advanced societies. Recent regional shifts in American urbanization; metropolitan restructuring; urban decline; evolution of the 'world' city; urbanization in the Third World. (B)
- 615. (GEG 615) Internal Structure of the City. (U P 542). 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)
- 624. (GEG 624) Industrial Geography. (U P 552). 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)
- 628. (GEG 628) Marketing Geography. (U P 562). 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/self-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)
- 635. Ethnic Groups in the United States and Canada. (GEG 635). 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)

642. (U P 632) Quantitative Techniques I. (GEG 642). Cr. 4
Statistical inference with emphasis on applications including control tendency, dispersion, hypothesis testing, correlation and regression. (Y)

651. (U P 651) Urban and Regional Systems. (GEG 651). 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)

652. (GEG 652) Independent Field Study. (U S 605). Cr. 2-4
Prereq: consent of instructor; for Urban Studies students: U S 401 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)

660. (GEG 660) Internship in Applied Geography. Cr. 4
Prereq: 15 credits in geography; consent of instructor. Offered for S and U grades only. On-the-job training, mostly in applied aspects of geography (retail location analysis, land use studies); some internships compensated. Internships are usually for one academic semester. (Y)

665. (GEG 665) Computer Assisted Mapping. (U P 672). Cr. 4
Science of computer assisted mapping and hands-on computer assisted map production; geo-management issues. (B)

672. (GEG 672) Computer Applications for Spatial Analysis. (U P 682). Cr. 4
Prereq: course in elementary statistics recommended. Introduction to computer software for spatial analysis, including spatial statistics, computer graphics, and computer cartography. (Y)



GERMAN and SLAVIC STUDIES

Office: 443 Manoogian Hall; 577-3024; Fax 577-3266

Chairperson: Donald Haase

Professors

Penrith Goff (Emeritus), Edmund Ordon (Emeritus), Marvin Schindler (Emeritus), Guy Stern

Associate Professors

Vladimir Bezdek (Emeritus), Achim Bonawitz (Emeritus), Kenneth Brostrom, Alfred Cobbs, Erhard Dabringhaus (Emeritus), Donald Haase, Maria Roth (Emerita)

Assistant Professors

Catherine Baumann, Frank J. Corliss, Jr. (Emeritus), Halimur Khan

Lecturers

Mark Ferguson, Alina Klin-Norris, Dickran Tournajan

Instructor

Vera Andrushkiw

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*

**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. The Department secretary will arrange an interview with the appropriate adviser upon the student's request.

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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, respectively.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

— Major Requirements

Major Requirements In German: A major in German must take German 231, 271, 272, 310, 320, 410, 593, and four courses in German on the 500 level. German majors must also take one course in the literature of another country, approved by the adviser.

Major Requirements In Russian: Students majoring in Russian are required to complete satisfactorily thirty-one credits in Russian beyond Russian 201 including: Russian 245, 302, 303, 351, 409, 410, 445, 460, 470, and one course in a culture or literature other than Russian. The Writing Intensive requirement is satisfied by taking RUS 593.

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 593 or Russian 593, 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 at least nineteen credits in German, including German 202, 271, 272, 310, 320, and 231 or 291.

Minor In Polish: Students wishing to obtain a minor in Polish are required to complete seventeen credits in Polish *beyond* Polish 201. These credits must include Polish 302, 346, 445, 460 (one section), and 570 (one section).

Minor In Russian: Students wishing to obtain a minor in Russian are required to complete nineteen credits in Russian *beyond* Russian 201. These credits must include: Russian 245, 302, 303, 351, 360, and 365.

'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 101, 102, and 201 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. Examinations are given by appointment at 443 Manoogian Hall.

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 honor point average of at least 3.3. He/she must accumulate at least fifteen credits in honors-designated course work, including at least one 400-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

In Germany: Students of German who would like to spend their junior year studying at the University of Freiburg or Munich are encouraged to apply to the Wayne State Junior Year in Germany Program. For more information, apply at 471 or 473 Manoogian Hall, or call 577-4605; and see 'Study Abroad,' page 210.

Scholarships

Also see page 212, above, and the section on the Office of Scholarships and Financial Aid, page 21. For further information, contact the Department Office.

Uwe K. Faulhaber Scholarship for Undergraduate German Language Studies: Awards made to undergraduates majoring or minoring in German language at Wayne State, who have a career goal of teaching in German language studies.

Friends of German Studies Scholarship: Award open to undergraduates enrolled in German language, literature, or culture courses, offered through Wayne State German Studies Area.

Junior Year In Germany (see Travel Study Programs, above.)

German-American Cultural Center Scholarship: Award of \$500-\$1000 open to students accepted in the Junior Year in Germany Program with outstanding academic achievement and demonstrated financial need.

Junior Year in Freiburg Scholarship: Award of \$500-\$2000 open to students accepted in the Freiburg program with outstanding academic achievement and demonstrated financial need.

Junior Year in Munich Scholarship: Award of \$500-\$2000 open to students accepted in the Munich program with outstanding academic achievement and demonstrated financial need.

Max Kade Foundation Scholarship: Award of \$500-\$2000 open to students accepted in the Junior Year in Germany Program with outstanding academic achievement and demonstrated financial need.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

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)

341. (SLA 341) (FC) **New Soil, Old Roots: The Immigrant Experience.** (GER 341)(POL 341)(RUS 341)(UKR 341). 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. Team taught by specialists in the Department. (F)

370. (SLA 370) **The Changing Face of Europe.** (GER 370)(POL 370)(RUS 370)(UKR 370). 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)

371. (SLA 371) **Russian and East European Film.** (RUS 371)(UKR 371)(POL 371). Cr. 3

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

475. (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)

105. (CT) **Critical Thinking: Issues in German and Slavic Cultures.** (SLA 105). Cr. 3

Explicit instruction in critical thinking skills and application of those skills to topics related to the German and Slavic countries as well as to individual student lives. (T)

231. **Short Fiction from Europe.** (SLA 231). 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)

270. (PL) **Anguish and Commitment: European Existentialist Literature.** (SPA 270)(FRE 270)(ITA 270)(RUS 270). 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)

271. (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)

272. (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)

290. **Topics in German Studies.** Cr. 3(Max. 9)
Individual themes, critical issues, special problems, or trends in German literature. Topics to be announced in *Schedule of Classes*. (I)

291. (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)

341. (SLA 341) (FC) **New Soil, Old Roots: The Immigrant Experience.** (ARM 341)(POL 341)(RUS 341)(UKR 341). 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. Team taught by specialists in the Department. (F)

370. (SLA 370) **The Changing Face of Europe.** (ARM 370)(POL 370)(RUS 370)(UKR 370). 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)

540. **Cultural Studies and Criticism** (GER 740). Cr. 3-4
Key concepts and major figures explored for scholarship and cultural studies. Readings and class in English; open to students from diverse disciplines. (I)

Polish Cultural Studies in English (POL)

275. **Survey of Polish Literature in Translation.** Cr. 3
Survey of Polish literature from the Renaissance to the modern period. (B)

341. (SLA 341) (FC) **New Soil, Old Roots: The Immigrant Experience.** (ARM 341)(GER 341)(RUS 341)(UKR 341). 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. Team taught by specialists in the Department. (F)

370. (SLA 370) **The Changing Face of Europe.** (ARM 370)(GER 370)(RUS 370)(UKR 370). 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)

371. (SLA 371) **Russian and East European Film.** (RUS 371)(UKR 371)(ARM 371). Cr. 3

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

Russian Cultural Studies in English (RUS)

270. (GER 270) (PL) **Anguish and Commitment: European Existentialist Literature.** (SPA 270)(FRE 270)(ITA 270). 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)

341. (SLA 341) (FC) **New Soil, Old Roots: The Immigrant Experience.** (ARM 341)(GER 341)(POL 341)(UKR 341). 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. Team taught by specialists in the Department. (F)

351. (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)

360. (PL) **Nineteenth Century Russian Literature in English.** Cr. 3

Literature of nineteenth century; special attention to major writers. (F)

365. (PL) **Twentieth Century Russian Literature in English.** Cr. 3

Russian literature in Soviet period. (Y)

370. (SLA 370) **The Changing Face of Europe.** (ARM 370)(GER 370)(POL 370)(UKR 370). 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)

371. (SLA 371) **Russian and East European Film.** (UKR 371)(POL 371)(ARM 371). 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)

105. (GER 105) (CT) **Critical Thinking: Issues in German and Slavic Cultures.** Cr. 3

Explicit instruction in critical thinking skills and application of those skills to topics related to the German and Slavic countries as well as to individual student lives. (T)

231. (GER 231) **Short Fiction from Europe.** 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)

341. (FC) **New Soil, Old Roots: The Immigrant Experience.** (ARM 341)(GER 341)(POL 341)(RUS 341)(UKR 341). 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. Team taught by specialists in the Department; in English. (F)

370. **The Changing Face of Europe.** (ARM 370)(GER 370)(POL 370)(RUS 370)(UKR 370). 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)

371. **Russian and East European Film.** (RUS 371)(UKR 371)(POL 371)(ARM 371). Cr. 3

Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, cultural and aesthetic points of view. (Y)

Ukrainian Cultural Studies in English (UKR)

341. (SLA 341) (FC) **New Soil, Old Roots: The Immigrant Experience.** (ARM 341)(GER 341)(POL 341)(RUS 341). 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. Team taught by specialists in the Department; in English. (F)

370. (SLA 370) **The Changing Face of Europe.** (ARM 370)(GER 370)(POL 370)(RUS 370). 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)

371. (SLA 371) **Russian and East European Film.** (RUS 371)(POL 371)(ARM 371). 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)

101. **Elementary Armenian.** Cr. 4

Material fee as indicated in *Schedule of Classes*. Introduction to sounds, spelling, speaking, reading, writing, grammar; emphasis on ability to speak and read Armenian. Introduction to ancient Armenian culture. (F)

102. **Elementary Armenian.** Cr. 4

Prereq: ARM 101 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of ARM 101. Introduction to medieval Armenian culture. (W)

201. (FC) **Intermediate Armenian.** Cr. 4

Prereq: ARM 102 or equiv. Material fee as indicated in *Schedule of Classes*. Conversation, grammar, reading, composition. Introduction to modern Armenian culture. (F)

590. **Directed Study.** Cr. 1-3(Max. 12)

Prereq: ARM 201 or equiv., written consent of chairperson. Undergraduate credit only. Further study in Armenian language or literature. (T)

GERMAN (GER)

101. **Elementary German.** Cr. 4

Material fee as indicated in *Schedule of Classes*. Development of ability to speak and read German. (T)

102. **Elementary German.** Cr. 4

Prereq: GER 101 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of GER 101. (T)

106. Intensive German. Cr. 6

Prereq: previous knowledge or study of German or consent of instructor. Accelerated, intensive treatment of material normally treated in German 101 with a gradual slowing to treat the material in German 102. German 106 will normally accommodate learners with previous knowledge of the language while still providing them with review and practice, encouraging them to build on the German knowledge they have. (F,S)

201. (FC) Intermediate German. Cr. 4

Prereq: GER 102 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of GER 102. Reading of graded German literature and grammar review. (T)

202. Intermediate German. Cr. 4

Prereq: GER 201 or equiv. Continuation of GER 201. (T)

310. Intermediate Composition and Conversation I. Cr. 3

Prereq: GER 202 or equiv. German of common usage. Practical approach to contemporary idioms. (Y)

320. Intermediate Composition and Conversation II. Cr. 3

Prereq: GER 202 or equiv. German of common usage. Practical approach to contemporary idioms. (I)

410. Introduction to German Studies. Cr. 3

Prereq: GER 202 or equiv. Basic introduction to reading literature and cultural texts in a German Studies context. (F)

460. Proseminar: Modern German Literature. Cr. 3

Prereq: GER 361 or 362. (Y)

510. Advanced Composition and Conversation. Cr. 3

Prereq: GER 310 or 320 or equiv. Emphasizes improvement of student's oral and written command of German. Detailed study of modern German syntax. (B)

530. Children's Literature and Culture (GER 730). Cr. 3-4

Historical, cultural and critical aspects of German children's literature. Includes works for young children and adolescents. (I)

550. Pre-Modern Germany. (GER 750). 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)

565. Romanticism. (GER 765). 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. (B)

567. Literature in the Age of Industrial Revolution. (GER 767). Cr. 3-4(Max. 8)

Nineteenth century literary and cultural texts emanating from the period of rising industrialization in the German-speaking world. (B)

572. Enlightenment and Sturm und Drang. (GER 772). Cr. 3-4(Max. 8)

Two German literary-intellectual movements of the eighteenth century which mark the beginning of modern German thought and literature. Age of enlightenment including texts of Lessing; the Storm and Stress movement, including works by Goethe and Schiller; their literary and cultural achievements. (B)

573. The Classical Age. (GER 773). Cr. 3-4(Max. 8)

Goethe, Schiller, and the literary and cultural background of Weimar and German Classicism. (B)

577. Modernism. (GER 777). Cr. 3-4(Max. 8)

Culture of Modernism. Fin-de-siecle Germany and Austria, modernism and the metropolis, modernism and the new media (film, radio), art and politics of the Weimar Republic. (B)

578. Texts and Contexts Since 1945. (GER 778) Cr. 3-4(Max. 8)

Recent and contemporary literary and cultural works in context of the political, social and intellectual developments since 1945. (B)

579. Topics In German Studies. (GER 779). 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)

580. Literature and Cultures of Minorities. (GER 780). Cr. 3-4

Texts by minority writers in Germany construct new or non-German identities in response to cultural traditions reflected in the 'masterpieces' of German literature. Turkish, Jewish, Afro-German and Czech authors are examined in relation to canonical works which portray notions of non-German ethnic groups. (Y)

585. Second Language Instruction: Theory and Methods. (GER 785)(FRE 585)(SPA 585)(FRE 785)(SPA 785). 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)

590. Directed Study. Cr. 1-4(Max. 8)

Undergrad. prereq: consent of German adviser; grad. prereq: consent of German adviser and graduate officer. (T)

593. (W) Writing Intensive Course in German. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 300-, 400-, or 600-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)

610. Critical Approaches to German Studies. Cr. 3-4

Open only to graduate students, or undergraduates with consent of major adviser. Major critical approaches to German literature and cultural texts, and the questions and problems that drive contemporary German studies. (I)

640. Structure of German. Cr. 4

Prereq: GER 510 or equiv. The phonological, morphological, and syntactical structure of modern German; theory and practice. (I)

661. Lyric Poetry. Cr. 4

Historical survey of German lyric poetry from the Baroque to the twentieth century; tools and methods of interpretation. (B)

670. Age of the Baroque. Cr. 4

Historical survey of poetry, *Lied*, and poetics; seventeenth-century mysticism and foundations of *Pietismus*; the Jesuit drama and the secular drama; the novel. (B)

POLISH (POL)

101. Elementary Polish. Cr. 4

Material fee as indicated in *Schedule of Classes*. Sounds, spelling, vocabulary, forms, syntax as basis for reading and conversation. (T)

102. Elementary Polish. Cr. 4

Prereq: POL 101 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of POL 101. (T)

201. (FC) Intermediate Polish. Cr. 4
Prereq: POL 102 or equiv. Material fee as indicated in *Schedule of Classes*. Study in depth of structure, particularly syntax, based on reading. Oral and written practice. (T)

302. Intermediate Polish. Cr. 4
Prereq: POL 201 or equiv. Broader knowledge of Polish grammar and lexicon based on reading of Polish literature. (W)

346. Oral and Written Composition. Cr. 4
Prereq: POL 302 or equiv. Structural features not mastered in beginning courses. Extends mastery of written and spoken Polish. (F)

390. Directed Study. Cr. 1–3 (Max. 6)
Prereq: POL 201 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)

445. Language Skills: Advanced Speaking and Writing. Cr. 4
Prereq: POL 346 or equiv. Intensive practical training in use of Polish idiom to achieve fluency of expression. (W)

460. Major Polish Writers and Their Times. Cr. 3 (Max. 6)
Mickiewicz or Sienkiewicz: major works; contemporaries; impact on development of Polish literature. Topics to be announced in *Schedule of Classes*. (Y)

570. Genre in Polish Literature. Cr. 3 (Max. 6)
Prereq: POL 302 or equiv. Development of a literary form: short story, poetry or literary criticism; emphasis on major exponents of the form. Topics to be announced in *Schedule of Classes*. (Y)

590. Directed Study. Cr. 1–3 (Max. 12)
Prereq: undergrad., POL 302 or equiv., written consent of chairperson; grad., written consent of chairperson and graduate officer. Graduate major credit only in East European Studies. (T)

593. (WI) Writing Intensive Course in Polish. Cr. 0
Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 300-, 400-, or 500-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)

101. Elementary Russian. Cr. 4
Material fee as indicated in *Schedule of Classes*. Sounds, spelling, vocabulary, forms, syntax as basis for reading and conversation. (T)

102. Elementary Russian. Cr. 4
Prereq: RUS 101 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of RUS 101. (T)

201. (FC) Intermediate Russian. Cr. 4
Prereq: RUS 102 or equiv. Material fee as indicated in *Schedule of Classes*. Structure, particularly syntax, based on reading. Oral and written practice. (T)

245. Language Skills: Speaking and Writing. Cr. 4
Prereq: RUS 201 or equiv. Structural features not mastered in beginning courses. Extends mastery of written and spoken Russian. (W)

302. Intermediate Russian. Cr. 3
Prereq: RUS 201 or equiv. Broader knowledge of Russian grammar and lexicon based on reading of Russian literature. (F)

303. Intermediate Russian. Cr. 3
Prereq: RUS 302 or equiv. Continuation of RUS 302. (W)

390. Directed Study. Cr. 1–3 (Max. 6)
Prereq: RUS 201 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)

460. Nineteenth-Century Russian Literature. Cr. 3
Prereq: consent of instructor. Great Russian classics from precursors of Pushkin to Chekhov's death. (F)

470. Twentieth Century Russian Literature. Cr. 3
Prereq: consent of instructor. Russian pre-revolutionary and Soviet literature, 1890 to the present. (W)

590. 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)

593. (WI) Writing Intensive Course in Russian. Cr. 0
Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 300-, 400-, or 500-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)

SLAVIC (SLA)

498. Honors Thesis in German and Slavic Languages and Literatures. Cr. 3–6
Prereq: senior standing; 3.3 h.p.a. Open only to majors in German and Slavic languages. Thesis problem to be completed under direction of faculty member. (T)

UKRAINIAN (UKR)

101. Elementary Ukrainian. Cr. 4
Material fee as indicated in *Schedule of Classes*. Sounds, spelling, vocabulary, forms, syntax as a basis for reading and conversation. (F)

102. Elementary Ukrainian. Cr. 4
Prereq: UKR 101 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of UKR 101. (W)

201. (FC) Intermediate Ukrainian. Cr. 4
Prereq: UKR 102 or equiv. Material fee as indicated in *Schedule of Classes*. Study in-depth of structure and syntax based on reading. Oral and written practice. (F)

302. Introduction to Ukrainian Literature: Nineteenth and Twentieth Centuries. Cr. 4
Prereq: UKR 201 or equiv. Readings of short stories, poetry and essays of representative authors. Readings in English or Ukrainian. (W)

390. Directed Study. Cr. 1–3 (Max. 6)
Prereq: UKR 201 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)

590. Directed Study. Cr. 1–3 (Max. 12)
Prereq: UKR 302 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)

GREEK and LATIN LANGUAGES and LITERATURES

Office: 431 Manoogian Hall; 577-3032

Interim Chairperson: Ernest J. Ament

Professors

Kathleen McNamee, Richard W. Minadeo

Associate Professors

Ernest J. Ament, Joel B. Itzkowitz, Kenneth R. Walters

Assistant Professors

Lena Hatzichronoglou, Michele V. Romnick

Lecturer

David M. Shive

Degree Programs

BACHELOR OF ARTS with a major in Classics

BACHELOR OF ARTS with a major in Classical Civilization

**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 literature of these languages in English translation. The substance of these studies constitutes the cultural influence which has been the basis of Western civilization and education for over two thousand years. The importance of this heritage for a wide variety of academic disciplines affords Classics majors excellent preparation for a variety of careers: teaching at the high school or university level, professional work in law, 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 where historical perspective is desired. Additionally, service courses are available for students, such as the vocabulary-building courses Classics 123 — Word Origins: English Words from Greek and Latin; and Classics 124 — Etymology: Medical Terms from Greek and Latin.

Bachelor of Arts Degrees

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University; see page 15.

A student who wishes to major or minor in the Department should plan his/her program with the Departmental major adviser as soon as possible after entering the University. Each program is arranged to satisfy each individual student's interests and purposes, such as the desire 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

DEGREE REQUIREMENTS: Students must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 25) and the College of Liberal Arts Group Requirements (see page 207), 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 15-43 and 207-212, respectively.

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 101 and 102 and any two Classics courses at the 200-level or above. Potential majors are also encouraged to elect Classics 101 (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 101 and 102 and any two Classics courses at the 200-level or above. Potential majors are also encouraged to elect Classics 101 (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 101 and 102, plus sixteen credits of course work in the other language. Potential majors are also encouraged to elect Classics 101 (Classical Civilization) during their freshman or sophomore year. Recommended cognates are listed below.

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 531	Language and Culture
Art History 520	Early Greek Art
Art History 521	Hellenistic and Roman Art
Art History 522	Ancient Greek Architecture
Art History 530	Early Christian and Byzantine Art
Art History 531	The Ancient City of Athens
Classics 200	Introduction to Greek Mythology
Classics 210	(PL) Honors Classical Origins of Western Thought
Classics 219	Daily Life in Ancient Rome
Classics 220	(PL) Introduction to Greek Tragedy
Classics 310	Law and Ancient Society
Classics 510	Law and Ancient Society
Classics 525	Greek and Roman Drama
History 533	History of Ancient Greece
History 534	History of Ancient Rome
History 536	The Early Middle Ages: 300-1000
History 537	The High Middle Ages: 1000-1300
Humanities 533	Western Culture in the Classical Period
Philosophy 210	(PL) Ancient Philosophy
Philosophy 541	Plato
Philosophy 542	Aristotle

Major Requirements in Classical Civilization: The major in Classical Civilization is an interdisciplinary study for students who choose not to do intensive work in the ancient languages but are interested in Greek and Roman contributions to Western civilization.

Core Requirements:

1. Fulfillment of the Foreign Language Group Requirement in either Greek or Latin (12 credits maximum).
2. Four Classics courses, from CLA 200 or above. (12-16 credits)
3. Art History 520 (Early Greek Art) and 521 (Hellenistic and Roman Art). (6 credits)

4. History 533 (History of Ancient Greece) and 534 (History of Ancient Rome). (6 credits)

5. Philosophy 210 (Ancient and Medieval Philosophy). (3 credits)

Electives: 10–18 credits, with courses required from at least two departments, to be chosen from the following:

Up to eight credits in Greek or Latin beyond 201	
Anthropology 531	Language and Culture
Art History 522	Ancient Greek Architecture
Art History 530	Early Christian and Byzantine Art
Art History 531	Ancient City of Athens
Classics 200	Introduction to Greek Mythology
Classics 210	(PL) Classical Origins of Western Thought
Classics 219	Daily Life in Ancient Rome
Classics 220	(PL) Greek Tragedy
Classics 310	Law and Ancient Society
Classics 510	Law and Ancient Society
Classics 525	Greek and Roman Drama
History 536	The Early Middle Ages: 300–1000
History 537	The High Middle Ages: 1000–1300
Humanities 533	Western Culture in the Classical Period
Philosophy 541	Plato
Philosophy 542	Aristotle

Total Credit Requirements for the Major: 37–49 credits, exclusive of the Foreign Language Requirement, with 27 credits required in the core area and 10–18 credits in electives.

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 214.

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 101 (Classical Civilization) and 200 (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 490, which will prepare and guide them in the writing of a Senior Honors Essay. One of the 400-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 490 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' (or 'Classical Civilization').

Eligible students who are interested in the program should consult the department honors 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 101 and 102 and including one Classics course from CLA 200 or above. Potential minors are also encouraged to elect Classics 101 (Classical Civilization) and Classics 200 (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 101 and 102 and including one Classics course from CLA 200 or above. Potential minors are also encouraged to elect Classics 101 (Classical Civilization) and Classics 200 (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 101 and 102, plus twelve credits in the other language. Recommended cognates are CLA 101, CLA 200, and CLA 220, 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 101 and 102 (eight credits).
2. Two Classics courses, from CLA 200 or above (six to eight credits).
3. Art History 520 (Early Greek Art) or 521 (Hellenistic and Roman Art) (three credits).
4. History 533 (History of Ancient Greece or 534 (History of Ancient Rome) (three credits).
5. Philosophy 210 (Ancient and Medieval Philosophy) (three credits).

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 371 also satisfies the Foreign Culture Requirement. Classics 101, 210, and 220 satisfy the Philosophy and Letters portion of the University General Education Program and of the College Humanities Requirement; and Classics 200 satisfies the College of Liberal Arts Cultural Studies Requirement.

Scholarships

Also see page 212, above, and the section on the Office of Scholarships and Financial Aid, page 21. For further information, contact the Department Office.

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 firsthand 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.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

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.

- 101. (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. (Y)
- 123. Word Origins: English Words from Greek and Latin. Cr. 3-4**
Vocabulary-building course designed to enlarge English vocabulary and increase understanding and spelling proficiency through a study of Greek and Latin roots of English words; aspects of interpreting and remembering legal, medical, and scientific vocabularies included. (Y)
- 124. Etymology: Medical Terms from Greek and Latin. Cr. 3-4**
Principles for recognizing and analyzing the basic components of medical terms derived from Greek and Latin. For students interested in medicine, dentistry, nursing, and allied scientific fields. No knowledge of a foreign language required. (I)
- 200. Greek Mythology. Cr. 3-4**
Typical myths related to religion, custom, ethics, philosophy, art, literature. (Y)
- 210. (PL) Honors Classical Origins of Western Thought. (HON 210). Cr. 3**
Open only to Honors Program students. 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)
- 220. (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)

310. Law and Ancient Society. (HIS 310). Cr. 3-4
Historical development from the Twelve Tables (fifth century B.C.) to the *Digest* of Justinian (sixth century A.D.); appraisal of the Classical Law (first century A.D. to third century A.D.), including status, slavery, property, contracts, and testamentary law; special attention to procedures. No special legal knowledge required. (B)

510. Law and Ancient Society. (HIS 510)(HIS 710). Cr. 3-4
Relationship between the legal systems of Ancient Greece and Rome and their social and economic settings. Topics include: law and family structure, legal status of women and children, law of succession. Focus is on actual case law and application of the law in real life settings. (B)

519. History of Everyday Life in the Ancient World. (HIS 542). Cr. 3
Prereq: one CLA or HIS course or consent of instructor. 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. (Y)

520. Special Studies. Cr. 1-4(Max. 8)
Prereq: minimum of one previous classics course, 200 level or above. 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)

525. 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. (Y)

590. Directed Study. Cr. 1-4 (Max. 8)
Prereq: undergrad., at least two classics courses and written consent of chairperson; grad., written consent of chairperson and graduate officer. Directed independent research in depth on a topic or author not treated in regular classics offerings, culminating in a course paper.(T)

593. (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 300 or higher which satisfies major requirement. Offered for S and U grades only. No degree credit. Required for all majors. Grade in CLA 593 is independent of grade in corequisite course. 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)

GREEK (GRK)

Ancient Greek

- 101. Elementary Greek. Cr. 4**
Basic vocabulary, forms, grammar. (Y)
- 102. Elementary Greek. Cr. 4**
Prereq: GRK 101. Continuation of GRK 101 with increasing emphasis on reading ability. (Y)
- 201. (FC) Classical Greek Prose. Cr. 4**
Prereq: GRK 102. Selections from various classical Greek prose authors such as Plato and Lysias. (Y)
- 260. Homer. Cr. 4**
Prereq: GRK 201 or equiv. or consent of instructor. Reading of selected passages from the *Iliad* and the *Odyssey*; study of the fundamentals of Homeric Greek. (I)

500. Greek for Graduate Students. Cr. 1-3(Max. 3)

Prereq: graduate standing. Introduction to basic vocabulary, forms and grammar of classical Greek leading to the reading of continuous Greek prose passages. Offered in conjunction with GRK 101 or GRK 102. (Y)

510. Greek Prose Composition. Cr. 2

Prereq: GRK 260 or equiv. or consent of instructor. Practice in the essentials of writing idiomatic and stylistic Greek prose. Supplementary readings in Greek for imitation. (I)

530. Attic Orators. Cr. 4

Prereq: GRK 260 or equiv. or consent of instructor. Development of Greek prose style and rhetoric in selected works of the Attic orators. (I)

540. Greek Philosophy. Cr. 4

Prereq: GRK 260 or equiv., or consent of instructor. Origin and development of Greek philosophy as seen through representative selections from the Presocratics, Plato, Aristotle, Epicurus, and the Stoics. (I)

560. Epic Poetry. Cr. 4

Prereq: GRK 260 or consent of instructor. Study of the epic poetry of Homer, Hesiod, Apollodorus and others in ancient Greek. Theory of oral vs. literary composition, the Homeric question, and metrics. (I)

590. Directed Study. Cr. 1-4(Max. 8)

Prereq: undergrad., written consent of chairperson; grad., consent of chairperson and graduate officer. (T)

593. (WI) Writing Intensive Course in Greek. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any CLA, LAT, or GRK course numbered 300 or higher which satisfies major requirement. Offered for S and U grades only. No degree credit. Required for all majors. Grade in GRK 593 is independent of grade in corequisite course. 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)

625. Greek Drama. Cr. 4

Prereq: any 300-level or above Greek course, or consent of instructor. Selected readings from the plays of Aeschylus, Sophocles, or Euripides and 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

111. Elementary Modern Greek. Cr. 4

Material fee as indicated in *Schedule of Classes*. Training in pronunciation, conversation and reading. (F)

112. Elementary Modern Greek. Cr. 4

Prereq: GRK 111 or equiv. Material fee as indicated in *Schedule of Classes*. Continuation of GRK 111. (W)

211. (FC) Intermediate Modern Greek. Cr. 4

Prereq: GRK 112 or equiv. Material fee as indicated in *Schedule of Classes*. Review of grammar, practice in oral and written modern Greek, based on readings in modern Greek literature. (F)

261. Advanced Grammar, Conversation and Composition. Cr. 4

Prereq: GRK 211 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)

371. (FC) Modern Greek Literature and Culture. Cr. 4

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)

101. Elementary Latin. Cr. 4

Basic vocabulary, forms, grammar. (Y)

102. Elementary Latin. Cr. 4

Prereq: LAT 101. Continuation of LAT 101, with increasing emphasis on reading ability. (Y)

201. (FC) Latin Literature. Cr. 4

Prereq: LAT 102. Representative selections of Latin prose and poetry. (Y)

260. Latin Poetry. Cr. 4

Prereq: LAT 201 or equiv. or consent of instructor. Representative selections of the poetry of Catullus, Virgil, Horace, Ovid, Martial and Latin elegy. (Y)

315. Cicero. Cr. 4

Prereq: LAT 201 or 260 or equiv. Selections from the basic philosophical and rhetorical writings of Cicero and from his letters. (I)

341. Roman Drama. Cr. 4

Prereq: LAT 201 or consent of instructor. Study of Roman drama through selected readings in the comedies of Plautus and Terence and the tragedies of Seneca. History of Roman drama and its relation to Greek antecedents studied through appropriate readings. (I)

350. Roman Epistolography. Cr. 4

Prereq: LAT 260 or consent of instructor. Social, literary, and historical significance of the letters of Cicero. (I)

500. Latin for Graduate Students. Cr. 1-3(Max. 3)

Basic vocabulary, forms and grammar of Latin leading to the reading of continuous Latin prose passages. Offered in conjunction with LAT 101 or LAT 102. (T)

581. Roman Historians. Cr. 4

Prereq: LAT 260 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)

583. Roman Philosophy. Cr. 4

Prereq: LAT 260 or equiv. or consent of instructor. Readings in Latin of the Roman philosophers, including the works of Lucretius, Cicero, Manilius, and Seneca. (I)

585. Epic. Cr. 4

Prereq: LAT 201 or 260 or equiv. Readings in Latin of the works of Ennius, Vergil, Lucan, Statius and others. (I)

586. Lyric and Elegy. Cr. 4

Prereq: LAT 260 or equiv. or consent of instructor. Readings in Latin of lyric and elegaic poetry including the works of Catullus, Tibullus, Horace, and Propertius. (I)

590. Directed Study. Cr. 1-4(Max. 8)

Prereq: undergrad., written consent of chairperson; grad., written consent of chairperson and graduate officer. (T)

593. (WI) Writing Intensive Course in Latin. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any CLA, LAT, or GRK course numbered 300 or higher which satisfies major requirement. Offered for S and U grades only. No degree credit. Required for all majors. Grade in LAT 593 is independent of grade in corequisite course. 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)

650. Roman Epistolography. Cr. 4

Prereq: any 300-level Latin course or consent of instructor. Social, literary, and historical significance of the letters of Cicero, Pliny and Seneca. (I)

682. Roman Rhetoric. Cr. 4

Prereq: LAT 315 or equiv. or consent of instructor. Study of Roman rhetorical theory and practice. (I)

684. Roman Drama. Cr. 4

Prereq: LAT 315 or equiv. or consent of instructor. Study of Roman comedy and tragedy through study of plays of Plautus, Terence, and Seneca. Early history of Roman drama studied through literary remains of Accius, Pacuvius, and Naevius. (I)



HISTORY

Office: 3094 Faculty/Administration Building; 577-2525

Chairperson: Alan Raucher

Professors

Ramon J. Betanzos, Thomas N. Bonner, John J. Bukowczyk, William J. Brazill, Jr., R. V. Burks (Emeritus), Milton Covensky (Emeritus), Corinne Gilb (Emerita), C. Norman Guice (Emeritus), Edwin C. Hall, Charles K. Hyde, Christopher H. Johnson, Philip P. Mason, Harry J. Magoulias (Emeritus), Alan Raucher, Monica Schuler, Samuel F. Scott, Melvin Small, Richard Studing, David Weinberg

Associate Professors

Effie Ambler, Marc Cogan, Elizabeth Faue, Marc Kruman, Stanley Shapiro, Stanley D. Solvick, Sandra VanBurkleo

Assistant Professors

Robert Jefferson, Joseph Likaka, Joseph Ward

Lecturer

Thomas Anderson

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 207) and the University General Education Requirements (see page 25), 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 15-43, and 207-212, respectively. The minimum requirement for a major in history is thirty-three credits, distributed according to the following five requirements:

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Major Requirements in History

1) A survey sequence consisting of two courses chosen from one of the following groups:

HIS 110 - 120 - 160 - 161

HIS 120 - 130 - 140 - 161

HIS 130 - 140 - 204 - 205

2) A minimum of eighteen credits in upper division coursework consisting of at least five HIS courses numbered 300 or above (excluding HIS 490, 497, and 593).

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 non-U.S. area.

4) Diversity of period 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) A knowledge assessment examination is required of all students who declare history as a major in Winter 1991 or thereafter. HIS 593 (Writing Intensive Course in History) is required of all students responsible for completing the University General Education Requirements.

Department advisers will help each student plan a program to fit his/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 509, 510, 516, 517, and 528 (see also suggested pre-law curriculum in the Liberal Arts Undergraduate Curricula, page 213).

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 honor point average (h.p.a.) in history courses and a 3.3 cumulative h.p.a. in all courses, as well as a grade of 'B' or better in the History Honors Seminar (History 595). To be admitted to the Honors Seminar, the student must have completed twenty-four credits in history courses, nine of which must be at or above the 300 level, and must have a 3.2 h.p.a. in history courses and a 3.3 cumulative h.p.a. Students are expected to write an approved Honors Thesis as part of this seminar. Honors majors must also take at least one 400-level seminar offered by the College's Honors Program, and accumulate at least fifteen credits in honors-designated course work, from any of the departments of the College, including History 595 and the Honors Program Seminar. 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 300 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 would 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.

Rolf and Jennie Johanneason 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

103. (AI) 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)

105. (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)

110. (HS) The Ancient World. Cr. 3-4
From prehistory to the break up of Mediterranean unity. (T)

120. (HS) The Medieval World. Cr. 3-4
Medieval civilization from the barbarian invasions to the Renaissance. (T)

130. (HS) Europe and the World: 1500–1945. Cr. 3–4

No credit after HIS 287 or HIS 190. 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)

140. (HS) The World Since 1945. Cr. 3–4

No credit after HIS 104. 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)

160. (HS) African Civilizations to 1800. Cr. 3–4

No credit after HIS 240. 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)

161. (HS) African Civilizations Since 1800. Cr. 3–4

No credit after former HIS 241. The origins of contemporary Africa, nineteenth century state-building, spread of Islamic religion, establishment of European empires, independence struggles, problems of independence. (T)

171. (HS) 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)

180. (N E 203) (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)

181. (N E 204) (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 development of modern state systems, regional/national conflicts, Islamic response to modernization. (Y)

191. (CBS 245) Latin America from Independence to the Present. Cr. 3

Historical overview of modern and contemporary Latin America from early 1800s to the present. Themes include nation-formation, revolutions, nationalism, development, dependency, U.S. involvement. (Y)

195. (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)

200. (U S 200) (SS) Introduction to Urban Studies. (GPH 200)(SOC 250)(P S 200). 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)

204. United States to 1877. Cr. 3–4

American experience with colonialism, revolution and nation building. (T)

205. United States Since 1877. Cr. 3–4

Industrialization, urbanization, and emergence of the United States as a world power. (T)

224. History of Michigan. Cr. 3–4

Social, economic development of the state, from French explorations to the present. (B)

232. (N E 202) 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 their was major Jewish settlement. (I)

243. (CBS 243) 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)

244. (CBS 241) (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)

250. (PCS 200) Introduction to Peace and Conflict Studies. (P S 282). 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)

251. (PHY 202) Science, Technology, and War. (P S 244)(PCS 202). Cr. 4

May not be used to fulfill natural science group requirement. Not open to students who took this topic in HIS 395. 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)

252. (PCS 201) Topics In Peace and Conflict Studies. (P S 283). Cr. 1–4

Special topics relating to peace and conflict studies. (Y)

270. (P S 270) Introduction to Canadian Studies. (GPH 270)(ENG 267). 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)

275. (FRE 275) Introduction to Quebec Studies. (P S 275)(GPH 275). Cr. 3

Survey of the French-speaking Province of Quebec in its cultural, literary, historical, geographical, and political aspects; key concepts and cultural patterns defining the Quebecois identity. Team taught in English. (B)

305. United States and the Vietnam Experience. Cr. 4

The United States' involvement in Vietnam; military, domestic and diplomatic impact. (Y)

310. (CLA 310) Law and Ancient Society. Cr. 3–4

Historical development from the Twelve Tables (fifth century B.C.) to the *Digest* of Justinian (sixth century A.D.); appraisal of the Classical Law (first century A.D. to third century A.D.), including status, slavery, property, contracts, and testamentary law; special attention to procedures. No special legal knowledge required. (I)

314. The Black Experience in America I: 1619–1865. (AFS 314). Cr. 3–4

African origins of the American black; transition from freedom to slavery; status of the black under slavery. (F)

315. The Black Experience in America II: 1865 to the Present. (AFS 315). Cr. 3–4

The black in national life since emancipation. (W)

319. 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)

- 324. (P S 325) Detroit Politics: Continuity and Change in City and Suburbs. (ULM 325). 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)
- 325. 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)
- 330. 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)
- 331. (N E 331) 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)
- 335. (HS) Revolution in the Modern World: 1750 to the Present. Cr. 3**
 Comparative survey of modern revolutionary upheaval focusing on liberal-democratic revolutions of the eighteenth and nineteenth centuries, socialist revolutions of the first half of the twentieth century, and Third-World revolutions of the post-1945 era. (B)
- 340. 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)
- 345. 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)
- 368. (N E 368) Islamic History: The Formation of the State. Cr. 3**
 History of the Near East from the death of the Prophet until the rise of the Abbasid Empire. (Y)
- 391. 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)
- 395. 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)
- 396. Topics in African History. Cr. 1-4(Max. 8)**
 Topics to be announced in *Schedule of Classes*. (I)
- 398. Topics in American History. Cr. 1-4(Max. 8)**
 Topics to be announced in *Schedule of Classes*. (I)
- 490. Directed Study. Cr. 1-6**
 Prereq: consent of chairperson. (T)
- 497. 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)
- 501. British North America to 1789. (HIS 701). Cr. 4**
 Prereq: HIS 204. 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)
- 503. Early American Republic: 1789-1850. (HIS 703). 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)
- 504. Civil War and Reconstruction: 1850-1877. (HIS 704). 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)
- 505. The Emergence of Modern America: 1877-1917. (HIS 705). Cr. 4**
 Emphasis on the rise of big business, social and intellectual change, protest movements and government policies. (B)
- 506. Modern America: 1917-1945. (HIS 706). Cr. 4**
 Analysis of economic and social problems, politics, and government policies. (B)
- 507. Contemporary American History: 1945 to the Present. (HIS 707). Cr. 4**
 Social, political, intellectual, economic, diplomatic, and cultural trends in the United States since World War II. (I)
- 508. Disease, Drugs and Doctors Since 1650. (HIS 708). Cr. 4**
 Survey of health conditions, medical theories, and the professional development of medicine from the period of colonial settlement, through the social and scientific changes of the nineteenth century, to the problems and issues of twentieth-century health delivery. (B)
- 509. Constitutional History of the United States from 1937 to the Present. (HIS 709). 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)
- 510. (CLA 510) Law and Ancient Society. (HIS 710). Cr. 3-4**
 Examination of the relationship between the legal systems of Ancient Greece and Rome and their social and economic settings. Topics include: law and family structure, legal status of women and children, law of succession. Focus is on actual case law and application of the law in real life settings. (I)
- 511. (ULM 610) Class, Race, and Politics in America. (P S 605)(SOC 733)(U P 703)(AFS 610). Cr. 3**
 Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)
- 512. American Foreign Relations to 1933. (HIS 712). 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)
- 513. American Foreign Relations Since 1933. (HIS 713). 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)
- 516. Constitutional History of the United States to 1860. (HIS 716). 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)
- 517. Constitutional History of the United States from 1860 to 1940. (HIS 717). 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)

519. History of American Social Thought. (HIS 719). 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)

520. Women in American Life and Thought. (HIS 720). Cr. 3

Role of women in the development of American society and in women's movements. (B)

521. The Peopling of Modern America, 1790–1914: A History of Immigration. (HIS 721). 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)

522. The Changing Shape of Ethnic America: World War I to the Present. (HIS 722). 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)

528. American Legal History. (HIS 728). 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)

529. (ECO 549) American Labor History. (HIS 729). Cr. 4

Analysis of American workers and unions in the nineteenth and twentieth centuries. (B)

530. Economic History of the United States. (HIS 730). 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)

531. Social Justice in America. (HIS 731). Cr. 4

Prereq: junior standing. History of Anglo-American criminal justice system from English roots to the Omnibus Crime Control Act of 1968. Major components of criminal justice will be examined: law, courts, police, corrections, juvenile justice. Changing perspectives of deviance; violence in American history. (B)

532. (AFS 532) 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)

533. History of Ancient Greece. (HIS 733). Cr. 3

Ancient Greek culture, emphasizing political events, social and economic institutions, cultural achievements. (B)

534. History of Ancient Rome. (HIS 734). Cr. 3

Institutional and cultural development. (B)

536. The Early Middle Ages: 300–1000. (HIS 736). 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)

537. The High Middle Ages: 1000–1300. (HIS 737). Cr. 3

Economic, social and cultural developments that transformed Western European civilization during the eleventh, twelfth and thirteenth centuries. (B)

538. The Renaissance. (HIS 738). 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)

539. Europe in the Age of Reformation. (HIS 739). Cr. 3

Protestant and Catholic reformation seen in the context of social, economic, and political conditions of the sixteenth and seventeenth centuries. (B)

541. The French Revolution and Napoleon. (HIS 741). 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)

542. (CLA 519) History of Everyday Life in the Ancient World. Cr. 3

Prereq: one CLA or HIS course or consent of instructor. 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. (B)

544. Twentieth Century Europe. (HIS 744). 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)

547. Modern Germany. (HIS 747). Cr. 3–4

The history of modern Germany against the background of its tradition and culture. Concentration on the Prussian–Austrian conflict, the emergence of German intellectual life, unification and modernization, and the crises and wars of the twentieth century. (I)

548. Nazi Germany. (HIS 748). 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)

549. Russian History through the Revolution. (HIS 749). Cr. 4

Development and transformation of state power, with particular attention to those economic and social elements peculiar to Russia. (Y)

550. The Soviet Union. (HIS 750). 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)

553. History of World War I and II. (HIS 753). Cr. 4

A military history of the two world wars of the twentieth century. (B)

555. Britain 1485–1714. (HIS 755). Cr. 4

Impact of religious, political and social change on British people during sixteenth, seventeenth, and early eighteenth centuries. (I)

562. The Rise of the European Working Class: 1750–1850. (HIS 762). 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)

563. Socialism and the European Labor Movement. (HIS 763). Cr. 3

Comparative labor history from 1850 to the present; Utopian socialism, Marxism, anarchism, syndicalism, communism, fascism; contemporary trends. (B)

566. France Since 1815. (HIS 766). Cr. 3

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)

573. The History of West Africa. (HIS 773). 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)

574. History of South Africa. (HIS 774). 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)

591. 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)

593. (WI) Writing Intensive Course in History. Cr. 0

Prereq: junior standing, consent of chairperson and instructor, satisfactory completion of English Proficiency Examination; coreq: any 500-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)

595. Honors Seminar. Cr. 3

Prereq: consent of chairperson; honors standing in history. (T)

596. Seminar for Majors. Cr. 3

Prereq: consent of chairperson. Open only to majors. Students write a term paper of at least twenty typed pages, including footnotes and annotated bibliography. (I)

600. Studies in Comparative History. Cr. 2-4

Topics to be announced in *Schedule of Classes*. (B)

601. Studies in American History. Cr. 2-4(Max. 9)

Topics to be announced in *Schedule of Classes*. (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. Instruction in honors courses is highly individualized with small classes exclusively taught by full-time regular faculty members.

Eligibility: To enroll in honors courses, students must have at least a 3.0 cumulative honor point average at Wayne State University. Entering freshmen should have a high school honor point average of at least 3.5, and students transferring from a community college a 3.3 h.p.a. 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 courses, honors-option courses, courses with an honors component, and honors directed studies. Students will normally earn many of their honors-designated credits in courses that also fulfill University General Education Requirements (see page 25).

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 fifteen credits in honors-designated course work, including (2) a senior essay or thesis done in the student's major department, and (3) at least one 420-level seminar offered through the Honors Program (HON 420-429). An h.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 fifteen honors credits.

Students pursuing a degree with *University Honors* will follow a course of study consisting of (1) at least thirty credits in honors-designated course work, including (2) a senior thesis or essay, and (3) one 420-level seminar offered by the Honors Program (HON 420-429). An h.p.a. of 3.3 or higher is required for graduation.

A student who satisfactorily completes a Departmental Honors curriculum or the University Honors Program will receive the appropriate Honors designation on both the diploma and the transcript. The 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), and the opportunity to participate in honors student groups.

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*. Departmental honors thesis or essay courses are listed only under the respective departmental headings in this bulletin and the *Schedule of Classes*. For a description of the following courses, see the appropriate Departmental sections of this bulletin.

- ANT 311 Detroit Minorities: Arabs, Hispanics, and Blacks
- AH 112 (VP) Renaissance through Modern Art Survey
- BIO 103 (LS) Environmental Biology
- BIO 105 (LS) An Introduction to Life



BIO 151	(LS) Basic Biology I
BIO 152	Basic Biology II
CHM 131	(PS) Chemical Principles and Analysis I
CHM 132	Chemical Principles and Analysis II
CHM 231	Organic Structure and Reactions
CHM 232	Organic Synthesis and Spectroscopy
CLA 200	Greek Mythology
CLA 210	(PL) Honors Classical Origins of Western Thought
ECO 201	(SS) Principles of Microeconomics
ECO 202	(SS) Principles of Macroeconomics
ENG 105	(BC) Freshman Honors: English I
ENG 205	(IC) Freshman Honors: English II
ENG 491	Honors Seminar
FRE 270	(PL) Anguish and Commitment: European Existentialist Literature
GER 270	(PL) Anguish and Commitment: European Existentialist Literature
HIS 130	(HS) Europe and the World: 1500-1945
HIS 140	(HS) The World Since 1945
HIS 595	Honors Seminar
HUM 220	(PL) Sophomore Honors Colloquium in Humanities
HUM 222	(PL) Constructs of Human Experience: Histories, Novels, Philosophies
ITA 270	(PL) Anguish and Commitment: European Existentialist Literature
MAT 201	Calculus I
MAT 202	Calculus II
MAT 203	Calculus III
MAT 235	Elementary Differential Equations
NFS 221	Human Nutrition
PHI 102	(PL) Honors Introduction to Philosophical Systems
PHI 186	Honors Introductory Symbolic Logic
PHI 232	(PL) Introduction to Ethics
PHI 355	(PL) Metaphysics
PHI 360	Space, Time and the Philosophy of Physics
P S 101	(AI) American Government
P S 281	World Politics
PSY 101	(LS) Introductory Psychology
PSY 208	Introduction to Drugs, Behavior and Society
PSY 260	Psychology of Social Behavior
PSY 331	Abnormal Psychology
RUS 270	(PL) Anguish and Commitment: European Existentialist Literature
SOC 587	Violence in the Family
SPA 270	(PL) Anguish and Commitment: European Existentialist Literature
SPB 101	(OC) Oral Communication: Basic Speech
UGE 100	(GE) The University and Its Libraries

Honors-Option Coursework

The Honors Option allows a student in any course taught by a full-time regular faculty member to elect honors level work, provided the instructor agrees to furnish commensurate extra instruction. If a grade of 'B' or above is earned in the course, 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 first 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 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

210. (CLA 210) (PL) Honors Classical Origins of Western Thought. Cr. 3

Open only to Honors Program students. 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. (Y)

420. (PL) Seminar in Philosophy and Letters. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

421. (SS) Seminar in Social Sciences. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

422. (LS) Seminar in Life Science. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

423. (PS) Seminar in Physical Science. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

424. (VP) Seminar in Visual and Performing Arts. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. Analysis of ways the visual or performing arts may be appreciated, evaluated, and criticized. Honors variant of an approved VP course in General Education Program. (Y)

425. (HS) Seminar in Historical Studies. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. Studies of periods of history in which there have been major transitions or changes. Honors variant of an approved HS course in General Education Program. (Y)

426. (FC) Seminar in Foreign Culture. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

427. (AI) Seminar in American Society and Institutions. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. Study of American society, its institutions and social change. Honors variant of an approved AI course in General Education Program. (Y)

428. General Honors Seminar. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. In-depth exploration of important concepts and approaches in liberal studies. Topics to be announced in *Schedule of Classes*. (Y)

490. Directed Study. Cr. 2-4 (Max. 16)

Prereq: written consent of director. (Y)

498. University Honors Thesis. Cr. 3-6

Prereq: junior or senior standing. 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

Coordinator: Richard P. Studing

Professors

Bernard M. Goldman (Emeritus), Martin M. Herman (Emeritus), Sara E. Leopold (Emerita), Richard P. Studing

Associate Professors

Marc Cogan, Nola H. Tutag (Emerita)

Following Winter Semester of 1994, the Humanities Department became a Program within the History Department, and ceased accepting majors. All students who were declared majors prior to that date will be given the opportunity to complete their degree requirements with a major in humanities.

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 25), and the College of Liberal Arts Group Requirements (see page 207).

2. Some may serve as electives or cognates for students majoring in other disciplines.

COURSES OF INSTRUCTION (HUM)

The following courses, numbered 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

101. (VP) Introduction to Art and Music in Western Civilization. Cr. 4

No credit for humanities majors. 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)

102. (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)

103. (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)

113. Practicum in Humanities. (Fld: 1). Cr. 1(Max. 3)

Prereq. or coreq: HUM 101, 102, 103, 210, 211, or 221. Attending and reviewing assigned performances and exhibitions related to HUM 101, HUM 102, HUM 103, HUM 210, HUM 211, or HUM 221. (T)

200. (IC) Reading and Writing About the Arts. Cr. 3

Prereq: ENG 102. 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)

210. (PL) Humanities and the Western Tradition I: Antiquity to the Renaissance. Cr. 4

Examining relationships among the arts and connections between art and ideas from antiquity to the Renaissance. (F)

211. (PL) 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)

220. (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)

221. Medium, Form and Meaning in the Arts. Cr. 3

Major works of poetry, drama, art and music serve to demonstrate how medium, form, meaning and message act in concert. (Y)

222. (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)

250. Images of Labor in the Arts and Literature. (LBS 250). Cr. 4

Diverse history of labor as reflected in the popular arts (films, songs, stories, and graphics). (T)

265. Topics in Humanities. Cr. 3(Max. 6)

Specific topics, subjects, themes in the humanities from multidisciplinary and interdisciplinary perspectives. Topics to be announced in *Schedule of Classes*. (I)

303. (VP) Music - Theatre - Cinema: Imitation, Adaptation, Transformation. Cr. 3

Prereq: HUM 102 or 221 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)

310. (HS) Historical Epochs In Contrast. Cr. 3

Prereq: junior standing or above. Two historical-cultural periods are compared and contrasted from multidisciplinary and interdisciplinary perspectives: views of theology (God and religion) and human nature, artistic achievements, and concepts of history. Primary materials emphasized; examination of historical periodization and methodology. (F)

390. Directed Study. Cr. 1-3(Max. 3)

Prereq: written consent of chairperson. Open primarily to junior and senior humanities majors. Advanced study in a particular area of the humanities. (T)

533. Western Culture in the Classical Period. Cr. 3

Prereq: HUM 210 and 211 or equiv. Stylistic relationships among the arts; consideration of connections between the arts and such other forms of knowledge or experience as history, philosophy, religion, and science. (I)

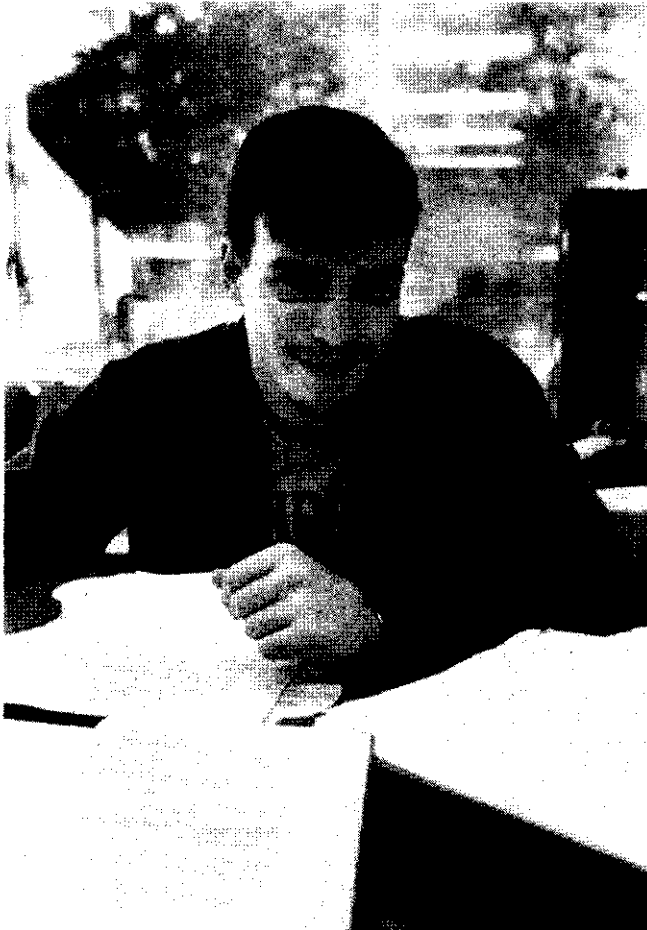
535. Western Culture in the Middle Ages. Cr. 3

Prereq: HUM 210 and 211 or equiv. Stylistic relationships among the arts; consideration of connections between the arts and such other forms of knowledge or experience as history, philosophy, religion and science. (I)

538. Western Culture in the Romantic Period. Cr. 3
 Prereq: HUM 210 and 211 or equiv. Stylistic relationships among the arts; consideration of connections between the arts and such other forms of knowledge or experience as history, philosophy, religion, and science. (I)

539. Western Culture from 1870 to the Present. Cr. 3
 Prereq: HUM 210 and 211 or equiv. Stylistic relationships among the arts; consideration of connections between the arts and such other forms of knowledge or experience as history, philosophy, religion, and science. (I)

593. (WI) Writing Intensive Course in Humanities. Cr. 0
 Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: HUM 533, 535, 536, 537, 538, 539, 575 or 576. 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)



INTERNATIONAL STUDIES

Office: 355 Manoogian Hall; 577-8072; Fax: 577-2738

Interim Director: Bruce S. Morgan

Advisory Committee

Africana Studies: Eboe Hutchful

Anthropology: Mark L. Weiss

Economics: Allen C. Goodman

English: Renata M. Wasserman

German and Slavic Studies: Donald Haase

History: Alan Raucher

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).

<i>Core Requirements</i>	<i>credits</i>
ANT 310 — Cultures of the World	3-4
GPH 110 — (SS) World Regional Patterns	4-5
LIN 273 — (ENG 273) Languages of the World	3
P S 271 or P S 281	
— Introduction to Comparative Politics	4
— World Politics	4
ECO 130 or HIS 140	
— Economic Issues of Canada, Mexico, and the United States	3
— (HS) The World Since 1945	3-4

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 Interim Director, Dr. Bruce Morgan, 355 Manoogian Hall.

LEGAL STUDIES

Office: 171 Law School Annex; 577-3947

Director: John Friedl

Advisory Committee

Boysie A. Billings, *Accounting*

Frederica B. Lombard, *Law*

John R. Reed, *English*

Stephen J. Spurr, *Economics*

Sandra F. VanBurkleo, *History*

Jesse C. Vivian, *Pharmacy Practice*

Marvin Zalman, *Criminal Justice*

Interdisciplinary Minor in Legal Studies

The College of Liberal Arts offers a Minor in Legal Studies for undergraduate students majoring in other disciplines. This minor 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. It is not intended to provide in-depth coverage of a particular body of law or to serve as a pre-law curriculum. 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) at least three courses from Group I; 3) at least two courses from Group II; and 4) not more than one course from Group III.

Substitution of some courses not listed below may be made with prior written consent of the Director.

Group I (three courses must be elected from this group)

ECO 525 — Economic Analysis of Law	4
HIS 528 — American Legal History (HIS 728)	4
PHI 327 or PHI 527	
— Foundations of Law	3
— Philosophy of Law	4
P S 310 — American Legal Systems and Processes	4
SOC 581 — Law in Human Society (CRJ 581)	3

Group II (two courses must be elected from this group)

AGS 306 — Law: Analysis and Writing	4
AFS 386 — Race, Class, and the Criminal Justice System (SOC 386)	3
AFS 558 — Law and the African American Experience (SOC 558)	3
ANT 617 — Political Anthropology	3
CLA 510 — Law and Ancient Society (HIS 510) (HIS 710)	3-4
CRJ 101 — Introduction to the Criminal Justice System	4
CRJ 230 — Penology: Punishment and Corrections (SOC 384)	3
CRJ 240 — Introduction to the Judicial Process	4
CRJ 312 — Politics of the Criminal Justice Process (P S 312)	4
CRJ 480 — (SOC 480) Outsiders, Outcasts and Social Deviants	3
CRJ 506 — Comparative Criminal Justice Systems	3
CRJ 594 — (PCS 500) Dispute Resolution (P S 589) (PSY 571)	3

CRJ 686 — (SOC 686) Organized Crime: Its History and Social Structure	3
ECO 520 — Regulation and Regulated Industries	4
ECO 521 — Market Power and Economic Welfare	4
ECO 550 — Public Finance: Taxation and Expenditure Theory	4
ECO 551 — Public Choice	3
ECO 552 — State and Local Public Finance (U P 675)	3
HIS 250 — (PCS 200) Introduction to Peace and Conflict Studies (P S 282)	3
HIS 509 — Constitutional History of the U.S. from 1937 to the Present (HIS 709)	3
HIS 510 — (CLA 510) Law and Ancient Society	3-4
HIS 516 — Constitutional History of the United States to 1860 (HIS 716)	4
HIS 517 — Constitutional History of the United States from 1860 to 1940 (HIS 717)	4
HIS 531 — Social Justice in America (HIS 731)	4
PCS 200 — Introduction to Peace and Conflict Studies (HIS 250) (P S 282)	3
PCS 500 — Dispute Resolution (CRJ 594) (P S 589) (PSY 571)	3
PHI 110 — (PL) Contemporary Moral Issues	3
PHI 232 — (PL) Introduction to Ethics	3-4
PHI 528 — History of Ethics	4
PHI 530 — Twentieth Century Analytic Ethics	4
P S 282 — (PCS 200) Introduction to Peace and Conflict Studies (HIS 250)	3
P S 311 — Politics and Local Justice	4
P S 312 — (CRJ 312) Politics of the Criminal Justice Process	4
P S 351 — (PL) Law, Authority and Rebellion	4
P S 352 — (PL) Justice	4
P S 582 — International Law	4
P S 589 — (PCS 500) Dispute Resolution (CRJ 594) (PSY 571)	3
PSY 571 — (PCS 500) Dispute Resolution (CRJ 594) (P S 589)	3
SOC 382 — Theories of Crime and Delinquency	3
SOC 384 — (CRJ 230) Penology: Punishment and Corrections	4
SOC 386 — (AFS 386) Race, Class, and the Criminal Justice System	3
SOC 480 — Outsiders, Outcasts, and Social Deviants (CRJ 480)	3
SOC 558 — (AFS 558) Law and the African American Experience	3
SOC 686 — Organized Crime: Its History and Social Structure (CRJ 686)	3
SPC 211 — (CT) Argumentation and Debate	3
U P 675 — (ECO 552) State and Local Finance	3

Group III (not more than one course may be elected from this group)

ACC 351 — Business Law I	3
ACC 517 — Taxes on Income	3
ACC 519 — Business Law II	3
C E 581 — Legal Aspects of Engineering Problems	3
CRJ 241 — The Juvenile Justice System	4
CRJ 571 — Constitutional Criminal Procedure	4
CRJ 572 — Criminal Law	4
CRJ 675 — Administrative Law in Criminal Justice	3
FPC 502 — Legal Environment of the Arts	3
GPH 581 — (GEG 581) Locational Issues in Hazardous Waste Mgt. (HWM 581)	3
HPR 664 — Legal Issues and Risk Management in Health, Phys. Ed. & Recreation	3
HWM 554 — Law and Administration Issues in Hazardous Waste Management I	2
SPJ 502 — History and Law of American Journalism	4
LBS 450 — Applied Labor Studies: Labor Law	3
MGT 574 — Collective Bargaining	3
PPR 312 — (WI) Pharmacy Jurisprudence	2
PPR 610 — Legal Environment in Pharmacy	2-3
PHI 111 — Ethical Issues in Health Care	3
P S 317 — The Living Constitution	4
P S 511 — Constitutional Law	4
P S 512 — Constitutional Rights and Liberties	4
P S 612 — Administrative Law and Regulatory Politics	3
P S 635 — Judicial Administration (CRJ 635)	3
U P 511 — Urban Planning Process	3-4
U P 665 — Planning and Development Law	2-3

LINGUISTICS

Office: Room 4025, 51 West Warren; 577-8642

Director: Martha Ratliff

Participating Faculty

Ellen Barton, *Associate Professor, English*

Lynn Bliss, *Professor, Communication Disorders and Sciences*

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*

John Mullennix, *Assistant Professor, Psychology*

Ljiljana Progovic, *Assistant Professor, English*

Martha Ratliff, *Associate Professor, English*

Aleya Rouchdy, *Professor, Near Eastern and Asian Studies*

Eli Saltz, *Professor, Psychology*

Patricia Siple, *Associate Professor, Psychology*

Rebecca Treiman, *Professor, Psychology*

Frances Trix, *Assistant Professor, Anthropology*

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. The program offers courses from the major areas of the field, including (a) the structural aspects of sentences (syntax), words (morphology), and speech sounds (phonology), (b) the historical development of language, (c) the semantic and pragmatic basis of language interpretation in sentences and discourses, (d) language variation and use in social contexts (sociolinguistics), (e) the processing and acquisition of language (psycholinguistics), and (f) the application of language to other areas of human knowledge.

Training in linguistics prepares students for advanced work in linguistic research, as well as for employment in teaching English and foreign languages; computer programming (especially in natural language processing); civil service and diplomatic work; broadcasting, mass media and public relations; and generally any profession requiring the precise use or the 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.

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 25), the College Group Requirements (see page 369), 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 15-43 and 369-374 respectively.

The bachelor of arts program consists of a core of linguistics courses which all majors must complete. In addition to the core courses, the student must pursue one of the following concentrations: a) Linguistics and a Language; b) Formal Linguistics: Syntax and Semantics; c) Psycholinguistics; d) Sociolinguistics; e) Individualized Program.

A student must complete a minimum of twenty-eight credits in core and concentration courses to satisfy the major requirements.

CORE COURSES:

	credits
LIN 529 — Phonology	3
LIN 530 — Theory of Syntax	3
LIN 570 — Introduction to Linguistic Theory	3

CONCENTRATIONS:

A. Linguistics and a Language

The student must complete fifteen credits in advanced language skills or in the linguistics of the chosen language beyond the basic courses. In addition, the student must elect an appropriate course in historical linguistics. The fifteen credits in advanced language skills should be planned in consultation with the adviser.

B. Formal Linguistics: Syntax and Semantics

Required Courses:	credits
LIN 185 — Introductory Symbolic Logic	3
LIN 557 — Philosophy of Language	4
LIN 572 — Topics in Language: Morphology	3
LIN 572 — Topics in Language: Semantics	3

Elective courses to complete 28-credit major requirements:

LIN 505 — Advanced Symbolic Logic	4
LIN 520 — Modal Logic	4
LIN 563 — Twentieth Century Analytic Philosophy I	4
LIN 671 — Psycholinguistics	3
PHI 535 — Logical Systems I	4
PHI 539 — Logical Systems II	4
PHI 564 — Twentieth Century Analytic Philosophy II	4

C. Psycholinguistics

Required Courses:

LIN 308 — Cognitive Psychology: Fundamental Processes	3
LIN 671 — Psycholinguistics	3

Elective courses to complete 28-credit major requirements:

LIN 508 — Phonetics	3
LIN 620 — Development of Memory	3
PSY 301 — Statistical Methods in Psychology	4

* For specific requirements, consult the Wayne State University Graduate Bulletin.

PSY 490 —Directed Study and Research (credit max. 9)	2-4
PSY 695 —Advanced Special Topics (elect with consent of adviser)	3

D. Sociolinguistics

Required Courses:

LIN 531 or LIN 576	
—Language and Culture	3
—American Dialects	3
LIN 532 or LIN 577	
—Language and Society	3
—Sociolinguistics	3

Elective courses to complete 28-credit major requirements:

LIN 576 — American Dialects	3
LIN 577 — Sociolinguistics	3
LIN 671 — Psycholinguistics	3
SPC 504 — Rhetoric of Racism	3
SOC 410 — (SS) Social Psychology	3
SOC 628 — Social Statistics	4
ANT 520 —Social Anthropology	3
ENG 560 —Studies in Folklore	3

E. Individualized Program

A student may design concentrations to meet an individualized program. Plans of work for special concentrations must be approved by the Committee for the Linguistics Program before the student has completed a maximum of twelve credits in the major.

Minor in Linguistics

The minor in linguistics requires at least six courses for a total of eighteen credits. These courses must include:

	credits
LIN 529 — Phonology	3
LIN 530 — Theory of Syntax	3
LIN 570 — Introduction to Linguistic Theory	3

The other three courses must be either (a) all from one of the four areas of concentration (A, B, C, or D, above); or (b) all LIN courses from departments in the College of Science or the College of Liberal Arts.

UNDERGRADUATE COURSES (LIN)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

- 170. (ENG 170) 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. (Y)
- 185. (PHI 185) Introductory Symbolic Logic. Cr. 3**
The logic of propositions; the general logic of predicates and relations. (T)
- 186. (PHI 186) Honors Symbolic Logic. Cr. 3**
Open only to Honors students. See LIN 185. (T)

- 272. (ENG 272) (PL) Basic Concepts in Linguistics. Cr. 3**
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 and animal communication, and language in social interaction. (T)

- 273. (ENG 273) Languages of the World. Cr. 3**
Prereq: ENG 102. 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)

- 308. (PSY 308) Cognitive Psychology: Fundamental Processes. Cr. 3**
Prereq: PSY 101 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)

- 505. (PHI 505) 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 metatheory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. (Y)

- 508. (CDS 508) Phonetics. (SED 532). Cr. 3**
Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiology approaches. (F)

- 520. (PHI 520) Modal Logic. Cr. 4**
Prereq: PHI 185 or PHI 186 or consent of instructor. The logic of necessity, possibility, and other modal notions as they occur in epistemic and deontic contexts. (B)

- 521. (ARB 521) Arabic Sociolinguistics. 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)

- 523. (ARB 523) Structure of Arabic. Cr. 3**
Prereq: ARB 202 or consent of instructor. No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

- 529. (ENG 571) Phonology. Cr. 3**
Prereq: LIN 570. 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)

- 530. (ENG 574) Theory of Syntax. Cr. 3**
Prereq: LIN 570. 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)

- 531. (ANT 531) Language and Culture. Cr. 3**
Prereq: ANT 210 or ANT 520 or S S 191 or SOC 201 or consent of instructor. An introduction to the structure of language and to the ways that humans use language in the construction of human worlds. Diversity of the world's languages and universal properties of language will be discussed. Theories of language change will be introduced. (F)

- 532. (ANT 532) Language and Society. Cr. 3**
An introduction to the functions of language in many kinds of human groups. Languages used to express social roles and statuses, caste, class, and ethnic diversity. Such aspects of language variability as "street" or vernacular languages, literary standard languages, pidgin and creole languages, and multilingualism. (W)

536. (CDS 532) Normal Language Acquisition and Usage. (SED 536). Cr. 3

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (Y)

557. (PHI 557) Philosophy of Language. Cr. 4

Prereq: PHI 185 or PHI 186 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)

563. (PHI 563) Twentieth Century Analytic Philosophy I. Cr. 4

Prereq: PHI 185 or PHI 186 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. (B)

570. (ENG 570) 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)

572. (ENG 572) 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)

573. (ENG 573) Traditional Grammar. Cr. 3

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (T)

575. (ENG 575) Theory of English as a Second Language. Cr. 3

Detailed examination of theories of language and language acquisition relevant to the non-native speaker of English. Review of research in language acquisition and language learning. (I)

576. (ENG 576) American Dialects. Cr. 3

Survey of chief social and geographic dialects of American English and introduction to theory of language variation. (I)

577. (ENG 577) 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)

593. (WI) Writing Intensive Course in Linguistics. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: LIN 529, 572, or 577. 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)

620. (PSY 620) Development of Memory. Cr. 3

Prereq: PSY 309 and PSY 240 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)

671. (PSY 671) 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 and memory, discussed within the framework of the behaviorist, generative linguistic and information processing approaches to language. (Y)



NEAR EASTERN and ASIAN STUDIES

Office: 437 Manoojian; 577-3015

Chairperson: Aleya A. Rouchdy

Professors

Aleya A. Rouchdy, 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 Near East and 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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, respectively.

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: (1) 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 101 and 102. They also include at least three units in cognate courses in related areas such as N E 200, 203, 204, or 355.

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 101 and 102. They also include at least three units in cognate courses in related areas such as N E 201, 202, or 365.

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 101-102, 201-202 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 honor 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).

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

Arabic (ARB)

101. Elementary Arabic I. Cr. 4

Material fee as indicated in *Schedule of Classes*. Vocabulary, forms, syntax, graded readings. (F)

102. Elementary Arabic II. Cr. 4

Prereq: ARB 101 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of ARB 101. (W)

201. (FC) Intermediate Arabic I. Cr. 4

Prereq: ARB 102 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of grammar, readings in classical and modern prose. (F)

* For specific requirements, consult the Wayne State University Graduate Bulletin.

202. Intermediate Arabic II. Cr. 4
Prereq: ARB 201 or consent of instructor. Continuation of ARB 201.
(W)

390. Directed Study. Cr. 1–6(Max. 9)
Prereq: consent of chairperson. Readings, periodic reports and consultations.
(T)

501. Medieval Arabic Texts. Cr. 3
Prereq: ARB 201 or consent of instructor. Reading and translation of Arabic Medieval texts.
(Y)

514. Readings in Modern Arabic Literature. Cr. 3
Prereq: knowledge of Arabic above ARB 202. Advanced readings in modern Standard Arabic.
(Y)

521. Arabic Sociolinguistics. (LIN 521). 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)

523. Structure of Arabic. (LIN 523). Cr. 3
Prereq: ARB 202 or consent of instructor. No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic.
(Y)

590. Directed Study. Cr. 3–6(Max. 9)
Prereq: undergrad., consent of chairperson; grad., consent of chairperson and written consent of graduate officer. Readings; periodic consultations and reports.
(T)

Asian (ASN)

390. Directed Study. Cr. 3–6(Max. 12)
Prereq: consent of chairperson. Directed readings.

455. (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)

456. (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)

485. 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)

590. Directed Study. Cr. 3–6(Max. 12)
Undergrad. prereq: consent of chairperson; grad. prereq: consent of chairperson and graduate officer. Graduate cognate credit only. Directed readings.
(Y)

Hebrew (HEB)

101. Elementary Hebrew I. Cr. 4
Material fee as indicated in *Schedule of Classes*. Grammar, vocabulary, graded readings, discussions.
(F)

102. Elementary Hebrew II. Cr. 4
Prereq: HEB 101 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Continuation of HEB 101.
(W)

201. (FC) Intermediate Hebrew I. Cr. 4
Prereq: HEB 102 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Review of grammar, readings in modern Hebrew texts.
(F)

202. Intermediate Hebrew II. Cr. 4
Prereq: HEB 201 or consent of instructor. Continuation of HEB 201.
(W)

204. Cultural Trends in Modern Hebrew Literature. Cr. 3
Selected readings in poetry and prose from Bialik to the present; drama selections at instructor's option.
(Y)

390. Directed Study. Cr. 1–3
Prereq: consent of chairperson. Readings; consultations and reports.
(T)

590. 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)

101. Elementary Japanese I. Cr. 4
Introduction to written and spoken Japanese.
(F)

102. Elementary Japanese II. Cr. 4
Prereq: JPN 101, placement or consent of instructor. Continuation of JPN 101.
(W)

201. (FC) Intermediate Japanese I. Cr. 4
Prereq: JPN 102, placement or consent of instructor. Continuation of JPN 102. Focus on language and Japanese culture.
(F)

354. 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)

Near Eastern Studies (N E)

200. (FC) Introduction to Islamic Civilization of the Near East. Cr. 3
The origin of Islam; the growth of Islamic institutions.
(Y)

201. The Bible and Ancient Mythology. Cr. 3
The Bible and Biblical religion in the context of its antecedents in the ancient world.
(Y)

202. Survey of Jewish History and Civilization. (HIS 232). 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 their was major Jewish settlement.
(I)

203. (HS) The Age of Islamic Empires: 600–1600. (HIS 180). 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)

204. (HS) The Modern Middle East. (HIS 181). 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)

270. Topics in Middle Eastern Studies. Cr. 1–4
Specialized topics related to the Middle East, such as: language, literature, religion.
(Y)

303. Great Cities of the Near East. Cr. 3

Illustrated study of the urban centers of the Near East: Mecca, Baghdad, Cairo, Jerusalem and others. (Y)

331. History and Civilization of the Ancient Near East I. (HIS 331). 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)

355. (ANT 355) (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)

368. Islamic History: The Formation of the State. (HIS 368). Cr. 3

History of the Near East from the death of the Prophet until the rise of the Abbasid Empire. (Y)

390. Directed Study. Cr. 3-6(Max. 9)

Prereq: consent of chairperson. Readings; consultations and reports. (T)

570. Topics In Middle Eastern Studies. Cr. 1-4 (Max. 8)

Specialized and topical studies in Middle East events, language, and literature. (Y)

590. Directed Study. Cr. 3-6 (Max. 9)

Prereq: undergrad., consent of chairperson; grad., consent of chairperson and graduate officer. Readings, consultations, reports. (T)

593. (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 300-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)

PHILOSOPHY

Office: 51 West Warren; 577-2474

Chairperson: Bruce Russell

Professors

Richard B. Angell (Emeritus), Lawrence B. Lombard, T. Michael McKinsey, Bruce Russell, Robert J. Yanal

Associate Professors

Herbert Granger, Barbara M. Humphries, Lawrence Powers, William D. Stine, Robert J. Titiev

Assistant Professor

Susan Vineberg

Lecturer

Stefan Sencerz

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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, respectively.

* For specific requirements, consult 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 210 (or 541 or 542) and PHI 211 (or 544 or 545 or 546) 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 185 or 186);
5. three courses at the 500-level or above (other than PHI 593); and
6. PHI 593 (Writing Intensive Course in Philosophy).

NOTE: Rather than taking a 200- or 300-level course in satisfying any of requirements (2) or (3), one may take a 500-level course from the same group instead; however, the student should consult the instructor before doing so. Courses taken at the 500-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 honor 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 487 and 489 (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 487,
- d. complete a 400-level seminar offered through the College Honors Program, and
- e. accumulate at least fifteen credits in honors-designated course work, including PHI 487 and 489 and the 400-level Honors Program Seminar.

At graduation, the overall honor 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 268).

1. *History of Philosophy group:* PHI 210 (or 541, or 542) or PHI 211 (or 545, or 546).
2. *Symbolic Logic group:* PHI 185 or 186.
3. *Value Theory group or Philosophical Problems group:* one course from either group.
4. One course at the 500 level or above from any group.
5. One additional course at the 200 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

Introductory Courses

101. (PL) Introduction to Philosophical Systems. (Lct: 3; or Lct: 3; Dsc: 1). Cr. 3-4

No credit after PHI 103. 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)

102. (PL) Honors Introduction to Philosophical Systems. Cr. 3-4

Open only to Honors students. See PHI 101. (I)

103. (PL) Introduction to Philosophical Problems. Cr. 3-4

No credit after PHI 101. 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)

104. (PL) Honors Introduction to Philosophical Problems. Cr. 3-4

Open only to Honors students. See PHI 103. (I)

105. (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)

110. (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; nuclear deterrence and strategic defense. (Y)

111. 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)

185. Introductory Symbolic Logic. (LIN 185). Cr. 3

The logic of propositions; the general logic of predicates and relations. (Y)

186. Honors Introductory Symbolic Logic. (LIN 186). Cr. 3
Open only to Honors students. See PHI 185. (Y)

History of Philosophy

210. (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)

211. (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)

541. Plato. Cr. 4
Prereq: any philosophy course at the 200 level or above, or classics major, or consent of instructor. Selected readings on topics in Plato. (B)

542. Aristotle. Cr. 4
Prereq: any philosophy course at the 200 level or above, or classics major, or consent of instructor. Selected readings on topics in Aristotle. (B)

544. Continental Rationalism. Cr. 4
Prereq: any philosophy course at the 200 level or above, or consent of instructor. Topics concerning Descartes, Spinoza or Leibniz. (I)

545. British Empiricism. Cr. 4
Prereq: any philosophy course at the 200 level or above, or consent of instructor. Topics concerning Locke, Berkeley, or Hume. (I)

546. Kant. Cr. 4
Prereq: any philosophy course at the 200 level or above, or consent of instructor. Selected topics or readings in Kant's philosophy. (B)

Theory of Value

232. (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)

233. 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)

327. Foundations of Law. Cr. 3
Prereq: upper division undergraduate status. No credit after PHI 527. 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)

370. (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)

524. Special Topics in Social and Political Philosophy. Cr. 4 (Max. 8)
Prereq: any philosophy course at the 200 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)

527. Philosophy of Law. Cr. 4
Prereq: one philosophy course at the 200 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)

528. History of Ethics. Cr. 4
Prereq: one philosophy course at the 200 level or above or consent of instructor. A survey and discussion of historically important moral philosophers from Plato to Mill. (B)

530. Twentieth Century Analytic Ethics. Cr. 4
Prereq: any philosophy course at the 200 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

240. 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)

350. (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)

355. (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)

360. 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)

523. Philosophy of Science. (SOC 608). Cr. 4
Prereq: PHI 185 or 186 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)

550. 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)

553. 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)

555. 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)

557. Philosophy of Language. (LIN 557). Cr. 4

Prereq: PHI 185 or 186 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)

563. Twentieth Century Analytic Philosophy I. (LIN 563). Cr. 4

Prereq: PHI 185 or 186 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)

564. Twentieth Century Analytic Philosophy II. Cr. 4

Prereq: PHI 185 or 186 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)

580. Special Topics in Philosophy. Cr. 3-4(Max. 9)

Topics and prerequisites to be announced in *Schedule of Classes*. (I)

Logic

505. Advanced Symbolic Logic. (LIN 505). 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 metatheory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. (Y)

520. Modal Logic. (LIN 520). Cr. 4

Prereq: PHI 185 or 186 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)

535. Logical Systems I. (MAT 535). Cr. 4

Prereq: PHI 185 or 186 or MAT 560 or MAT 542 or consent of instructor. 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)

539. Logical Systems II. (MAT 539). Cr. 4

Prereq: PHI 535 or MAT 535 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)

575. Philosophy of Logic. Cr. 4

Prereq: PHI 185 or 186 and one other philosophy course at the 200 level or above, or consent of instructor. Topics concerning such issues as the nature of logic, the relation between logic and ontology, and the relation between logic and mathematics. Topics to be announced in *Schedule of Classes*. (I)

Special Courses

487. Honors Directed Reading. Cr. 4

Prereq: philosophy honors candidate. Research on topic of honors essay and research for comprehensive examinations. (F)

489. Honors Proseminar. Cr. 4

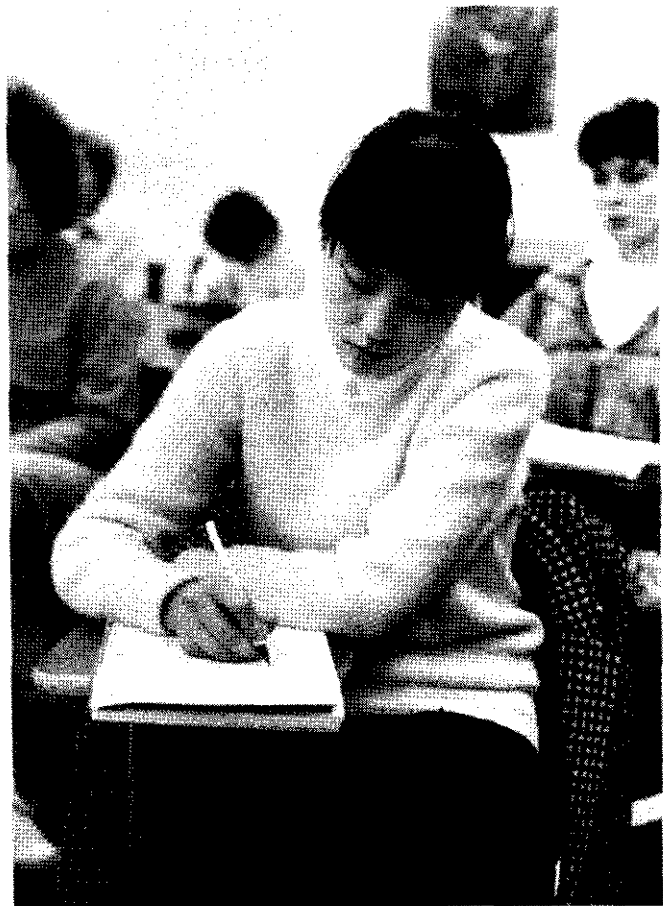
Prereq: PHI 487. Continuation of PHI 487. (W)

590. 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)

593. (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 300- or 500-level philosophy course except PHI 520, 535, 539, and 575. 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. (I)



POLITICAL SCIENCE

Office: 2040 Faculty/Administration Building; 577-2630

Chairperson: Charles D. Elder

Professors

Philip R. Abbott, David W. Adamany, Pi-chao Chen, Rondal G. Downing, Charles D. Elder, Richard C. Elling, Otto Feinstein, Theodore B. Fleming, Jr. (Emeritus), Wesley L. Gould (Emeritus), Charles J. Parrish, Frederic S. Pearson, Henry J. Pratt, Murray B. Seidler (Emeritus), Jorge Tapia-Videla, Maurice Waters, Harold L. Wolman

Associate Professors

Timothy Bledsoe, Ronald E. Brown, James T. Chalmers, Susan P. Fino, Michael Goldfield, John M. Strate, T. Lyke Thompson

Assistant Professors

Mary Herring, Marjorie E. Sarbaugh-Thompson

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*

**MASTER OF PUBLIC ADMINISTRATION in Criminal Justice*

**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, consult 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 an honor 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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, 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 101 or 103).
2. At least one course from the following: P S 251, 271, 281, 282.
3. At least four courses at the 300 level or higher. (P S 593 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 International Relations/Comparative Politics (second digit of 7 or 8). P S 101, 103, 251, 271, 281, and 282 do not count toward fulfilling this requirement.
5. A Writing Intensive course in political science with co-registration in P S 593, in order to satisfy the Writing Intensive Course in the Major requirement. Any political science course at the 300-level or higher, except P S 333, 563, and 664, 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 593, 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 360, 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 301, 302, 304, 305, 306, and 343.

Public Law/Legal Studies. Judicial interpretation of the Constitution; civil liberties and constitutional rights; law enforcement and the operations of the judicial system. Relevant courses include: P S 310, 311, 511, 512, 612, and 635.

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 200, 224, 311, 325, 522, and 602.

Public Administration. The nature and functions of public agencies; techniques of public management; public bureaucracy in its social setting. Relevant courses include: P S 231, 292, 333, 343, 522, 635, and 637.

Public Policy. How policy is formulated, decided, implemented, and evaluated; moral and political standards for making policy. Relevant courses include: P S 241, 242, 292, 333, 343, 446, 522, 544, 581, and 643.

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 242, 251, 351, 352, 353, 551, 556, and 557.

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 360, 446, 563, and 664.

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 271, 371, 475, 476, 478, 572, 577, and 637.

International Relations. Conflict and cooperation among nations; causes of war and the pursuit of peace; international organizations and multi-national 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 281, 282, 381, 581, and 582.

— 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 including P S 310, 511, and 512 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 an honor point average of 2.25 and follow the procedures set forth by the College of Liberal Arts for declaring a major (see page 208).

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 207) excepting the foreign language requirement, and the University General Education Requirements (see page 25), 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 15-43 and 207-212, 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 co-registration in P S 593 is also required, in order to satisfy the Writing Intensive Course in the Major requirement. Any political science elective or concentration course at the 300-level or higher, except P S 333, 563, and 664, 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 593, 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.

Persuasive Writing (3 credits): One course in persuasive writing selected from English 301, 303, 305, or 308. This requirement is in addition to the University General Education Intermediate Composition (IC) requirement.

Mathematics (4 credits): MAT 150 or 180 required. This requirement should be satisfied as early as possible.

Computing (2–4 credits): One course in computing selected from CSC 100, 101, or 110, or ACC 263; CSC 101 or ACC 263 recommended.

Economics (8 credits): Two introductory principles courses (Economics 201 and 202).

American Government (3–4 credits): Political Science 101 or 103.

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 241 —Introduction to Public Policy	4
P S 242 —Ethics and Politics of Public Policy	4
2. Techniques and Methods	
P S 563 —Statistics and Data Analysis I	4

The statistics course is prerequisite to:

P S 446 —Techniques of Policy Analysis	4
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Political Science Electives: Students must take two additional political science courses (6–8 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 231, 333, 343, 522, 602 and 612, 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 231, 303, 311, 333, 343, 522, 544, 643, 644, and 664, 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 224, 231, 325, 522, and 602, 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.

Judicial Administration: The following are required for students in the Judicial Administration concentration:

Political Science Requirements (10–12 credits): Three courses selected from P S 231, 310, 311, 312, 612, and 635; dealing with local justice, American legal systems and processes, and the politics and administration of court systems.

Cognate Course (3–4 credits): One course selected from another discipline on a subject such as: organizational and managerial behavior, management techniques, business management, legal history or criminology.

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 honor point average of 3.3. To graduate with honors, students must:

1. Maintain a 3.3 honor point average.
2. Under the direction of one or more members of the department, complete a senior honors paper (P S 495).
3. Complete all requirements for the Bachelor of Arts or Bachelor of Public Affairs degree.
4. Complete one 400-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 fifteen credits in honors-designated course work, including P S 495, 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 h.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 211). 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 either the undergraduate adviser or the pre-law adviser.

Internships

Internships in government 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 292, 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 or exchange program coordinator 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 212, above, and the section on the Office of Scholarships and Financial Aid, page 21. For further information, contact the Department Office.

The Tudor Award is given annually for the best paper or essay written by an undergraduate student in a political science course.

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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

100. (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)

101. (AI) American Government. Cr. 4
No credit after P S 103. Politics and functions of American governmental institutions. Policy processes and the role of citizens in the political process. (T)

103. (AI) The American Governmental System. Cr. 3
No credit after P S 101. Structure and functions of the American political system. Governmental institutions and processes. (T)

**200. (U S 200) (SS) Introduction to Urban Studies.
(SOC 250)(GPH 200)(HIS 200). 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)

207. State and Local Government. Cr. 4
Overview and examination of the structure and processes of American state and local governments with a stress upon intergovernmental relations. (Y)

224. (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)

231. Introduction to Public Administration. Cr. 4
Prereq: P S 101 or 103. Governmental and administrative structures and organizations. Concepts and techniques of public management. Impact of public bureaucracies on modern society. (T)

241. Introduction to Public Policy. Cr. 4
Prereq: P S 101 or 103. Public policy-making institutions and processes. Emphasis on theory and practice of policy formation, implementation and evaluation. Various models of political decision making. (T)

242. 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)

**244. (PHY 202) Science, Technology, and War.
(HIS 251)(PCS 202). Cr. 4**
Prereq: P S 101 or 103. 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)

- 246. Policy and Rationality: Dilemmas of Choice. Cr. 4**
Individual decision-making and limitations on human cognition; collective choice; implications for policy development. (Y)
- 251. Introduction to Political Ideologies. Cr. 4**
Comparison of ideologies, political institutions, and economic systems. Democracy and authoritarianism, capitalism, socialism and communism contrasted. (Y)
- 270. Introduction to Canadian Studies. (HIS 270)(GPH 270)(ENG 267). 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)
- 271. 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)
- 275. (FRE 275) Introduction to Quebec Studies. (HIS 275)(GPH 275). Cr. 3**
Survey of the French-speaking Province of Quebec in its cultural, literary, historical, geographical, and political aspects; key concepts and cultural patterns defining the Quebecois identity. Team taught in English. (B)
- 281. 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)
- 282. (PCS 200) Introduction to Peace and Conflict Studies. (HIS 250). 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)
- 283. (PCS 201) Topics In Peace and Conflict Studies. (HIS 252). Cr. 1-4**
Special topics relating to peace and conflict studies. (Y)
- 292. Political Science Internship. (U S 292). 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)
- 301. Public Opinion and Political Behavior. Cr. 4**
Prereq: P S 101 or 103 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)
- 302. Political Parties and Elections. Cr. 4**
Prereq: P S 101 or 103. Development, structure, functions and operations of American political parties; their electoral and governmental roles; comparison with other systems; possible reforms. (B)
- 303. Power and Pressure Groups. Cr. 4**
Prereq: P S 101 or 103. 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)
- 304. The Legislative Process. Cr. 4**
Prereq: P S 101 or 103. 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)
- 305. Politics of the American Presidency. Cr. 4**
Prereq: P S 101 or 103. Constitutional, historical, and political bases of the presidency. Influence of courts, Congress, interest groups, the news media, and personality on the office. (B)
- 306. 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)
- 307. (ULM 307) Michigan Politics. Cr. 4**
History and overview of Michigan politics: structure, process, current issues. (B)
- 310. 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)
- 311. Politics and Local Justice. Cr. 4**
Aspects of the local judicial process and interaction with political structures; judicial selection; operation of local courts in relationship with elected officials and pressure groups; discretion and bias in judicial process. (Y)
- 312. (CRJ 312) 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)
- 317. The Living Constitution. Cr. 4**
Investigation of contemporary federal constitutional debate. Examination of a case currently pending before the U.S. Supreme Court; legal underpinning for and policy implications of the different possible outcomes. (B)
- 325. Detroit Politics: Continuity and Change In City and Suburbs. (ULM 325)(HIS 324). 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)
- 333. The Politics of Government Budgeting. Cr. 4**
Prereq: P S 231. The process of budget development; political factors affecting budget decisions, and the use of the budgeting process as a device for making policy choices. (Y)
- 343. Bureaucracy and Public Policy. Cr. 4**
Prereq: P S 101 or 103. 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)
- 351. (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)
- 352. (PL) Justice. Cr. 4**
Analysis of major theories of justice; social, economic and political justice. (B)
- 353. (HS) Community-Building in the History of Western Political Thought. Cr. 4**
Conceptions of community in the history of Western political thought; historical origins and impact of these theories. (B)
- 360. 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)

371. Major European Democracies: Germany and Britain. Cr. 4

Government and politics of Great Britain and Germany; the workings of parliamentary systems; politics and problems of German unification.

(Y)

375. Government and Politics of Canada. Cr. 4

Functioning and role of Canadian political institutions: cabinet government, Parliament, bureaucracy, the Canadian federal system, interest groups, political parties, the Canadian political economy. Comparisons between key Canadian institutions and their U.S. counterparts.

(B)

381. 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)

382. (AFS 342) 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)

391. 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)

446. Techniques of Policy Analysis. Cr. 4

Prereq: P S 563 or introductory statistics course. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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.

(Y)

475. Russia and the Commonwealth of Independent States. Cr. 4

Social, economic and political institutions of Russia and the other states of the former Soviet Union. Transition from communist rule and centralized economy. Relationships among the former Soviet Republics and with other nations of the world.

(Y)

476. Central Europe in the Post-Communist Era: From Marxism to Capitalism. Cr. 4

Central Europe's adaptation to Soviet hegemony and withdrawal; political and economic problems of post-communism.

(Y)

478. Contemporary African Politics. (AFS 478). Cr. 4

Nature of African politics; impact of African politics on international relations.

(B)

490. Directed Study. Cr. 1-4

Prereq: consent of chairperson and undergraduate adviser.

(T)

492. Senior Honors Seminar. Cr. 4

Prereq: admission to political science honors program, senior standing; others must have minimum 3.3 h.p.a. and written consent of undergraduate adviser. Bibliographic and data resources for political science research. Examples of contemporary political science research including presentations of ongoing work by departmental faculty. Development and defense of proposal of senior honors paper and completion of preliminary literature review and annotated bibliography.

(T)

495. 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)

503. African American Politics. (AFS 503). Cr. 4

Nature and texture of black politics; various perspectives on politics by blacks; the impact of blacks on American politics.

(Y)

511. 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)

512. 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)

522. Issues in Urban Public Policy and Management. (U P 515). Cr. 4

Prereq: P S 224 and 231 or consent of instructor. Examination of influences on urban policy formation and implementation. Problems of service distribution, policy impacts and policy evaluation in urban areas. Public administration in urban settings with focus on: program development/implementation, public facilities planning, land use controls, and public services.

(B)

544. Politics of the Elderly. Cr. 4

Analysis of age-based political behavior as reflected in public opinion, voting, and political organization; special governmental programs and agencies serving the aged.

(B)

551. U. S. and Canadian Political Thought. Cr. 4

Critical analysis of U. S. and Canadian political thought including the forms liberalism has taken throughout the history of both countries and the challenges of conservatism, democratic radicalism, and socialism; emphasis on role of political thought in public policy disputes.

(B)

556. 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)

557. Marxism and Socialist Thought. Cr. 4

Review and analysis of Marxist thought in theory and practice; conflicting interpretations of Marx; democratic socialism; anarchism; contemporary neo-Marxist social science.

(Y)

563. Statistics and Data Analysis in Political Science I. Cr. 4

Student computer account required. Material fee as indicated in *Schedule of Classes*. Introduction to statistical description and inference in the study of politics, administration and public policy. Introduction to computer data processing and analysis; applications in the study of politics, administration and public policy.

(Y)

572. China, Japan, and the Far East. Cr. 4

Introductory survey of postwar political and economic development of East Asia: China, Japan, South Korea, Taiwan, Hong Kong, Singapore.

(Y)

574. Ethnicity: The Politics of Conflict and Cooperation. (PCS 550)(AFS 574). 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)

577. Government and 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)

581. 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)

582. International Law. Cr. 4

Survey of basic principles of international law, their historical origin, bases in custom and convention, interpretation by courts and legal scholars. Special attention to current concerns: human rights, conflict resolution, environmental law; influence by United Nations and the European Union. (I)

583. International Conflict and Its Resolution. Cr. 4

Types of international conflict and such methods of resolution as negotiation, mediation and other third-party procedures. (B)

589. (PCS 500) Dispute Resolution. (CRJ 594)(PSY 571). Cr. 3

Overview of the processes and sectors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

591. 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)

592. Political Science AGRAD Internship. Cr. 4

Prereq: consent of undergraduate adviser and M.P.A. program director. Open only to students in B.A./B.P.A./M.P.A. AGRAD 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)

593. (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 300 or higher except P S 333, 446, 563 and 664. 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)

599. Special Topics in Political Science. Cr. 1-4(Max. 16)

Prereq: consent of chairperson or instructor. Open only to juniors, seniors and graduate students. Topics to be announced in *Schedule of Classes*. (T)

602. Intergovernmental Relations and American Federalism. Cr. 3

Legal, fiscal, political and administrative relationships among participants in American federal system. Current issues and public policies which affect or are affected by intergovernmental relationships. (B)

605. (ULM 610) Class, Race, and Politics in America. (HIS 511)(SOC 733)(U P 703)(AFS 610). Cr. 3

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

607. Labor and American Politics. (I R 742). 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)

612. 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)

634. (I R 743) Public Sector Labor Relations. Cr. 3

Prereq: graduate standing. History, present functionings, problems and current controversies surrounding public sector unions. (B)

635. Judicial Administration. (CRJ 635). Cr. 3

Investigation of management of court processes and personnel; role of court administrators; financing, budgeting, speedy trial, indigent representation problems; alternatives to litigation; impact analysis. (B)

637. Comparative Public Administration. Cr. 3

Prereq: P S 231 or equiv. Comparative analysis of major problems and issues affecting national administrative institutions, structures, processes and behavior in a cross-cultural perspective. (B)

643. Politics and Administration of Entitlement Programs. Cr. 3

National government policy related to old-age assistance, income maintenance, food stamps, health care, and other entitlement programs. (B)

644. (ULM 621) Regional, State, and Urban Economic Development: Policy and Administration. (ECO 665)(U P 655). Cr. 3

Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

664. Statistics and Data Analysis in Political Science II. Cr. 3

Prereq: P S 563 or equiv. Student computer account required. Material fee as indicated in *Schedule of Classes*. 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 discriminant function analysis. (Y)



ROMANCE LANGUAGES and LITERATURES

Office: 487 Manoojian Hall; 577-3002

Interim Chairperson: Louis Kibler

Academic Services Officer: Terrie Pickering

Professors

Vincent C. Almazan (Emeritus), Fernande Bassan (Emerita), Manuela M. Cirre (Emerita), Andrea di Tommaso, Jesus Gutierrez, E. Burrows Smith (Emeritus), Donald C. Spinelli, Richard Vernier (Emeritus)

Associate Professors

Jorgelina Corbatta, Michael J. Giordano, Francisco J. Higuero, Louise M. Jefferson, Louis Kibler, Charlotte Lemke (Emerita), Sol Rossman (Emeritus), Donald E. Schurknight, Charles J. Stivale, A. Monica Wagner (Emerita)

Assistant Professors

Theresa Antes, John E. Eipper, Heather Lancaster

Lecturers

Claude Astrachan, Raffaele DeBenedictis, Connie Green, Fenfang Hwu, Marilyn Rashid

Adjunct Professor

Robert Holley

Director of Foreign Language Laboratories

Farouk Alameddine

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. The Department secretary will arrange an interview with the appropriate adviser upon the student's request.

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 207) and the University General Education Requirements (see page 25), 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 15-43 and 207-212, respectively.

Major Requirements

All majors in Italian are required to take a minimum of two courses in English or American literature or in the literature of a country other than that of their major language. All majors in 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: There are two French majors offered by the Department, one in language and literature and the other in language and culture.

A major in French language and literature must take French 210 or 260 or 410, 361, 362, 510 or 520 or 531, 540, 640, 645 or 646 or 647, and any two of the following: 649, 651, 663, 665, 677, 681, 684, and 691.

A major in French language and culture must take French 210 or 410, 260 or 271 or 272, 361, 362, 510 or 531, 520, 640, 645 or 646 or 647.

French majors in either option are also 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 310, 320, 360 and 361; 661; 668; two courses in the post-Renaissance period; and two cognate courses required of all majors in Italian and Spanish.

Major Requirements in Spanish: A student majoring in Spanish is required to take Spanish 220, 310; any two of Spanish 361, 362, or 363; Spanish 510, 520, either 555 or 556, and three literature courses at the 600 level (at least one peninsular and at least one Latin American), and one elective course in Spanish numbered 203 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 214.

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 honor 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 400-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).

Travel Study

Wayne at Gordes Summer Camp: With the approval of the Department, students may earn credit in advanced French during an eight-week summer session in the Renaissance village of Gordes in the south of France. (See Study Abroad, page 210.)

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Minors and Cognate Study

Minor Requirements in French: A French minor requires the completion of seventeen to eighteen credits in French 260, 210 or 410, 271 or 272, 361, or 362 and one 500- or 600-level course.

Minor Requirements in Italian: An Italian minor requires the completion of eighteen credits in Italian courses including: 202, 310 or 320, 360 or 361, any 600 level course, and one additional course at the 300 or 600 level. Substitutions can be made after consultation with the undergraduate adviser.

Minor Requirements in Spanish: A minor in Spanish requires the completion of 220 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) 203, 304, 305, 310, 510, 520, 530, 640; (culture) 555, 556; (literature) 361, 362, 363, any 600-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 208.

Courses: The student should elect a language as early as possible and continue it without interruption. The courses numbered 101, 102, and 201 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. Most of the structural and textual materials are recorded on tape by speakers of native fluency and are available to students in the Foreign Language Laboratory. 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 101, those with two years, in 102, those with three years, in 201. Those with four years of study may elect 201 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

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.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 463.

— 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)

270. (GER 270) (PL) **Anguish and Commitment: European Existentialist Literature.** (SPA 270)(ITA 270)(RUS 270). 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)

271. (FC) **Introduction to French Civilization.** 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)

272. (FC) **The Contemporary French.** Cr. 3

Prereq: FRE 271 recommended. 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)

273 **Literary Works from the French Tradition.** Cr. 3

Introduction to selected prose works from several periods of the French literary tradition (all readings in English). Course taught in English. (Y)

275. **Introduction to Quebec Studies.** (HIS 275)(P S 275) (GPH 275). Cr. 3

Survey of the French-speaking Province of Quebec in its cultural, literary, historical, geographical, and political aspects; key concepts and cultural patterns defining the Quebecois identity. Team taught in English. (I)

691. **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)

207. **Daily Life in Italy Today.** Cr. 3

Introduction to the intellectual, political, cultural, and social life of modern-day Italians; their traditions, customs, folklore, daily habits. Taught in English. (Y)

270. (GER 270) (PL) Anguish and Commitment: European Existentialist Literature. (SPA 270)(FRE 270)(RUS 270). 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)

271. (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 political, social, cultural and intellectual groundwork of Humanism and the Renaissance. Taught in English. (Y)

272. (FC) Italian Culture and Civilization II. Cr. 3

Prereq: ITA 271 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)

515. Advanced Study of Italian Cinema. Cr. 3(Max. 9)

Material fee as indicated in *Schedule of Classes*. Concentrated study of specific trends or the development of individual directors. Topics to be announced in *Schedule of Classes*. (B)

Spanish in English Translation (SPA)

240. (CBS 210) Chicano Literature and Culture. Cr. 3

Examination of Chicano literature. Themes and figures in a social and historical context. (B)

250. (CBS 211) Puerto Rican Literature and Culture. Cr. 3

Examination of Puerto Rican literature. Themes and figures in a social and historical context. (B)

270. (GER 270) (PL) Anguish and Commitment: European Existentialist Literature. (FRE 270)(ITA 270)(RUS 270). 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)

FOREIGN LANGUAGE INSTRUCTION

FRENCH (FRE)

101. Elementary French. Cr. 4

Material fee as indicated in *Schedule of Classes*. Training in pronunciation, aural comprehension, oral and written expression. Laboratory work is part of class preparation. (T)

102. Elementary French. Cr. 4

Prereq: FRE 101 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of FRE 101. (T)

201. (FC) Intermediate French. Cr. 4

Prereq: FRE 102 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of FRE 102. (T)

210. Intermediate Grammar, Conversation and Composition. Cr. 4

Prereq: FRE 201. Special attention to development of language skills. Conducted entirely in French; discussion based on reading from contemporary materials. (T)

260. Introduction to the Reading of Literature. Cr. 4

Prereq: FRE 201. 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)

361. Survey of French Literature I. Cr. 4

Prereq: FRE 210 or 260. Study of literature from the Middle Ages through the 18th century. (F)

362. Survey of French Literature II. Cr. 4

Prereq: FRE 210 or 260. Study of literature in the nineteenth and twentieth centuries. (W)

410. Intermediate Conversation, Composition, and Contemporary Cultural Readings. Cr. 4

Prereq: FRE 210. Discussion and composition based on readings in contemporary French social and cultural topics. (Y)

510. (WI) Advanced Speaking and Writing. Cr. 4

Prereq: FRE 210 or 410 or consent of instructor. Spoken French in the context of French civilization. Readings and writing skills based on contemporary French texts, translations. (B)

520. Phonetics and Diction. Cr. 3

Prereq: FRE 210 or 410 or consent of instructor. A systematic study of French sounds, phonetic transcriptions; practice in the language laboratory; intensive drills in accurate pronunciation and intonation. (B)

531. Advanced Composition "sur le Motif". Cr. 4

Prereq: FRE 210 or 410. Composition and *explication de textes* utilizing texts related to Provence. Taught only in Provence at the Wayne State University summer program in Gordes, France. (S)

540. Advanced Grammar Review. Cr. 3

Prereq: FRE 210 or 410 or consent of instructor. Advanced French grammar. Translation exercises from English to French; study of appropriate grammar rules. (B)

585. (GER 585) Second Language Instruction: Theory and Methods. (GER 785)(SPA 585)(FRE 785)(SPA 785). 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)

598. Honors Thesis in French. Cr. 3-6

Prereq: consent of French undergraduate adviser. Open only to Honors students in French. (T)

640. The Structure of French. Cr. 3

Prereq: FRE 520 or consent of instructor. Principles of linguistics and their application to French. (B)

645. French Civilization. Cr. 4

Prereq: FRE 361 or 362 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)

646. Civilization "sur le Motif". Cr. 4

Prereq: FRE 210 or 410. Aspects of modern French civilization in Provence through daily readings and direct contact with the region. Taught only in Provence at the Wayne State University summer program at Gordes, France. (S)

647. The French Mind. Cr. 4

Prereq: FRE 361, 362. The moral and intellectual values underlying French culture and civilization. Their historical development and their evolution as reflected in the institutions, literature and everyday life of modern France. (B)

649. Medieval Literature in Modern French. Cr. 4

Prereq: FRE 361. Study of medieval culture through masterpieces of French and Provençal literatures. Readings in modern French versions. (B)

651. French Sixteenth Century Literature. Cr. 4

Prereq: FRE 361. 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)

663. French Seventeenth Century Literature. Cr. 4

Prereq: FRE 361 or equiv. or consent of instructor. Historical background, religious and literary movements. Development of the

Classical ideal in literature, salons, and academies. Representative authors of non-dramatic literature and the theatre (Corneille, Moliere and Racine). Content varies to cover a genre, literary movement, school or period. Topics to be announced in *Schedule of Classes*. (B)

665. French Eighteenth Century Literature. Cr. 4

Prereq: FRE 361. 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)

677. Studies in French Literature. Cr. 4

Prereq: FRE 361 or 362. 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*. (W)

681. French Nineteenth Century Literature. Cr. 4

Prereq: FRE 362. 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)

684. French Twentieth Century Literature. Cr. 4

Prereq: FRE 362. 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)

686. Francophone Literatures. Cr. 4 (Max. 8)

Prereq: FRE 362 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)

500. 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)

590. Directed Study. Cr. 1-4(Max. 8)

Prereq: undergrad., consent of adviser and chairperson; grad., consent of chairperson, adviser, and graduate officer. (T)

ITALIAN (ITA)

101. Elementary Italian. Cr. 4

Material fee as indicated in *Schedule of Classes*. Ear training, grammar, reading, writing, speaking; emphasis on ability to speak and read Italian. (T)

102. Elementary Italian. Cr. 4

Prereq: ITA 101 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of ITA 101. Composition, conversation, reading of simple modern prose. (T)

201. (FC) Intermediate Italian. Cr. 4

Prereq: ITA 102 or placement. Material fee as indicated in *Schedule of Classes*. Grammar review, composition, conversation, reading, discussion of contemporary Italian culture. (T)

202. Intermediate Italian. Cr. 4

Prereq: ITA 201 or placement. Continuation of ITA 201 with readings in modern Italian literature and culture. (T)

310. Italian Conversation. Cr. 3

Prereq: ITA 202 or placement. Conversation based on current topics and reading materials. (T)

320. Italian Grammar and Composition. Cr. 3

Prereq: ITA 202 or placement. Advanced study of Italian grammar, phonetics, and syntax. Practice in writing themes and translations. (T)

360. Masterpieces of Italian Literature I. Cr. 4

Prereq: ITA 202 or consent of department. Representative works or selections from the writings of the major authors from the thirteenth through seventeenth centuries. (F)

361. Masterpieces of Italian Literature II. Cr. 4

Prereq: ITA 202 or consent of department. Representative works or selections from the writings of the major authors from the eighteenth through twentieth centuries. (W)

593. (W) Writing Intensive Course in Italian. Cr. 0

Prereq: junior standing, consent of instructor; coreq: any 300- or 600-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)

661. Dante: Divine Comedy. Cr. 4

Prereq: ITA 360 or consent of instructor. A close reading of Dante's *Commedia*, with attention to sources, background, and interpretation. (B)

668. Studies in Renaissance Literature. Cr. 4(Max. 12)

Prereq: ITA 360 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)

679. Studies in the Italian Theatre. Cr. 4(Max. 12)

Prereq: ITA 360 and 361 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)

683. Studies in Modern Italian Poetry. Cr. 4(Max. 12)

Prereq: ITA 361 or consent of instructor. Selected studies of movements, themes, periods or poets. Topics to be announced in *Schedule of Classes*. (B)

687. Studies in Modern Italian Fiction. Cr. 4(Max. 12)

Prereq: ITA 361 or consent of instructor. Study of a genre, movement, theme, or period. Topics to be announced in *Schedule of Classes*. (Y)

Special Courses (ITA)

500. 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)

590. Directed Study. Cr. 1-4(Max. 8)

Prereq: undergrad., consent of adviser and chairperson; grad., consent of adviser, chairperson, and graduate officer. (T)

SPANISH (SPA)

101. Elementary Spanish. Cr. 4

Material fee as indicated in *Schedule of Classes*. Ear training, grammar, reading, writing, speaking. (T)

102. Elementary Spanish. Cr. 4

Prereq: SPA 101 or placement. Material fee as indicated in *Schedule of Classes*. Continuation of SPA 101. (T)

201. (FC) Intermediate Spanish. Cr. 4

Prereq: SPA 102 or placement. Material fee as indicated in *Schedule of Classes*. Grammar review; emphasis on compositions, reading, conversation. (T)

203. Intermediate Spanish. Cr. 3

Prereq: SPA 201. Continuation of SPA 201. More intensive review of Spanish grammar; linguistic preparation for reading of literature; oral practice in the language. (T)

220. Intermediate Spanish: Readings in Hispanic Literature and Culture. Cr. 4

Prereq: SPA 201 or placement. Discussion of literary and cultural readings from Spain and Spanish America; vocabulary building; spoken and written skills emphasized. (T)

260. (CBS 212) Latin American and Latina Women Writers. Cr. 3

Creative writings by Latin American and Latina women writers; feminist theory and literary criticism from throughout Latin America with comparison to Latina women's writings. (I)

304. Commercial Spanish. Cr. 3

Prereq: SPA 220. 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)

305. Medical Spanish. Cr. 3

Prereq: SPA 220. 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)

310. Intermediate Grammar. Cr. 4

Prereq: SPA 201 or placement. Study and utilization of grammar in speech and writing; pronunciation and intonation. Conducted entirely in Spanish. (Y)

320. Intermediate Conversation. Cr. 3

Prereq: SPA 220. Informal class conversations, debates and oral reports to reinforce grammatical principles and to improve pronunciation through practice and imitation. (B)

361. Survey of Spanish Literature I. Cr. 3

Prereq: SPA 220. Spanish literature from its origin to 1700. (F)

362. Survey of Spanish Literature II. Cr. 3

Prereq: SPA 220. Spanish literature from 1700 to the present. (W)

363. Survey of Spanish American Literature. Cr. 3

Prereq: SPA 220. Survey of Spanish American literature from colonial period to the present. (Y)

510. (WI) Advanced Composition. Cr. 3

Prereq: SPA 310 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)

520. Spanish Phonetics. Cr. 3

Prereq: SPA 310 or consent of instructor. A systematic study of Spanish sounds; intensive drilling in accurate pronunciation. (B)

530. Advanced Grammar and Stylistics. Cr. 3

Prereq: SPA 510 or placement. Intensive study of grammar and syntax. Translation of literary texts into Spanish. Free composition and conversation. Conducted in Spanish. (B)

540. Technical and Literary Translation. Cr. 3

Prereq: SPA 310. English-Spanish and Spanish-English translations, literary and technical. Idioms in technical, business and legal contexts. Computerized translation technology. (B)

555. Spanish Culture and Its Tradition. Cr. 3

Prereq: SPA 361, 362, or 363. Spain's cultural history: painting, sculpture, architecture and music, through films, records, newspapers, and the text. (B)

556. Spanish American Cultures and their Traditions. (CBS 556). Cr. 3

Prereq: SPA 361, 362, or 363. 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)

585. (GER 585) Second Language Instruction: Theory and Methods. (GER 785)(FRE 585)(FRE 785)(SPA 785). 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)

640. The Structure of Spanish. Cr. 3

Prereq: SPA 520 or consent of instructor. Principles of linguistics and their application to Spanish. (B)

641. Spanish Medieval Literature: Origins to 1500. Cr. 4

Prereq: SPA 361, 362, or 363. Main currents and masterworks of Spanish literature from its origins to 1500. (Formerly SPA 650.) (B)

642. Spanish Literature of the Renaissance. Cr. 4

Prereq: SPA 361 or 362. Literary genres of the sixteenth century (poetry and narrative: picaresque, pastoral, morisco, and chivalric). (B)

643. Spanish Literature of the Baroque Period. Cr. 4

Prereq: SPA 361 or 362. Great poets of the Spanish seventeenth century: Lope de Vega, Gongora, Quevedo; prose of Quevedo and Gracian. Literary selections studied within the unique cultural climate of the Spanish Baroque. (B)

644. Spanish Literature of the Eighteenth Century. Cr. 4

Prereq: SPA 361, 362, or 363. Literature of the Spanish Enlightenment; major works and literary trends and movements in the Spanish eighteenth century up to Romanticism. (Formerly SPA 652.) (B)

645. Spanish Romanticism. Cr. 4

Prereq: SPA 361, 362, or 363. Origins and development of Romanticism in Spain: theatre, poetry, costumbrismo, and novel. (Formerly SPA 652.) (B)

646. The Spanish Novel of the Nineteenth Century. Cr. 4

Prereq: SPA 361 or 362. Representative works of the Realist and Naturalist movements. (Formerly SPA 693.) (B)

647. The Spanish Novel of the Twentieth Century. Cr. 4

Prereq: SPA 361, 362, or 363. 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 693.) (B)

649. Spanish Poetry of the Nineteenth and Twentieth Centuries. Cr. 4

Prereq: SPA 361, 362. Representative figures and trends in modern and contemporary Spanish poetry. Post-Romantics, Symbolists, the Generations of 1898 and 1927, and the more contemporary poets. (Y)

656. Cervantes. Cr. 4

Prereq: SPA 361, 362, or 363. A detailed study of *Don Quijote*. Other short works of Cervantes. (B)

657. The Comedia. Cr. 4

Prereq: SPA 361, 362, or 363. Analysis of representative plays of Lope de Vega, Ruiz de Alarcon, Tirso de Molina, Calderon, and other dramatists of the Golden Age. (B)

659. Genres and Topics in Peninsular Spanish Literature. Cr. 3 (Max. 9)

Prereq: SPA 361, 362, or 363. Topics such as modern Spanish theatre, Generation of 1898, to be announced in *Schedule of Classes*. (B)

660. Spanish American Colonial Literature. Cr. 4

Prereq: SPA 361, 362 or 363. 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)

662. The Spanish American Novel II. Cr. 4

Prereq: SPA 361, 362 or 363. 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 686.) (B)

663. Spanish American Poetry. Cr. 4

Prereq: SPA 361 or 362 or 363. Major poets and their texts from the period of Independence through the early stages of Modernism, Modernism and Vanguard, to contemporary poetry. (B)

669. Genres and Topics in Spanish American Literature. Cr. 3

Prereq: SPA 361, 362 or 363. Topics in the literature of Latin America, such as the short story or theatre, to be announced in *Schedule of Classes*. (B)

670. Spanish Literature of the Silver Age: 1900-1936. Cr. 3

Prereq: Spanish major or consent of instructor. Writers of first three decades of twentieth century; current narratological theories applied to intertextual maneuvers and philosophical concepts. (I)

671. Unamuno's Existential Fiction. Cr. 3

Prereq: Spanish major or consent of instructor. Important novels of Miguel de Unamuno; emphasis on characters and their agonization in a circumscribed area. (I)

Special Courses (SPA)

500. 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)

590. Directed Study. Cr. 1-4(Max. 8)

Prereq: undergrad., consent of adviser and chairperson; grad., consent of adviser, chairperson, and graduate officer. (T)

SOCIOLOGY

Office: 2228 Faculty/Administration Building; 577-2930

Chairperson: Donald E. Gelfand

Professors

Joseph Albini (Emeritus), David W. Britt, J. Ross Eshleman, Donald E. Gelfand, Mel J. Ravitz (Emeritus), Raye A. Rosen (Emeritus), Mary C. Sengstock, Leon H. Warshay, Eleanor P. Wolf (Emeritus)

Associate Professors

Clifford J. Clarke, Thomas J. Duggan, Jeffrey W. Dwyer, Janet R. Hankin, Anne W. Rawls, Mary J. Van Meter

Assistant Professors

Elizabeth Chapleski, Jacqueline Huey, Augustine Kposowa, Leon Wilson

Lecturer

David Maines

Adjunct Faculty

Diane Brown, *Center for Urban Studies*, Barbara Hirshorn, *Institute of Gerontology*, Bill Hoffman, *United Automobile Workers*, Robert Kahle, *Center for Urban Studies*, Dorothy Kispert, *Parents and Children Together (PACT)*, Michael Martin, *Africana Studies*, Elizabeth Olson, *Institute of Gerontology*, Rosalie Young, *Community Medicine*

Degree Programs

BACHELOR OF ARTS with a major in sociology

BACHELOR OF ARTS with a major in anthropology and sociology

BACHELOR OF APPLIED STUDIES with a major in sociology

**MASTER 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

Admission Requirements for these programs are satisfied by the general requirements for undergraduate admission to the University; see page 15.

* For specific requirements, consult 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 207) and the University General Education Requirements (see page 25), 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 15–43 and 207–212, 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.

—With a Major in Sociology

Major Requirements: Students majoring in sociology are required to elect a minimum of thirty credits in the field, including Sociology 200, 330, 405 (or 605 or 606), 410, 420. Students may not elect more than forty-five credits in course work within the Department.

—With a Major in Anthropology and Sociology

Major Requirements: Students majoring in anthropology and sociology are required to take Anthropology 210, 211, 520, 527, 531 or 532, and 638 or 639; and Sociology 200, 330, 405 (or 605 or 606), 410, 420. A total of at least twenty credits in sociology and twenty credits in anthropology must be completed, but not more than forty-five credits in the combined fields may be elected.

Model Plan for Majors

Junior Year: Sociology 330, 420, 405 (or 605 or 606), 410; elective courses. Students are urged to take Sociology 420 and 405, in particular, in the junior year.

Senior Year: Sociology 382, 540; elective courses; remaining requirements not taken in junior year.

Bachelor of Applied Studies

—with a Major in Sociology

Admission Requirements: This program is designed for students who hold an Associate degree in a human services technology field; see the general requirements for undergraduate admission to the University, 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 207) and the University General Education Requirements (see page 25), as well as the major and cognate requirements listed below. Each candidate for the degree of Bachelor of Applied Studies must complete a minimum of sixty-three credits beyond the required credits for the Associate degree. Courses in excess of the sixty-three credit minimum may be required if any of these requirements have not been met. 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 15–43 and 207–212, respectively.

Major Requirements: Candidates must complete thirty credits in sociology including SOC 200, 330, 405 (or 605 or 606), 410, 420; and a minimum of one course in at least three of the following areas:

- Criminology, Penology, Deviance (SOC 382, 384, or 480);
- Cultural Diversity (SOC 355, 550, 557, or 558);
- Family and Sex Roles (SOC 448, 540, 541, 545, or 546);
- Social Institutions and Social Structure (SOC 335, 536, or 581);
- Special Problems (SOC 576, or 587).

In consultation with their advisers, students should select courses which relate to their areas of specialization in the human services field. Students may not elect more than forty-five credits in course work within the Department.

Cognate Requirements: Students are required to take courses in three additional areas which will enhance their management and organizational skills. These courses include: computer applications course*; management skills (PSY 350, or P S 231); statistics (SOC 628* or equivalent). (Sociology courses used to satisfy management and organization skills requirements—indicated by an asterisk—may also be counted toward the major.) Additional elective courses are required to total a minimum of sixty credits at a baccalaureate degree granting institution.

Honors Program

An honors major in sociology is available to students who fulfill all requirements for the major, and who maintain a cumulative honor 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 h.p.a. of 3.3;
3. sociology h.p.a. of 3.3;
4. a minimum of three and maximum of six thesis credits in SOC 499;
5. an approved honors thesis;
6. at least one 400-level seminar offered through the Honors Program of the College of Liberal Arts. and
7. an accumulation of at least fifteen credits in honors-designated course work, including SOC 499, and the 400-level Advanced Honors Seminar. 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).

Minor and Cognate Study

Minor Requirements: A minor in sociology is offered for students majoring in other fields. The minor requires at least twenty-one credits; course requirements are as follows:

SOC 200	(SS) Understanding Human Society
SOC 330	(SS) Social Institutions and Social Structure
SOC 405	Basic Sociological Theory
SOC 410	(SS) Social Psychology
SOC 420	(WI) Methods of Social Research
Two Sociology electives	

* Sociology courses used to satisfy these management and organization skills requirements may also be counted toward the major.

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 340 (Exploring Marriage and Other Intimate Relationships), 446 (Women in Society), 540 (The Family), 541 (Marriage and Family Problems), 545 (Human Sexual Behavior and Society), 546 (Sex Roles: Being Men and Women), 587 (Violence in the Family), or 640 (Family Theories and Research).

2. **Business:** Students who are preparing for a career in business might consider electing one or more of the following: Sociology 330 (Social Institutions and Social Structure), or 550 (Urban and Metropolitan Living).

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 one or more of the following courses: Sociology 586 (Race, Class and the Criminal Justice System), or 557 (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 202 (Social Problems), 382 (Theories of Crime and Delinquency), 384 (Penology: Punishment and Corrections), 480 (Outsiders, Outcasts and Social Deviants), 581 (Law in Human Society), 587 (Violence in the Family), or 686 (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 or more of the following courses: Sociology 536 (Introduction to Medical Sociology), 576 (Society and Aging), or 677 (Sociology and Institutional Care).

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 or master's degree 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.

UNDERGRADUATE COURSES (SOC)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

200. (SS) Understanding Human Society. Cr. 3

No credit after SOC 204. 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)

202. (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)

204. (SS) Applied Approach with Data Analysis for Understanding Society. Cr. 3

Analysis of basic sociological concepts and principles through the presentation of data; computer-aided analysis to demonstrate applied sociological perspective. Introduction to computers; students research data by computer analysis. (Y)

210. Topics in Sociology. Cr. 3 (Max. 9)

Specialized and topical studies of sociological themes. Topics to be announced in Schedule of Classes. (T)

236. Women and Health. Cr. 4

Analysis of the 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)

250. (U S 200) (SS) Introduction to Urban Studies. (GPH 200)(P S 200)(HIS 200). 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)

260. (AFS 260) 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)

303. AIDS and Society. Cr. 3

Survey of social, epidemiological, physiological, legal and preventive issues surrounding AIDS. (Y)

330. (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)

335. Cults, Myths, and Religions in Society. Cr. 3

Objective analysis of the interrelations between religious phenomena and social institutions, social structure and behavior. (B)

340. 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)

351. (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)

382. Theories of Crime and Delinquency. 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)

384. (CRJ 230) Penology: Punishment and Corrections. Cr. 4

No credit after former SOC 584. 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)

386. (AFS 386) 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)

390. 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)

391. 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)

405. 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)

410. (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)

420. (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)

441. Introduction to Clinical Sociology. Cr. 3

Prereq: junior standing, 15 credits in sociology. Employment of sociological theory and research in clinical settings, to assist individuals and groups in solving problems. Discussion of possible settings in which clinical sociology can be employed. (B)

446. 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 socioeconomic changes on the lives of women (including their relationships with men). (Y)

480. Outsiders, Outcasts and Social Deviants. (CRJ 480). 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)

499. Honors Thesis in Sociology. Cr. 3(Max. 6)

Prereq: sociology major; cumulative h.p.a. 3.0, 3.3 in sociology; written consent of thesis and honors advisers. Open to juniors and seniors. For students interested in pursuing an independent program of original research. (Y)

501. Selected Sociological Topics. Cr. 1-3

Topics to be announced in *Schedule of Classes*. (I)

520. Women and Crime. Cr. 3

Prereq: SOC 382. Issues of women in the criminal justice system. Traditional and feminist perspectives. Topics include: victimization, offending, personnel, and theory. (F)

536. 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)

540. 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)

541. 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)

542. Cross-Cultural and Ethnic Perspectives on the Family. Cr. 3

Prereq: SOC 340. Range of possibilities of family structure and process. Topics include: intergenerational and husband-wife relations, child rearing practices, extended family patterns. Cross-cultural examples from studies of American ethnic groups and other countries. (B)

545. Human Sexual Behavior and Society. Cr. 3

Sexual behavior from a cross-cultural point of view. Historical development and findings of sociological research related to human sexual behavior. (Y)

546. Sex Roles: Being Men and Women. Cr. 3

Roles of men and women in society today; how they are changing and the effects of these roles on individuals and society. (Y)

550. Urban and Metropolitan Living. (U P 521). Cr. 3

Examination of the development and organization of urban living as it emerged from village to city to metropolitan regions. Consideration given to such topics as the causes of urbanization and its consequences for the ecological and social structure of the city, intergroup relations, crime and poverty in the city. (Y)

- 554. (ANT 506) Urban Anthropology. Cr. 3**
Prereq: ANT 210 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)
- 555. Collective Behavior: Masses, Mobs, and Social Realities. Cr. 3**
Analysis of the change process through efforts of organized groups, crowds, mobs, riots, social reform efforts, revolutions. Examination of forms of social contagion including fads, rumors, manias. Emphasis on contemporary social movements. (I)
- 557. Race Relations in Urban Society. (AFS 557). 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)
- 558. (AFS 558) Law and the African American Experience. Cr. 3**
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)
- 560. Sociology of International Inequality and Underdevelopment. Cr. 3**
Prereq: introductory course in social science area. Comprehensive introduction to theoretical, substantive and methodological issues relating to international inequality; preparation for research interests of students from diverse backgrounds. (Y)
- 570. Inequality and Social Class. Cr. 3**
Analysis of the inequalities in societies, the United States and others. Causes of social class differences; varying structures of stratification; consequences for the individual, ethnic groups, political power; the conditions under which mobility occurs. (I)
- 576. 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)
- 581. Law in Human Society. (CRJ 581). 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)
- 587. 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)
- 588. Family Violence: Intervention. (S W 588). Cr. 1-2**
Prereq. or coreq: SOC 587. Open to PACT students; others by consent of instructor. Application of theory and intervention techniques in the family experience of maltreatment. (Y)
- 589. Applied Techniques for Dealing with Family Violence. Cr. 3**
Prereq. or coreq: SOC 587. Theory and research on family violence as they suggest the services needed by victims. Analysis of legal, medical, counseling and other service needs of victims. (Y)
- 591. 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)
- 605. Sociological Theory Before 1920. Cr. 4**
Prereq: SOC 200 or consent of instructor. Sociological theorists before 1920, their thought and the historical context in which such thought developed. (Y)
- 606. Sociological Theory Since 1920. Cr. 4**
Prereq: SOC 200 or consent of instructor. Historical and Theoretical analysis of sociological thought in the present century. Current trends in sociological theory. (Y)
- 608. (PHI 523) Philosophy of Science. Cr. 4**
Prereq: PHI 185 or PHI 186 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)
- 628. 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)
- 629. Advanced Social Statistics. Cr. 4**
Prereq: SOC 628. 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)
- 640. Family Theories and Research. Cr. 3**
Major sociological and social psychological theories relevant to the study of the family combined with a comprehensive survey of family research; these theories and research findings applied to contemporary family issues and family policy. (B)
- 643. Approaches to Family Study. Cr. 3**
Prereq: introductory course in a social science. Family systems and crisis theories as basis for study of family interaction; includes black family structure and function historically and in contemporary society. (Y)
- 644. Urban Family Intervention. (S W 644). Cr. 1**
Prereq. or coreq: SOC 643. Open to PACT students; others by consent of instructor. Application of theory and practice technique in the helping process of urban, minority families in poverty. (Y)
- 646. Family-Based Intervention Techniques. (S W 646). 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)
- 647. Family Perspectives for Practitioners. Cr. 3**
Introduction to sociological theory and research on family; designed for practitioners in nursing, mental health, and counseling. Review of family structure, diversity, problems. Social context and developmental aspects of families. Changes in families through the life cycle and their effects on members. (Y)
- 658. Applied Sociology I: Policy Research and Analysis. Cr. 3**
Prereq: graduate students or advanced social science undergraduates. The logic of applied sociological analysis, policy research design and ethical issues in applied social science. Critical analysis of specific projects and of contributions of related social science disciplines. Development of writing skills for policy makers. (Y)
- 659. 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 effectiveness of change strategies. Materials drawn from theory and practice in sociology and related social sciences. (Y)

675. (ULM 635) 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)

677. Sociology of Institutional Care. Cr. 3

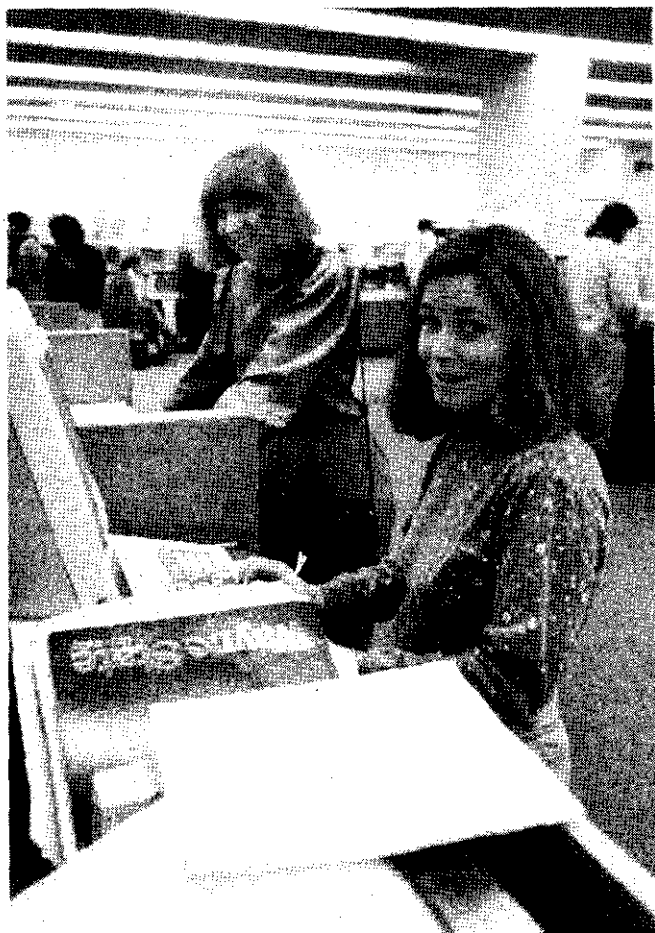
Converging issues of theory, research and practice in general hospitals, mental hospitals, and nursing homes. Ecology of institutions and the adaptation of individuals within them. (I)

685. (ULM 615) Political Economy of the Urban Ghetto. (ECO 681)(U P 667). 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)

686. Organized Crime: Its History and Social Structure. (CRJ 686). Cr. 3

Prereq: SOC 382. 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 or 577-4166

Director: Jackie Byars

Co-Major Program

This program is designed to provide the theoretical base and methodological skills for developing interdisciplinary research in women's and gender studies. The aims of the program are: (1) to instruct students in the rapidly expanding scholarship on women and gender; (2) to introduce students to the historical, social and cultural contributions of women; and (3) within an intellectually coherent structure, to explore with students their individual investments in issues of gender, past, present, and future.

The Program offers co-major and minor concentrations of study. The co-major is designed for students who wish both the diversity of gender-related courses representing a wide array of university disciplines and the specialization of 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 have a transcript designation in women's studies that reflects their work in this interdisciplinary area of study.

CO-MAJOR REQUIREMENTS consist of thirty-two credits including three core courses and twenty-four credits in elective courses. The core courses are as follows:

	<i>credits</i>
ENG 503 - Topics in Women's Studies	3
HIS 520 - Women in American Life and Thought	3
SOC 446 - Women and Society	3

Alternates to these core courses may be selected in consultation with the Program Director, but students may not take more than two core courses from the same department. An independent study of four credits is required of all co-majors in their senior year. It is to be arranged with an instructor in the student's major field and with an instructor associated with the Women's Studies Program. The student will devise and complete a project in her/his major field using the methodology of gender studies and focusing on a topic relating to women or gender. A paper, report, or public presentation will result from the project. All arrangements for this course are made by the student, who is responsible for obtaining the director's approval of the project.

Electives must be chosen from the courses listed below or any new courses approved by the Directors of the Program. Elective credit must be distributed so as to satisfy the following conditions:

1. At least nine credits in women's studies courses from the fields of anthropology, history, political science, psychology, and sociology.
2. At least nine credits in women's studies courses from the fields of art history, Africana studies, classics, English, German and Slavic languages, philosophy, Romance languages, and communication.

MINOR REQUIREMENTS consist of eighteen credits distributed as follows:

W S 301 - Interdisciplinary Introduction to Women's Studies	3
SOC 446 - Women in Society	3
PSY 325 - Psychology of Women	3
Women in history (elective in Africana studies, classics, or history)	
Women and literature (elective in English or foreign languages in translation)	
One elective in another discipline (e.g., art history, film studies, rhetoric or linguistics).	

Many departmental courses included in the women's studies program may also count toward satisfying a departmental major or appropriate

group requirements. Each semester the director of the program prepares a course sampler of offerings for the next term in order to help students make selections; it is available in the offices of the Department of English and is distributed by mail to all students and faculty on the Women's Studies mailing list.

Courses in Women's Studies

credits

AFS 511 —Black Women in America	3
ANT 524 —Cross Cultural Study of Gender	3
ENG 257 —(IC) Literature By and About Women: Literature & Writing	3
ENG 503 —Topics in Women's Studies	3
GER 290 —Studies in German Literature (when appropriate)	3
HIS 325 —The Family in History	3
HIS 520 —Women in American Life and Thought	3
PHI 110 — (PL) Contemporary Moral Issues (when appropriate)	3
PHI 111 —Ethical Issues in Health Care	3
PSY 260 —Psychology of Social Behavior	4
PSY 325 —Psychology of Women	3
PSY 338 —Human Sexuality	3
PSY 346 —Psychology of Adolescent Behavior and Development	3
PSY 348 —Parent-Child Interaction across the Lifespan	3
PSY 568 —Social Psychology of Personality	3
PSY 642 —Psychology of Infant Behavior and Development	3
SOC 340 —Exploring Marriage and Other Intimate Relationships	3
SOC 446 —Women in Society	3
SOC 540 —The Family	3
SOC 541 —Marriage and Family Problems	3
SOC 545 —Human Sexual Behavior and Society	3
SOC 546 —Sex Roles: Being Men and Women	3
SOC 587 —Violence in the Family	3
SOC 640 —Family Theories and Research	3
W S 301 — Interdisciplinary Introduction to Women's Studies	3

UNDERGRADUATE COURSES (W S)

For interpretation of numbering system, signs and abbreviations, see page 461.

270. Interdisciplinary Topics in Women's Studies. Cr. 3

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 on contemporary women's studies scholarship. (F,W)

301. Interdisciplinary Introduction to Women's Studies. Cr. 3-4

Introduction to famous texts in feminist thought, and a survey of the contributions to the field of women's studies from the behavioral sciences, history, humanities, and the social sciences. (W)

403. (SPC 403) Gender and Communication. Cr. 3

Analysis of gender communication issues within interpersonal, group, organizational, intercultural, public, and mass mediated contexts. (Y)

503. (ENG 503) Topics in Women's Studies. Cr. 3(Max. 9)

Thematic, critical or generic study of women and literature. Topics to be announced in *Schedule of Classes*. (Y)

511. (AFS 511) 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)

530. (AFS 530) African American Women's Literature. Cr. 4

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)



**LIBRARY and INFORMATION SCIENCE
PROGRAM**

DEAN: Peter Spyers-Duran

Foreword

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 science courses, gaining library and research skills during their undergraduate studies, and providing preparation for graduate work and admission to the graduate Master of Library and Information Science (M.L.I.S.) degree program.

Approximately 100,000 libraries in the United States employ 150,000 professionals. The ALA-accredited M.L.I.S. degree is internationally recognized as the first professional degree in the field. Other individuals use their library and research skills in allied areas of information service outside the traditional library setting. In the next decade, those with appropriate credentials will have a significantly wider choice of opportunities to apply their skills, including traditional libraries and information centers within 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 1988.

Objectives

Courses offered to undergraduates present theory, concepts and practice in library and information studies. These courses may: assist the undergraduate in his/her library and research skills; serve as an introduction to the field for students who plan to pursue the M.L.I.S. degree program; and/or provide education for those desiring supportive positions and responsibilities in libraries and information centers.

The mission of the Library and Information Science Program is to educate qualified men and women to assume professional responsibilities as librarians/information specialists in an everchanging society. To achieve these goals, the Program sets the following general objectives for its students:

1. To evaluate the library and the information profession in their historical, social, technological, educational, and political dimensions;
2. To identify the library's distinctive role among the communication agencies which share responsibility for the preservation and dissemination of the human record;
3. To identify the common properties of information that exist throughout disciplines as they relate to library and information service;
4. To identify and examine the concepts, structure, and organization of knowledge;
5. To select, acquire, organize, store, retrieve, analyze, and disseminate information and materials;
6. To apply the concept of information transfer to facilitate access to recorded knowledge;
7. To demonstrate an understanding of the distinctiveness of each library/information center as a component of a specific environment;
8. To develop sensitivity to the opportunity and responsibility of library/information service in an urban, multicultural setting;
9. To identify the needs of individuals and groups for library/information services, design plans, and implement programs that respond to identified needs;
10. To identify, evaluate, and utilize current and emerging technologies in the organization and retrieval of information;
11. To apply principles of effective management to the operation of library/information centers and systems;
12. To examine, assess, and apply research in professional practice, and to the solution of library/information problems;
13. To articulate a personal philosophy of ethics and professional responsibilities;
14. To recognize the necessity for continuing involvement in professional education, in professional organizations, and in self-evaluation.

Facilities

University Libraries: Wayne State University has five libraries with a total of well over 2.8 million books and twenty-four thousand periodicals. 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 the Media Library, including films and videotapes, audiovisual equipment, audiotapes, microforms, microcomputers, and phonograph records; and the offices of the Library and Information Science Program.

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 Shifman 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 science student. Readily available to the University student is the main branch of the Detroit Public Library, and the professional research library of the Detroit Historical Museum.

Computer Laboratory: The Library and Information Science Program has its own microcomputer laboratory equipped with state-of-the-art personal computers. Students can access the University Libraries' mainframe computer and a variety of common library databases. Located in the Kresge Library, the laboratory provides hands-on experience in accessing a variety of information retrieval systems, as well as other applications in library and information service. Library and information science students also have access to the computing facilities located in the Media Center of the Purdy Library.

Undergraduate Program

Undergraduate College of Education students interested in preparing for a career as library/media specialists in elementary or secondary schools, or other students interested in public, academic, or special library work, are eligible to take a limited number of courses in the Library and Information Science Program. Undergraduates interested in enrolling in library 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.

Graduate Degrees and Certificates

**MASTER OF SCIENCE in Library and Information Science*

**SPECIALIST CERTIFICATE in Library and Information Science*

**CERTIFICATE in Archival Administration*

Faculty

Office: 106 Kresge Library; (313) 577-1825; Fax: (313) 577-7563

Dean of University Libraries and Library Science: Peter Spyers-Duran

Director of Library and Information Science Program:

Robert P. Holley

Professors

Genevieve M. Casey (Emerita), Michael Keresztesi (Emeritus), Margaret Grazier (Emerita), Robert P. Holley, Philip Mason, Joseph J. Mika, Edith Phillips (Emerita), Vern Pings (Emeritus), Ronald Powell, Peter Spyers-Duran

Associate Professors

Betty Maurstad (Emerita), Carole McCullough, Gordon Neavill

Assistant Professors

Rosie Albritton, Lynda Baker, Kenneth Cory, Elin K. Jacob, Nancy B. Johnson, Bor-sheng Tsai

Instructor

Christopher Brown-Syed

Lecturer

Judith Field

Adjunct and Cooperating Faculty

Roger Ashley, Director, Model High School Media Center, Bloomfield Hills; Shirley B. Cody, Educational Resources Librarian, Grand Valley State University; Bonnie A. Dede, Head, Special Formats Cataloging, University of Michigan; Daria Drobný, Rehabilitation Institute of Michigan; Anaclore Evans, Librarian, Technical Services, University Libraries; Ruth Fitzgerald, Regional Educational Media Center (Retired), Berrien Springs; Suzanne Frankie, Dean, University Libraries, Oakland University; Susan Goodman, Inflow Consulting; Paulette Groen, Technical Information Specialist, Ford Motor Company; Charles Hanson, Director, Grosse Pointe Public Library; Richard Hathaway, Coordinator, M-LINK Project, University of Michigan; Susan J. Hill, Director, White Pine Library Cooperative; Marianne Hipp, Head, Technical Services, Lawrence Technological University; Leslie S. Hough, Director, Reuther Library and Archives; Margery Ann Long, Associate Professor, Reuther Library and Archives; Sandra I. Martin, Director, Harper Hospital Library; James M. Matarazzo, Graduate School of Library and Information Science, Simmons College; Blaine V. Morrow, Reference Librarian (Retired), Grosse Pointe Public Library; James Moseley, Program Coordinator, College of Medicine; Brian Owens, University of Windsor; Robert E. Raz, Director, Grand Rapids Public Library; Rita C. Richey, Associate Professor, College of Education; Mary Lou Riley, Reference and Adult Services, Grand Rapids Public Library; Ronna J. Rivers, Archivist, Reuther Library and Archives; R. Craig Roney, Associate Professor, College of Education; Peter B. Sanders, Professor, College of Education; Kathleen E. Schmeling, Archivist, Reuther Library and Archives; Janice K. Selberg, Librarian, Neef Law Library; Charlotte Simon, Doctoral Student, College of Education; Albert F. Stahl, Associate Professor, College of Education; Jacqueline Tilles, Associate Professor, College of Education

* For specific requirements, consult the Wayne State University Graduate Bulletin.

FINANCIAL AIDS, ACTIVITIES and AWARDS

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 page 21). The following financial aids apply to the Program:

Gloria A. Francis Scholarship: Awarded to students with outstanding scholastic achievement and desirable qualities of character and leadership. Financial need may also be considered.

Miriam T. Larson Memorial Scholarship: Awarded to an individual declaring a health sciences/medical libraries concentration.

Edith B. Phillips Endowed Scholarship: Awarded to students with outstanding scholastic achievement and desirable qualities of character and leadership. Preference given to students intending to concentrate in technical services and/or collection development.

Charles Samarjian Endowed Scholarship: Award open to students selected on the basis of scholastic achievement, character, leadership, and financial need.

Title II-B Fellowship: Awarded to students selected according to guidelines stipulated in the grant proposal from the U.S. Department of Education.

H.W. Wilson Scholarship: Awarded to students selected on the basis of academic qualifications, character, and financial need.

Internships

The University Libraries support internships offering employment to library science students. The internship program provides students with an excellent opportunity to gain practical skills while supplementing their income. Students are encouraged to take advantage of this learning opportunity. 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 Technical Services Department of the University Libraries.

In addition to these placements, several area libraries offer paid and valuable pre-professional experiences. For a list of current opportunities, consult the Director of the Library and Information Science Program.

Library Employment Opportunities

In order to broaden student understanding of various aspects of library and archival professions, the University offers opportunities for students to work on an hourly basis (up to twenty hours per week during the regular academic year) and full-time (forty hours per week during the summer) in the University Libraries and at the Archives of Labor and Urban Affairs. Part-time employment is also available in other institutions in the metropolitan Detroit area.

Field Experience

Within the Detroit metropolitan area there are over 200 libraries, many of which provide opportunities for supervised field experiences which students may elect for credit. A planned on-site experience in a participating library under the direction of a professional librarian and the supervision of a member of the faculty can be arranged. Applications must be received by the first day of the Summer term for Fall term placements; by the first day of the Fall term for Winter term placements; and by the first day of the Winter term for Summer term placements.

Placement Services

Library and information science students may use the University Placement Services. Placement Services include establishment of credential files to be mailed to prospective employers. In addition, the Library and Information Science Program offers resume and employment counseling, sponsors a Career Information Day, and maintains an extensive listing of currently available positions in all types of libraries throughout the United States.

Activities

Library and Information Science Student Association: recognized by the University as an 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 American Library Association in 1988, the Chapter sponsors professional activities, promotes professionalism, and is open to all student ALA members.

American Society for Information Science — Student Chapter: Chartered by A.S.I.S. in 1991, the Chapter sponsors professional activities, promotes professionalism, and is open to all student A.S.I.S. members.

Special Libraries Association—Student Chapter: Chartered by the S.L.A. in 1989, the Chapter 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.

UNDERGRADUATE COURSES (LIS)

The following courses, numbered 090–699, are offered for undergraduate credit and are available to undergraduates with junior- or senior-level standing. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

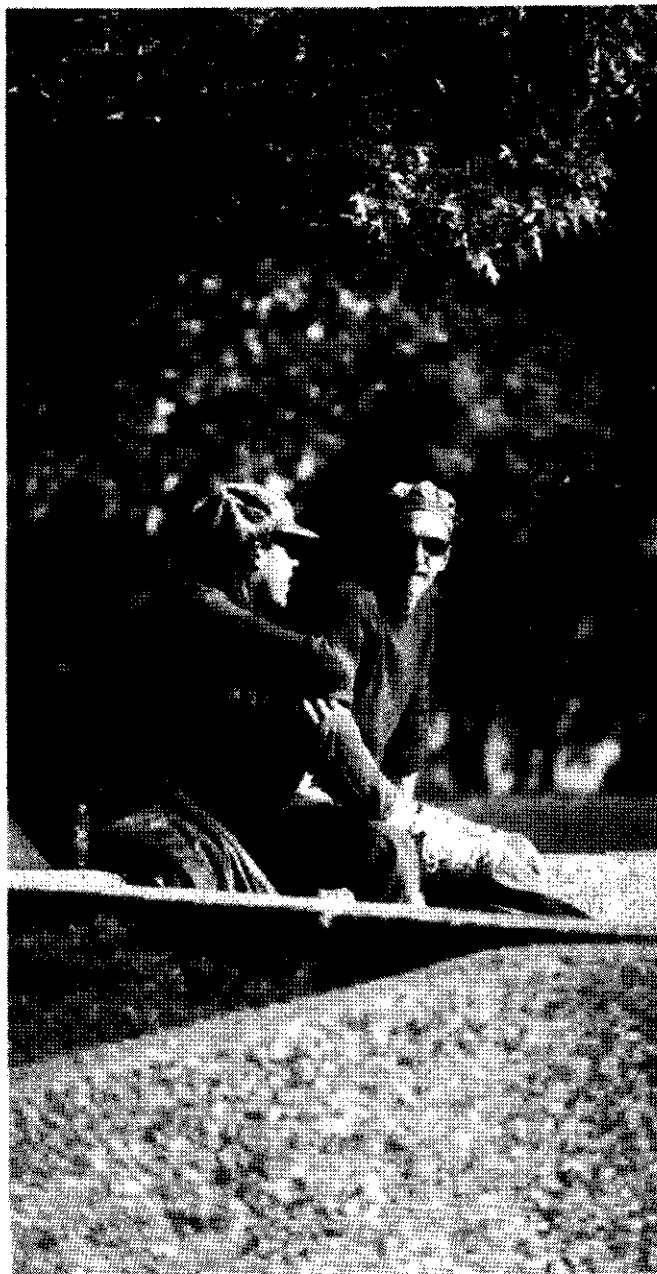
- 601. Introduction to the Information Profession. Cr. 3**
The development and place of libraries in society; objectives, functions of and trends in major types of libraries. Core course. (T)
- 608. Information Programming and Processing. Cr. 3**
Storage and retrieval problems as approached by conventional and nonconventional methods. Computer applications in libraries. Core course. (T)
- 611. Reference and Information Services and Resources. Cr. 3**
Reference function of the library; major titles in the reference collection with criteria for their evaluation; sources of continuing knowledge of reference materials; online reference sources, systems and searching. Development of interpersonal communication skills to increase effectiveness in response to patrons' information needs. Core course. (T)
- 616. Electronic Access to Information. Cr. 3**
Material fee as indicated in *Schedule of Classes*. Introduction to the various types of electronic media used to acquire and transmit information and to tailor it to specific user needs. Hands-on access to online search services, CD-ROM technology, hypermedia, in-house databases, and other aspects of emerging technology. Core course. (T)
- 621. Technical Services in Libraries. Cr. 3**
Material fee as indicated in *Schedule of Classes*. Survey of objectives and methods of acquisition, classification, cataloging, preparation of books and related materials in libraries. Core course. (T)
- 636. (I T 511) Educational Technology. Cr. 2**
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)
- 637. (I T 512) Producing Instructional Media and Materials. Cr. 2–3**
Design and development of instructional media and materials for use in educational, industrial, or human services programs. Development of computer-generated instructional materials. (Y)
- 638. (I T 510) Using Educational Media Methods and Materials. Cr. 2**
Survey of educational media, methods, and materials. Techniques of operating and using both traditional audiovisual aids and new technologies, to deliver instruction. Overview of innovative applications of technology in variety of instructional settings. (Y)
- 651. (ELE 722) Survey and Analysis of Literature for Younger Children. 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)
- 652. (ELE 724) Survey and Analysis of Literature for Older Children. 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)

653. (EED 631) Literature for Adolescents. 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)

655. (ELE 728) Storytelling. Cr. 3
Prereq: LIS 651. 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)

672. Multicultural Information Services and Resources. Cr. 3
Prereq: LIS 601, 611, 616. Study of impact of cultural diversity on library services; development of relevant collections; effective interaction with a diverse community. (Y)

678. 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

DEAN: Robert L. Carter

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 six instructional centers in the Detroit metropolitan area as well as in other selected locations in Michigan, and delivers instructional programs through television broadcasting. 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 accommodate their schedules to 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 Degree Programs

BACHELOR OF INTERDISCIPLINARY STUDIES

BACHELOR OF TECHNICAL AND INTERDISCIPLINARY STUDIES

*MASTER OF INTERDISCIPLINARY STUDIES

College Directory (area code : 313)

Dean: Robert L. Carter 577-4675
 Director, Academic Services: Mary Kay Urick 577-6710

ADMINISTRATIVE SERVICES

Business Manager: Arthurine Turner 577-6960

ALUMNI RELATIONS

Director: Percy L. Moore 577-0577

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: Roslyn Abt Schindler 577-4627
 Associate Director: Howard Finley 577-0833
 Information/Advising — Undergraduate 577-0832
 Information/Advising — Graduate 577-4612
 Service Agency Administration Program 577-6728

DIVISION OF METROPOLITAN PROGRAMS and SUMMER SESSIONS

Associate Dean: Barbara Couture 577-4595
 Director, Credit Programming and Instructional Services:
 Barbara Roseboro 577-4682
 Director, Alternative Programming and Facilities Management:
 Kristopher T. Krzyzanski 577-4682
 Assistant to Associate Dean:
 Cynthia Ward 577-4595
 Program Coordinators 577-4682
 Noncredit Programs 577-4665
 Visitor Program 577-4665
 Telecommunications 577-6966
 Sponsored Programs 577-4665

MARKETING

Coordinator 577-4597

NON-MATRICULANT STUDENT SERVICES

Academic Advising 577-4693

RECORDS and REGISTRATION SERVICES

Academic Advising 577-4693
 Registration 577-4671

UNIVERSITY CENTER at MACOMB 577-6261

Mail address for all offices: (Department Name), College of Lifelong Learning, 6001 Cass Ave., Detroit, MI 48202

Instructional Centers

The College of Lifelong Learning maintains comprehensive instructional centers at convenient locations throughout the Detroit metropolitan area:

Birmingham Center Groves High School 20500 W. Thirteen Mile Beverly Hills, MI 48025 Telephone: 810-642-2661 313-577-3605	Northeast Center St. Basil School 22860 Schroeder Eastpointe, MI 48021 Telephone: 810-771-3730 313-577-3590
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Eastside Detroit Center 3127 E. Canfield Detroit, MI 48207 Telephone: 577-4701	Northwest Activities Center 18100 Meyers Road Detroit, MI 48235 Telephone: 577-0613
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Harper Woods Center Bishop Gallagher High School 19360 Harper Avenue Harper Woods, MI 48225 Telephone: 577-3590	Southfield Center Signature Building 27300 W. Eleven Mile Southfield MI 48034 Telephone: 810-358-2104 313-577-3592
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Sterling Heights Center Heritage Junior High School 37400 Dodge Park Sterling Heights, MI 48312 Telephone: 810-978-7881 313-577-4470

* For specific requirements, consult 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. 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: Room 329, Criminal Justice Building, 6001 Cass Avenue, Detroit, Michigan 48202; telephone: 313-577-4671

Credit Registration: Registration for off-campus academic courses is held during the regular *Early Mail-in* and *Final 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 (Room 329, 6001 Cass Avenue, Detroit, Michigan 48202); from all extension centers; and from the Registration Office on the Wayne State campus. They are available by mail from the CLL Marketing Office; telephone: 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 CLL Schedule of Classes for 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 from the CLL Marketing Office; telephone: 313-577-4597.

Marketing

Coordinator: Douglas Freed

The Marketing Office cooperates with other agencies within and outside the College of Lifelong Learning to advertise CLL programs through the print media, direct mail, radio, television, and various other means. This office develops promotional strategies, assists in the preparation of copy, develops and maintains mailing lists, and designs and distributes public relations materials.

DIVISION of COMMUNITY EDUCATION

Associate Dean/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, Ruthie White, Karen Wilson

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, developmental classes, 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 this twenty-four to thirty credit program. This course of study itself does not lead to a degree; but assists students in entering and completing degree programs offered by other schools and colleges in the University.

Admission Requirements: This program has no restrictions on age or previous academic performance. The minimum requirement is a General Equivalency Diploma (GED) or high school diploma.

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: Admission applications and transcripts may be submitted at any time during the academic year. Applications should be submitted approximately two months prior to each semester.

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 University Scholarships and Financial Aid office.

The Division of Community Education Scholarship Fund makes funds available to qualified students. Contact the Office of Scholarships and Financial Aid (313-577-3378).

DIVISION of METROPOLITAN PROGRAMS and SUMMER SESSIONS

Associate Dean: Barbara Couture

Director of Alternative Programming and Facilities Management:
Kristopher Krzyzanski

Director of Credit Programming and Instructional Services:
Barbara Roseboro

Assistant to the Associate Dean: Cynthia Ward

Academic Advising

Frank Williams and the Extension Center Managers

Extension Center Directors

Macomb County: Earl Newman; *Oakland County:* Sharon O'Brien;
Wayne County: Keith White

Extension Center Managers

Susan English, Jennifer Keas, Lynn Miller-Wietecha, Sharon O'Brien,
Angela Rochon, Keith White

Program Coordinators

Paul Fiedler, Lee S. Randall, Linda Robertson, William Slater, 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 298.

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 Birmingham and Southfield Centers, and in Macomb County at the Sterling Heights Center.

School of Business Administration courses in the 600-609 series are open only to students holding matriculated graduate status at Wayne State University. Graduate courses, numbered at the 700 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, the University Center at Macomb, and Mott College in Flint. 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 Mott College in Flint, University Center at Macomb, and Delta University Center.

The Chemical Engineering Graduate Certificate in Hazardous Waste Management is offered at the Sterling Heights 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 master'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. Graduate courses leading to the Graduate Specialist Certificate in Archival Administration are available at selected extension locations, including Flint, Lansing, Grand Rapids, and Saginaw.

Nursing: Bachelor's and master's-level courses are offered at several CLL extension centers and other locations, including the University Center at Macomb, and Traverse City. The College of Nursing also participates in the interdisciplinary graduate certificate programs in infant mental health, and gerontology.

Pharmacy and Allied Health Professions: Courses are scheduled off-campus occasionally through the Occupational Therapy Department.

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 introductory courses for the Bachelor of Social Work program at the Northwest Activities Extension Center. The Graduate Certificate Program in Social Work Practice with Couples and Families is offered at Grand Rapids. Courses leading to completion of partial degree requirements for the B.S.W. and M.S.W. degrees 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 Urban Studies and Peace and Conflict Studies, are offered for this College at several locations.

Television Courses: Television courses provide a way to earn college credit through courses broadcast on WTVS, Channel 56, or over the College Cable Channel or The Working Channel. Along with the broadcasts, students use a textbook and/or study guide and meet with an instructor at scheduled times.

Travel Study: Sponsoring schools and colleges offer travel-study programs through CLL. Some are ongoing programs, and others vary each year.

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 313-577-4665.

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, Room 215, 6001 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

Director: Earl Newman, Macomb County

Counselor: Denise Thomas

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 15-43 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 ARTS and 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
Sociology
Speech Communication

*BACHELOR OF ARTS and BACHELOR OF SCIENCE
with a Major in*

Mathematics
Psychology

BACHELOR OF INTERDISCIPLINARY STUDIES

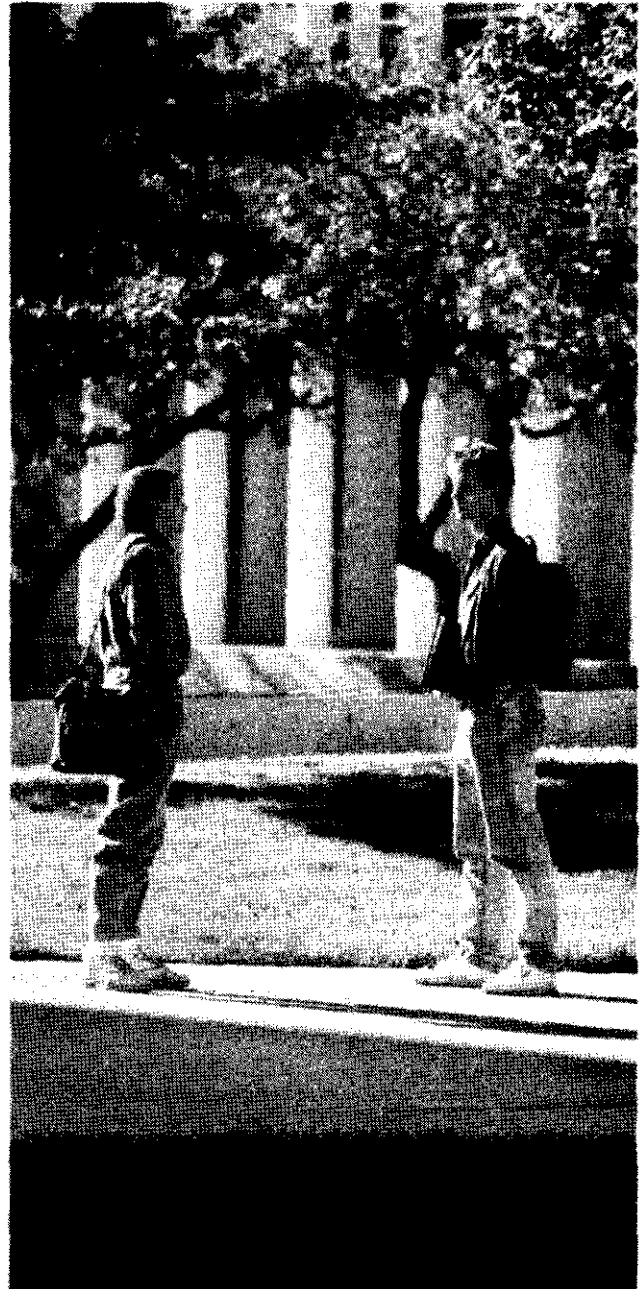
BACHELOR OF SCIENCE IN NURSING

BACHELOR OF SOCIAL WORK

*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: Fourth Floor, Criminal Justice Building, 6001 Cass Avenue, Detroit, MI 48202

Associate Dean and Director: Roslyn Abt Schindler

Associate Director for Student Services: Howard Finley

Assistant to the Associate Dean/Director: Linda L. Hulbert

Professors

A. Ronald Aronson, Jerry G. Bails, Martin Glaberman (Emeritus), Julie T. Klein, Clifford L. Maier, Richard Raspa, Rolland Wright

Associate Professors

Sandor Agocs (Emeritus), Eric A. Bockstael, David Bowen, Mary Lee Field, Gloria House, Moti Nissani, Daphne W. Ntiri, Roslyn Schindler, Norma Shifrin (Emerita), Francis Shor, Roland Wacker

Assistant Professors

Robert L. Carter, Peter Friedlander, Andre Furtado, Theodore Kotila, Penelope Majeske, James Michels, Mary F. Minock, Jerome Reide, Marsha Richmond, Saul Wineman (Emeritus)

Lecturer

Thomas Moeller

Adjunct Professor

Guerin C. Montilus

Academic Advisers

Sherry Clippert, Roberta DeMeyer, Demetrius Ford, Lois Hazell, Bobbie Walls, 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 four credits.

* For specific requirements, consult 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 credits. Some directed study courses have telecourse components, and can earn up to eight elective 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 25) and the credit distribution requirements as stated below. (See page 29 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 ten credits per semester, including a weekly workshop (four credits), a telecourse or directed study course (three 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 201–203, 231–233, or 271–273 within any CLL subject area code.

	<i>credits</i>
GIS 203—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 eleven credits per semester: a workshop (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 300-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.

— 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 transferrable from the associate degree level. Transfer credit may be allowed for requirements in social science, humanities, and science/technology, but NOT for the Foundations of Knowledge Sequence (GIS) or AGS 492 and GIS 308 cited below. The 128 credits must include satisfaction of the University General Education Requirements (see below and page 25) and the following distribution requirements. (See page 29 for special requirements for students enrolled prior to Fall Term 1987.)

Capstone Program Credit Distribution Requirements

ASSOCIATE DEGREE TRANSFER CREDIT (Sixty-four Credits)

<i>INTERDISCIPLINARY STUDIES (Forty Credits)</i>	<i>credits</i>
GIS 308—Topics in Interdisciplinary Studies	4
GIS 151—(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 492—(W) Senior Capstone Essay/Project	4

ELECTIVES (Twenty-four Credits): Students must have a minimum of thirty-seven credits at the 300-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.

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 25) 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 300-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 151
Intermediate Composition	AGS 352, 491, GIS 351, GUH 201
Writing-Intensive Course	AGS 486, 492, 496
Oral Communication	GIS 156
Computer Literacy	GST 271
Critical Thinking	GIS 326

Group Requirements

Life Science	GST 202
Physical Science	GST 242
Historical Studies	GIS 316
Social Science	AGS 348, GSS 271
American Society/Institutions	AGS 342, GSS 151
Foreign Culture	GIS 341, GIS 343, GSS 321
Visual and Performing Arts	GUH 273
Philosophy and Letters	GUH 271

SERVICE AGENCY ADMINISTRATION PROGRAM

Office: 282 Justice Building, 6001 Cass Avenue, Detroit, MI 48202

Coordinator: Percy L. Moore

Academic Programs

MINOR in Service Agency Administration

POST-BACCALAUREATE CERTIFICATE in Service Agency Administration

The Service Agency Administration Program offers courses for persons who plan to work as professionals in various nonprofit organization settings. The objective of the Program is to provide a quality learning experience for nonprofit organization professionals in a scholarly environment, and to support professionalization opportunities for nonprofit organization leaders. The Program offers the Minor in Service Agency Administration for the undergraduate student and the Post-Baccalaureate Certificate for persons already working in the nonprofit sector and who have already earned a bachelor's degree.

THE MINOR in Service Agency Administration 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 honor point average of 2.0, is required for completion of the Minor. Required courses for the Minor include: SAA 300, 350, 400, and 450, plus one elective selected from an approved list of courses drawn from allied fields.

THE POST-BACCALAUREATE CERTIFICATE in Service Agency Administration is designed for various nonprofit organization personnel: administrators, managers, volunteers, and other individuals who wish to receive certification from faculty and experts in nonprofit management. Required for admission is a bachelor's degree from an accredited four-year institution. The certificate candidate must complete twenty-four semester credits at Wayne State University with a minimum honor point average of 2.5. Required courses for the certificate include: SAA 300, 350, 400, 430, and 450, 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: Each student must register prior to attending class. Toward the end of each semester, counselors visit ISP classes to register students for the following term. Students are notified by mail of the exact dates for in-class registration, and registration forms may be returned by mail. Any student not registered during in-class registration sessions may register at the CLL Registration office or at any CLL center.

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 honor 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 counselor before registering again. Such permission will be granted only after an interview.

Counseling: The counselors 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 h.p.a., who is registered for at least seven credits in the semester of the award. Application deadline is four weeks prior to the first day of classes for the semester.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 463.

GENERAL SCIENCE and TECHNOLOGY (GST)

051. 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. (F,W)

151. History and Concepts of Mathematics: An Interdisciplinary Introduction. Cr. 3

Prereq: Passing grade in math diagnostic test or consent of instructor. 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)

183. (GUH 183) The Sciences and Humanities: Understanding the Human Condition. (GSS 183). 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)

186. Seminar in Interdisciplinary Science and Technology. Cr. 4-12

Selected studies in science and technology approached from an interdisciplinary perspective. Seminars may include: a practical and theoretical guide to the human body; geology and geography of Michigan; and psycho-chemical, psychosomatic and mental illness. Topics announced each semester. (S)

190. Science and Technology: Directed Study. Cr. 2-4 (Max. 12)

Prereq: consent of instructor. Directed study supervised by a faculty member; appropriate if no course of instruction available in desired subject area. (T)

201. Health Concepts and Strategies. Cr. 3

Conceptual treatment of individual and social components of well-being. Topics include: stress, addictive behavior, infectious and chronic diseases, sexuality, aging and death. Must be taken in conjunction with GST 202. (F)

202. (LS) Changing Life on Earth. Cr. 3-4

Prereq: successful completion of English Proficiency Test or equiv. Meets General Education Laboratory Requirement when elected for 4 credits. Material fee as indicated in *Schedule of Classes*. Telecourse and laboratory. Introduction to key biological concepts, including the definition of life, origin of life, evolution, cellular organization, instincts, heredity, chemistry of life, the genetic code, and the nature of science; laboratory acquaintance with discovery and the experimental nature of the life sciences. (F)

203. 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)

231. (LS) Living in the Environment. Cr. 4

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)

233. Current Issues in Energy Policy. Cr. 3

Semester-long course with periodic weekend sessions. Topics may include: nuclear energy, nuclear waste management; food technology and agriculture; solar energy, and alternative energy sources. Dates and themes announced each semester. (W)

242. (PS) Atoms and Stars: A Historical Introduction to Astronomy, Physics and the Process of Scientific Discovery. Cr. 4

Meets General Education Laboratory Requirement. Historical introduction to key concepts in astronomy and physics; scientific process, ideas, methods. (W)

271. (CL) Computers and Society. Cr. 4

Computer technology as a case study of the interaction between technology and society; computer literacy and programming emphasized. Workshop course. (T)

371. Techno-Social Systems and Human Values. Cr. 4

Prereq: 8 credits in General Science and Technology courses or equiv., or consent of instructor. Technology as a human activity reflecting and shaping society's needs, desires and values. Multi-disciplinary approach with case studies in technological development used to study history and evolution of technology, especially in contemporary life. (I)

GENERAL SOCIAL SCIENCES (GSS)

151. (AI) American Political Development. Cr. 4

Survey of major developments in American political institutions and ideas; analysis of the current operation of the national government. Workshop course. (Y)

152. Congress: We the People. Cr. 3

Telecourse: Individuals, interactions, organizations, and processes of United States Congress. Topics include: constitutional roots of congressional powers and institutions; historic development, growth and change in congressional powers, organizations, and personnel; relationships of Congress with other branches of government. (Y)

153. 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)

183. (GUH 183) The Sciences and Humanities:

Understanding the Human Condition. (GST 183). 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)

186. Seminar in Interdisciplinary Social Science. Cr. 4-12

Selected studies in social science approached from an interdisciplinary perspective. Seminars may include: black perspective on history; the history of disease; social perspectives on human sexuality; introduction to death and dying; and ethnocultural perspectives. Topics announced each semester. (S)

190. Social Science: Directed Study. Cr. 2-4(Max. 12)

Prereq: consent of instructor. Directed study supervised by a faculty member; appropriate if no courses of instruction are available in desired subject area. (T)

201. Problems in Work and Labor. Cr. 4

Workshop course emphasizing problems related to the nature of work and jobs. (W)

202. Work and Society: America, the Second Century. Cr. 3

Telecourse. From the Centennial to the present day: economic, political, diplomatic/military, and social developments providing the context for work in the United States. (W)

203. Conference on Work and Labor Today. Cr. 3

Semester-long course with periodic weekend sessions. Analysis of specific economic and social issues related to institutions and individuals in modern American society. Dates and themes announced each semester. (W)

271. (SS) Selected Perspectives on Ethnicity. Cr. 4

Interdisciplinary social science approach to ethnicity and immigration, historical and contemporary. Development of analytical skills. (F)

272. 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)

273. 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)

311. Native American Cultures. Cr. 4

Prereq: GSS 271 or equiv. Workshop. Examination of Native American cultures both before and after European contact, from earliest migrations and settlement of the North and South American continents, to present-day cultures and problems associated with urbanization and acculturation. (Y)

371. Women in Development. Cr. 4

Prereq: upper division standing. 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)

571. American Religion: An Interdisciplinary Social Science Study. Cr. 4

Prereq: senior standing. 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)

183. The Sciences and Humanities: Understanding the Human Condition. (GSS 183)(GST 183). 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)

186. Seminar in Interdisciplinary Humanities. Cr. 4-12

Selected studies in humanities approached from an interdisciplinary perspective. Seminars may include: the saga of the frontier; media, art and society; politics and the arts. Topics announced each semester. (S)

190. Urban Humanities: Directed Study. Cr. 2-4 (Max. 12)

Prereq: consent of instructor. Directed study supervised by a faculty member; appropriate if no course of instruction available in desired subject area. (T)

201. (IC) Cultural Identity and the American Experience: Writers' Responses. Cr. 4

Prereq: GIS 151 or equiv. Origins, ideals, symbols and substance of American culture and character. Critical analysis and writing on the distinguishing features of American thought and culture. (F)

203. 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)

212. 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)

271. (PL) Art and Aesthetics: Literature and Philosophy. Cr. 4

Analysis of literary works; philosophical approaches to the meaning and nature of literature, and of the criteria for its evaluation. (W)

273. (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)

282. From Socrates to Sartre: An Introduction to Philosophy. Cr. 3

Survey telecourse in history of western philosophy; major philosophical approaches to questions about the nature of reality, knowledge, and ethical conduct. Readings from Plato, Descartes, Hume, Kant, Hegel, Marx, Sartre. (W)

371. (PL) Significant Issues in Cultural Studies. Cr. 3 or 4

Prereq: upper division standing or consent of instructor. Extending the notion of 'culture' to include mass and popular cultures; ways ideas give order and significance to human experiences and how they are valued and devalued; students taught to write analytical essays with emphasis on comparative method. (Y)

373. Cultural Meaning and the Arts. 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)

381. (HS) Approaches to the Study of History. Cr. 3 or 4

Prereq: upper division standing or consent of instructor. Workshop course. Methodological and philosophical considerations integral to history; what constitutes the act of historical inquiry. (Y)

GENERAL INTERDISCIPLINARY STUDIES (GIS)

051. Developmental Reading and Writing. Cr. 3

No degree credit. Offered for S and U grades only. Open only to Interdisciplinary Studies Program students. 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)

151. (BC) Written Communication Skills. Cr. 4 (Max. 8)

Must be taken in first 36 credits in Interdisciplinary Studies Program. General language awareness and written communication skills emphasized; students learn to write essays for academic success. This course must be taken during first thirty six credits of the Interdisciplinary Studies Program. (T)

156. (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)

203. 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)

303. 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)

304. Foundations of Knowledge: Directed Study. Cr. 4 (Max. 12)

Prereq: upper division standing or consent of instructor. 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)

306. Foundations of Knowledge Seminar: Cross-Cultural Perspectives. Cr. 4

Prereq: upper division standing. 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)

308. Topics in Interdisciplinary Studies. Cr. 4

Conference; examples of interdisciplinary research demonstrating the advantages, complexities, and constraints of this approach, compared with traditional single disciplinary methods. (Y)

313. 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)

316. (HS) World War I as a Turning Point: Historical Perspectives. Cr. 4
Prereq: upper division standing. 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)

323. Foundations of Knowledge Conference III. 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 Summer semester. (S)

326. (CT) Methods of Search and Critical Thinking. Cr. 4
Prereq: upper division standing. 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)

328. Foundations of Knowledge Seminar: World Religions. Cr. 4
Prereq: upper division standing. Interdisciplinary cross-cultural and epistemological analysis of religion as self expression of the most intimate relationship between humans and the universe, and as response to social conflict. (S)

351. (IC) Intermediate Reading and Writing. Cr. 4
Prereq: GIS 151 or equiv. Continuation of GIS 151. Analytical reading, writing, and writing revision in the humanities, sciences and social sciences. Emphasis on research. (T)

360. (FC) Interdisciplinary Perspectives on Foreign Culture: The Arabs. Cr. 3
Prereq: upper division standing or consent of instructor. Humanistic aspects history, socio-cultural institutions of Arab cultures; theory and methods, comparativist perspectives. (F)

361. (FC) Interdisciplinary Perspectives on Foreign Culture: The Africans. (AFS 361). Cr. 4
Prereq: upper division standing. Humanistic aspects history, socio-cultural institutions of African cultures; theory and methods, comparativist perspectives. (Y)

362. (FC) Interdisciplinary Perspectives on Foreign Culture: The Chinese. Cr. 3
Prereq: upper division standing. Humanistic aspects history, socio-cultural institutions of Chinese culture; theory and methods, comparativist perspectives. (W)

384. General Interdisciplinary Directed Study. Cr. 2-4(Max. 12)
Prereq: upper division standing and prior consent of instructor. Elective. Directed study supervised by a faculty member. Appropriate if no courses of instruction are available covering desired interdisciplinary topic area. (I)

386. Interdisciplinary/Integrated Advanced Studies Seminar. Cr. 4-12
Prereq: upper division standing. 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)

391. Interdisciplinary Core Seminar. Cr. 4
Prereq: GIS 203, 308. Experience in applying theories and methods of interdisciplinary problem solving. A case study involving two or more disciplinary areas explores a specific problem. Students then pursue a research topic under the instructor's direction. (T)

513. (AFS 513) The Black Family. Cr. 4
Prereq: upper division or graduate standing. Survey and analysis of historical and social forces relative to the study of the Black family. (Y)

526. (ANT 526) The African Religious Experience: A Triple Heritage. (AFS 526). 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)

535. (AFS 535) African American Religious History and Practice. (ANT 535). Cr. 3
Prereq: upper division standing. Offered for undergraduate credit only. 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)

306. Law: Analysis and Writing. Cr. 4
Prereq: GIS 151 or equiv.; upper division standing. Intermediate written communication course: analytical reading, writing and revision; rhetorical aspects of legal materials, Supreme Court opinions. (Y)

334. Advanced Directed Study: Science and Technology. Cr. 2-4(Max. 12)
Prereq: upper division standing and consent of instructor. Directed study supervised by a faculty member. Appropriate if no courses of instruction are available covering desired science and technology topic area. Elective. (T)

336. Science and Technology Advanced Studies Seminar. Cr. 4(Max. 12)
Prereq: upper division standing. Current and historical studies of issues and topics from interdisciplinary science and technology. Topics announced each semester. Elective. (T)

342. (AI) The American Constitution and the Judicial System. Cr. 4
Prereq: GIS 151 or equiv. Interdisciplinary approach to phases of United States constitutional development; the relationship of courts to American government in historical and contemporary contexts. (Y)

344. Advanced Directed Study: Social Science. Cr. 2-4(Max. 12)
Prereq: upper division standing and consent of instructor. Advanced study supervised by a faculty member. Appropriate if no courses are available covering desired social science topic area. Elective. (T)

346. Social Science Advanced Studies Seminar. Cr. 4(Max.12)
Prereq: upper division standing. Area and period studies, problems and themes in interdisciplinary social science. Topics announced each semester. Elective. (T)

348. (SS) Theoretical and Practical Analysis of Work Organizations. Cr. 4
Prereq: GIS 151 or equiv.; upper division standing. Current social science theoretical perspectives; application to workplace. (Y)

352. (IC) Readings in Popular Culture: A Writing Course. Cr. 4
Prereq: GIS 151 or equiv.; upper division standing. Intermediate level reading and communications course; analytical reading and composition skills. Focus on social commentary in the literature of popular culture by modern foreign and American writers. (Y)

354. Advanced Directed Study: Urban Humanities. Cr. 2-4(Max. 12)
Prereq: upper division standing and consent of instructor. Study supervised by faculty member. Appropriate if no courses of instruction are available covering desired humanities topic area. Elective. (T)

356. Urban Humanities Advanced Studies Seminar. Cr. 4(Max. 12)

Area and period studies, problems and themes from interdisciplinary urban humanities. Topics announced each semester. (T)

455. 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)

476. Senior Seminar I. Cr. 4

Prereq: upper division standing. Topics determined by the upper division faculty; designed to draw together and reassess fundamental values and themes underlying ISP curriculum. Core readings and a substantial paper are assigned. (T)

486. (WI) Senior Seminar II. Cr. 4

Prereq: GIS 351 or equiv.; upper division standing. 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)

491. (IC) Senior Essay Seminar I. Cr. 4

Prereq: upper division standing. 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)

492. (WI) Senior Capstone Essay/Project. Cr. 4

Prereq: senior level standing; completion of Intermediate Composition (IC) course. 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)

496. (WI) Senior Essay Seminar II. Cr. 4

Prereq: AGS 491. Continuation of AGS 491. Lecture and tutorial course in which students complete a major research paper. (T)

SERVICE AGENCY ADMINISTRATION (SAA)

300. Service Agency Administration. Cr. 4

Prereq: passing score on English Proficiency Examination. Overview of the historical background, development, role, organization and purpose of human service agencies. Theoretical and practical aspects of management and leadership in human service agencies. (F,W)

310. Survey of Philanthropy. Cr. 4

Prereq: junior standing; passing score on English Proficiency Examination. Historical basis for philanthropy, grantmaking and the donative transaction (from the point of view of donor and recipient); other topics include: ethics, career opportunities and current issues, trends in philanthropy. (T)

350. Management of Volunteer Programs. Cr. 4

Prereq: passing score on English Proficiency Examination. Volunteer management practices including: analysis of volunteer motivations and their implications for management; planning and evaluation of volunteer programs; recruiting, selecting, training and evaluating volunteers for youth and human service agencies. (W)

400. Fundraising and Grantwriting. Cr. 4

Prereq: passing score on the English Proficiency Examination. Methods and techniques of fundraising and grantwriting for the operation of human service agencies. Theoretical and practical examination of campaign fundraising, grantwriting and corporate/foundation proposal writing. (F)

410. Information Technology in Nonprofit Operations. Cr. 4

Prereq: SAA 300 or successful satisfaction of intermediate writing course. Use of information technology in daily operation of a nonprofit organization; laboratory use of accounting, fundraising, wordprocessing and spreadsheet programs, as used in nonprofit organizations. (F,W)

430. Topics in Service Agency Administration. Cr. 4

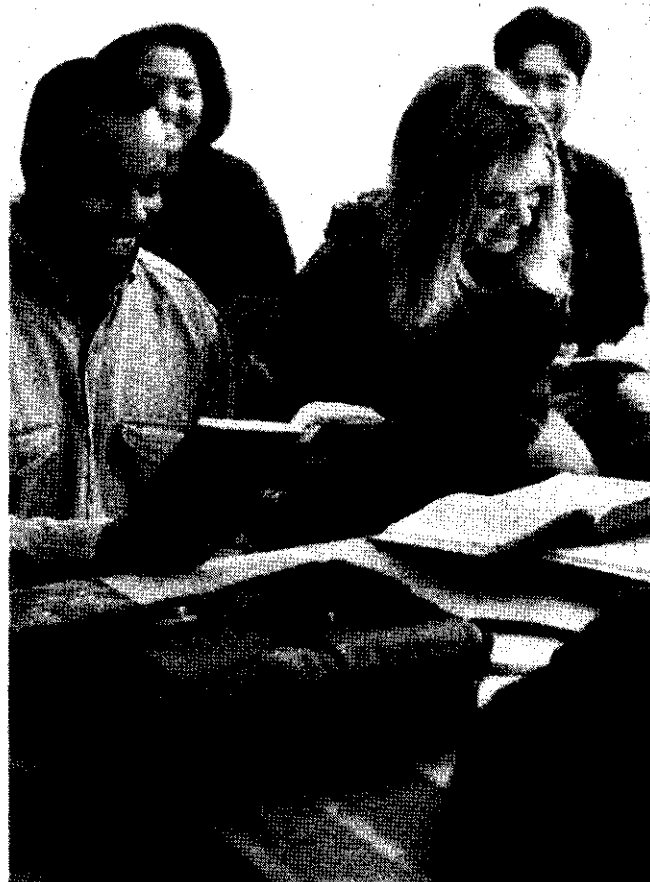
Prereq: SAA 300. Current trends, issues, policies, regulations and other topics relevant to the nonprofit sector; topics related to Service Agency Administration, both internal to the organization and externally in other sectors and the environment. (Y)

445. Internal Evaluation in Nonprofit Organizations. Cr. 1

Coreq: courses numbered above SAA 400, or electives. Internal evaluation as ongoing analysis of effectiveness and efficiency of organizations, and as leadership tool. Measures employed to evaluate performance of nonprofit organizations. (T)

450. Internship and Leadership in Service Agency Administration. Cr. 4-8

Prereq: SAA 300; 350 or 450. Demonstration of professional abilities of workplace entry-level and advanced students in service agency administration. Short written thesis describing and analysing internship or leadership experience. (T)



SCHOOL OF MEDICINE

DEAN: Robert J. Sokol

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 and Master of Arts. 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 eight hundred students are post-graduate trainees as medical residents, post-doctoral fellows, or fellows in twenty-four different clinical research programs. 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 more than fifty 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. The School, through the University, has entered into partnership with the Detroit Medical Center hospitals. The chairpersons of our departments or their designees serve as heads of departments or divisions within each of the Medical Center hospitals. 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 health care to staff other institutions and to practice in the community. Furthermore, the School is committed to its educational and care delivery activities within the context of medical education as a national activity, to which each institution contributes responsibly according to its abilities and resources.

History of the School

The 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 Dr. Theodore A. McGraw, a native of Detroit who returned to the city in 1865 after serving for two years in the United States Army as a contract surgeon.

In 1879 a second medical college, the Michigan College of Medicine, opened in Detroit. The two colleges soon united to become the Detroit College of Medicine. In 1919, the Detroit College of Medicine and Surgery, as it was 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 has entered its second century with a period of unparalleled 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.

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 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 School of Medicine is closely affiliated with a Veterans' Administration hospital, and seven other major urban and suburban hospitals in the metropolitan Detroit area. All offer programs for third- and fourth-year medical students.

The medical school participates in nationally-funded programs through the Meyer L. Prentis Comprehensive Cancer Center of Metropolitan Detroit, one of twenty centers comprising a network of cancer research and treatment; and the Wayne State University Comprehensive Sickle Cell Center, one of ten national centers for the study and treatment of sickle cell anemia.

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;

Grace Hospital, a full-service hospital which offers a wide range of outpatient services. (Huron Valley Hospital, located in a northern suburb, is also operated by the DMC.)

Harper Hospital, which specializes in oncology, cardiology, general surgery and a number of additional surgical specialties and subspecialties;

Hutzel Hospital, which includes among its areas of excellence: obstetrics, gynecology, gynecologic oncology, ophthalmology, neonatology, perinatology, urology and the treatment of infectious and renal diseases;

Rehabilitation Institute, Inc., 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;

Gershenson Radiation Oncology Center, which provides high-technology radiation treatment services for all Medical Center Hospitals. A magnetic resonance imaging center and the world's first superconducting cyclotron are under development.

Shiffman Medical Library

Director: Ellen B. Marks

Librarians: Cynthia Krolkowski, Keir Reavie, Lothar Spang, Nancy Wilmes

Hours:

<i>Monday – Thursday</i>	8:00 a.m. – 11:00 p.m.
<i>Friday</i>	8:00 a.m. – 6:00 p.m.
<i>Saturday</i>	9:00 a.m. – 5:00 p.m.
<i>Sunday</i>	12:00 n. – 7:00 p.m.

The Shiffman Medical Library, conveniently located on the Detroit Medical Center campus adjacent to the School of Medicine, maintains collections of over 250,000 volumes and 2970 journal subscriptions. Outstanding services in support of graduate research and study include: seven day per week reference and online information services; access to the complete Medline database from the library, offices, laboratories and homes; on-site access to full-text databases in the health sciences and subsidized or no-charge access to all databases at the National Cancer Institute, National Library of Medicine, National Center for Biotechnology Information and prominent national research sites. Microcomputers are available for student use within the library. Instructional programs in support of health services information management are a growing part of the services of the Shiffman Library.

All information resources needed for graduate study can be accessed through the University Libraries' Detroit Area Library Network (DALNET), a fully-computerized library system; special resource sharing programs with the University of Michigan and Michigan State University; and the Shiffman Library's membership in the National Network of Libraries of Medicine which extends the graduate student's access to the collections of all academic health sciences center libraries.

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.

External Affairs

Office: First Floor, Scott Hall, 540 E. Canfield

Executive Director: Stanley Jones

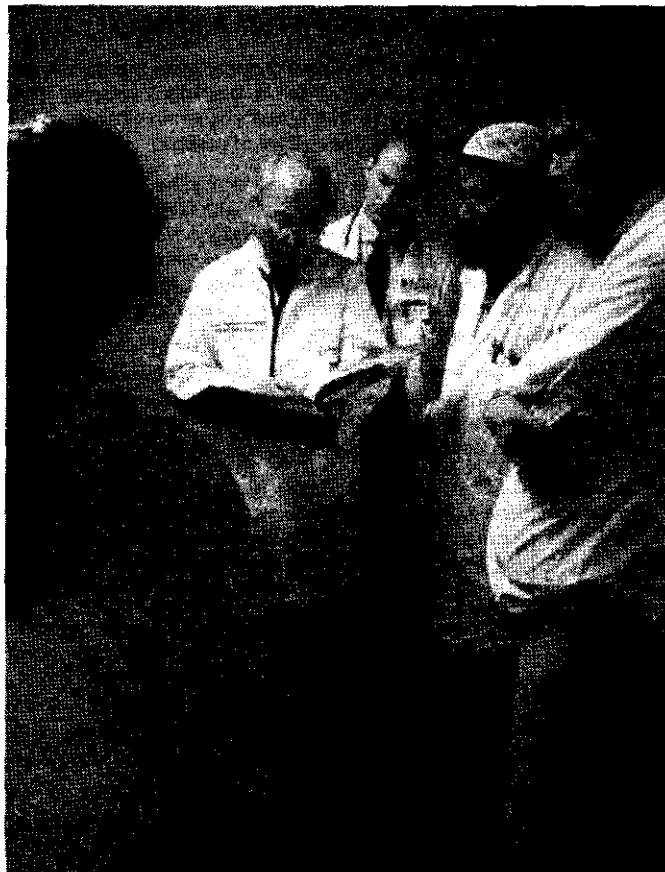
Manager of Alumni Affairs: Betty-Anne Leitch
Acting Manager of Development: Stanley Jones
Director of Public Affairs: Kathleen Wedemire

The *External Affairs 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.

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 7,000) 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 Board of Governors*.

The *Development Office's* fund-raising program is based on the premise that the personal and financial involvement of its alumni and friends enhance the quality and reputation of this School. Only through a broad base of volunteer assistance can the School of Medicine secure enough private gifts to help supplement state assistance, tuition, and other means of support essential to providing an outstanding program of education and research.

The *Public Affairs Office*, working with all elements of the School of Medicine, communicates to the School's constituencies its research, education, and health care objectives



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: Charles C. Vincent, M.D.

The School of Medicine currently accepts 256 students for its entering class. The students are selected from a large number of applicants. Encouragement is given to qualified students from minority groups, medically underserved areas, and students who bring diversified interests and abilities to the medical profession. Every effort is made to choose those students who possess the academic and personal characteristics which will enable them to succeed in completing the School of Medicine curriculum.

Academic Recommendations for Admission

Although the Wayne State University School of Medicine prefers that applicants for admission have earned a bachelor's degree, it will occasionally consider students of unusual academic attainment and maturity who have completed three years of college.

Recommendations for entrance are: general physics with laboratory, one year; inorganic and organic chemistry with laboratory, one year each; general biology or zoology with laboratory, twelve semester or eighteen quarter credits. The student is urged to select those subjects which will contribute substantially to a broad cultural background. Applicants from professional schools must have completed ninety semester credits in liberal arts courses.

It is to be noted that when students are accepted before completion of their premedical requirements, they must maintain a satisfactory scholastic average in their continued premedical work to warrant enrollment in the School of Medicine.

The *Medical College Admission Test* is required of all applicants for admission into the first year class. Students seeking admission into the September freshman class should take this test no later than October of the previous year. After a preliminary review of application credentials, interviews are held with those applicants who warrant further consideration.

Admission to the First-Year Class

The School of Medicine adheres to the acceptance procedures of the Association of American Medical Colleges, including the 'Early Decision Plan.' Admission procedures of this School are:

1. No place in the first-year class shall be offered to an applicant more than one year before the actual start of instruction for that class.
2. Following the receipt of an offer of a place in the first-year class, a student shall be allowed two weeks in which to make a written reply.

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.

4. No student who has at any time been requested to withdraw for any reason from a medical school in which he/she has been registered will be accepted by this School of Medicine. Students who have been dropped for poor scholarship by the School of Medicine should not expect favorable consideration for readmission.

5. Any applicant accepted by the School of Medicine who does not complete enrollment must apply for readmission and meet all requirements in force at the time of such new application.

Admission with Advanced Standing

Students from approved L.C.M.E. American medical schools may be admitted with advanced standing to the 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 have matriculated as a student in an approved United States or Canadian medical school for a period of time equal to that spent by the class in which he/she seeks entrance and must have completed courses equivalent to those required of that class.

2. The applicant must file a completed application form and must present official transcripts from each school attended showing that he/she meets, in full, the entrance requirements for admission to this School.

3. The applicant must be a student in good standing at the medical school from which he/she is withdrawing. A letter of support from the dean of that school is required.

4. The applicant must take such examinations in the courses for which he/she seeks credit as may be required by the faculty of the School of Medicine (either the National Board Part I or the Medical Science Knowledge Profile exam).

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 counseling and academic programs for high school, college, and post-baccalaureate students. The post-baccalaureate program guarantees admission to the School of Medicine for all students who perform satisfactorily in the program. This unit is also responsible for the summer program for incoming minority students.

Graduate Programs

Director: George E. Dambach, Ph.D.

Advanced study programs leading to the Doctor of Philosophy, Master of Science, and Master of Arts degrees are available in the School of Medicine. The primary purpose is to provide an opportunity for graduate training in preparation for careers in research in the medical and health-related sciences.

The graduate student enters a community of scholars and is expected to become acquainted with the development of a main area of study and its relationship to other pursuits. Students are expected to become independent and self-directed, to acquire useful perspectives on the meaning and limitations of exact science, and to maintain a balance between practicality and abstract intellectual activity. They are expected to draw from and add to the wealth of accumulated knowledge in their chosen discipline. Graduate students work closely with faculty advisers who help plan course schedules and research programs. Doctoral programs are offered in the areas cited below under graduate degrees.

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
- 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
- Cancer Biology
- Cellular and Clinical Neurobiology
- Community Health Services
- Immunology and Microbiology
- Molecular Biology and Genetics
- Pharmacology
- Physiology
- Radiological Physics

***MASTER OF ARTS with specialization in Audiology**

(The Ph.D. program with specialization in audiology is offered by the College of Liberal Arts.)

***GRADUATE CERTIFICATE in Community Health Services Research and Evaluation**

SCHOOL DIRECTORY

Dean	1241 Scott Hall; 577-1335
Administration and Finance	1241 Scott Hall; 577-1048
Continuing Medical Education ..	4H Univ. Health Center; 577-1180
External Affairs	1128 Scott Hall; 577-1495
Alumni Affairs	1128 Scott Hall; 577-1495
Development	1128 Scott Hall; 577-1495
Public Affairs	1281 Scott Hall; 577-1429
Personnel Office	1248 Scott Hall; 577-1163
Information	1102 Scott Hall; 577-1460
Medical Center Relations	9C Univ. Health Center; 745-5194
M.D. Programs:	
Admissions	1310 Scott Hall; 577-1466
Curricular Affairs	1207 Scott Hall; 577-5611
Student Affairs	1369 Scott Hall; 577-1463
Financial Aid	1374 Scott Hall; 577-1039
Records and Registration	1272 Scott Hall; 577-1470
Neuroscience Program	1269 Scott Hall; 577-1286
Ph.D. and M.S. Programs	1261 Scott Hall; 577-1455
Research	1269 Scott Hall; 577-1455
Residency:	
Graduate Medical Education ..	9C Univ. Health Center; 745-5146

Mailing address for all offices: Wayne State University,
School of Medicine, 540 East Canfield, Detroit, Michigan 48201

* For specific requirements, consult the Wayne State University Graduate Bulletin.

COLLEGE OF NURSING

DEAN: Edythe Ellison Hough

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.

Degree Programs

BACHELOR OF SCIENCE in Nursing

**MASTER OF SCIENCE in Nursing with a clinical focus in:*

- Adult Primary Care Nursing
- Adult Psychiatric Mental Health Nursing
- Advanced Medical-Surgical Nursing
- Child and Adolescent Psychiatric Mental Health Nursing
- Community Health Nursing
- Nursing Administration
- Nursing, Parenting, and Families
- Transcultural Nursing

**DOCTOR OF PHILOSOPHY in Nursing*

*Graduate Certificate Programs

Nursing Education

Neonatal Nurse Practitioner



For specific requirements, consult the Wayne State University Graduate Bulletin.

ADMINISTRATION and FACULTY

Dean: Edythe E. Hough
Associate Dean, Academic Affairs: Marjorie A. Isenberg
Associate Dean, Research: Darlene Mood
Assistant Dean, Adult Health and Administration: Dawn Hameister
Assistant Dean, Family, Community, and Mental Health:
Marie-Luise Friedemann
Administrative Assistant Dean for Student Affairs: Vickie Radoye
Assistant to the Dean: Patricia Stroker
Business Manager: Christine Green
Academic Services Officers: Felicia Grace, Jane Helinski,
Carilee Hogan, Naida Simon

Professors

Edythe Hough, Madeleine Leininger, Barbara McArthur, Darlene Mood, Marilyn Oberst

Associate Professors

Nancy Trygar Artinian, Arnold Bellinger, Mary Delaney, Mary Denyes, Judith Floyd, Marie-Luise Friedemann, Dawn Hameister, Effie Hanchett, Ingvarda Hanson, Marjorie Isenberg, Mary Jirovec, June Kuczynski, Carolyn Lindgren, Laurel Northouse, Marilyn Oermann, Barbara Pieper, Jeannette Poindexter, Virginia Rice, Fredericka Shea

Assistant Professors

Frances Board, Chandice Covington, Marie Draper Dykes, Judith Fouladbakhsh, Hertha Gast, Lois Hunt, Kathleen Moore, Olivia Washington, Ruby Wesley, Feleta Wilson

Clinical Assistant Professors

Geraldine Flaherty, Allison Friedman

Clinical Instructors

Margaret Falahee, Karen Olsen, Suzanne Savoy

Lecturers

JoAnn Ashare, Joan Bickes, Jan Christine, Toni Dawson-Grant, Madeline Diedo, Joyce Hammer, Janet Harden, Sharon Langlotz, Cynthia Marks, Margie Miller, Barbara Moore, Daphne Nedd, Dolores Philpot, Sukhta Pradatsundarasar, Rose Robinson, Barbara Russol, Linda Sikora, Christine Weber

COLLEGE DIRECTORY

Dean	112 Cohn; 577-4070
Associate Dean for Academic Affairs	230 Cohn; 577-4138 and: 800-544-3890
Office of Student Affairs	10 Cohn; 577-4082
Center for Health Research	315 Cohn; 577-4134
Assistant to the Dean	108 Cohn; 577-4105
Business Manager	100 Cohn; 577-4086

Mailing address for all offices:

College of Nursing
Wayne State University
5557 Cass Avenue
Detroit, Michigan 48202

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 (B.S.N.) 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, RN-BSN Completion, and Accelerated ADN-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' or better in each course. Applicants must have a minimum 2.5 honor 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 honor point average. Admission to the program is highly competitive and is based in large part on the honor 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' or better in each course. Applicants must have a minimum 2.5 honor 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 honor point average. Admission to the program is highly competitive and is based in large part on the honor 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.

RN-BSN COMPLETION: Applicants are eligible to apply to the RN-BSN Completion Program if they are Michigan licensed registered nurses (RNs) who have completed diploma or associate degree programs and wish to continue their professional education. Admission to the program is offered every semester.

ACCELERATED ADN-MSN: Applicants are eligible to apply to the Accelerated ADN-MSN Program if they are Michigan licensed registered nurses who have earned associate degrees in nursing (ADN) and are interested in preparing for advanced nursing practice at the master's level. The Accelerated ADN-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 an ADN honor point average of at least 3.3 and a minimum of one year's experience as a registered nurse. Progression into senior year professional nursing courses is granted after completion of all prerequisite courses and validation of nursing knowledge from successful completion of NLN Mobility Profile II Examinations.

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 an honor 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. Applicants for the Accelerated ADN-MSN Program must show documentation of at least one year's experience as a registered nurse.

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.)

RN-BSN Completion Program and Accelerated ADN-MSN Program 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 past record in the program, 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 B.S.N. accredited programs. Transfers to the upper division level will be determined by the equivalency of curricula as determined by the Associate Dean for Academic Affairs and upon available space in the program in upper division courses. The College determines which transfer credit is applicable to the B.S.N. 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' or better:

	<i>credits</i>
BIO 151 —(LS) Basic Biology I (Laboratory)	4
BIO 287 —Anatomy and Physiology (Laboratory)	5
CHM 102 —(PS) General Chemistry I (Laboratory)	4
CHM 103 —General Chemistry II (Laboratory)	4
ENG 102 —(BC) Introductory College Writing	4
PSY 101 —(LS) Introductory Psychology	4
PSY 240 —Developmental Psychology	4
SOC 200 or ANT 210	
—(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 25). All applicants must have a minimum 2.5 honor 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 honor point average. Since admission to the program is competitive, the higher the honor 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, satisfaction of the English Proficiency (EP) requirement of the General Education Requirements, and completion of the following courses with a grade of 'C' or better:

	<i>credits</i>
BIO 151 —(LS) Basic Biology I (Laboratory)	4
BIO 220 — (LS) Microbiology (Laboratory)	4
BIO 287 —Anatomy and Physiology (Laboratory)	5
CHM 102 —(PS) General Chemistry I (Laboratory)	4
CHM 103 —General Chemistry II (Laboratory)	4
PSY 240 —Developmental Psychology	4
English Proficiency (EP) Requirement	

The English Proficiency (EP) requirement may be satisfied by examination (see General Education Requirements, page 25). All applicants must have a minimum 2.5 honor 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 honor point average. Since admission to the program is competitive, the higher the honor 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. 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 Affairs. The University and the College reserve the right to refuse or cancel a student's admission or to direct 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 \$200,000/\$600,000 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 August 31 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. **Course Material Fee Cards (CMF):** The student must purchase course material fee cards for certain courses identified in the *Schedule of Classes*.

5. **BCLS—Level C Certification:** All students must have the equivalent of BCLS—Level C (Basic Cardiac Life Support) certification 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 August 31 of each year. Faculty are directed to deny student access to clinical experiences if the student cannot present proof of current health clearance, BCLS—Level C 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 at least one full semester prior to the re-entry term. 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 past 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.

Progression to Senior Year Nursing Courses for RN Students

Progression of the RN student in the RN–BSN Completion and the Accelerated ADN–MSN Programs to senior-level nursing courses is contingent upon satisfactory completion of National League for Nursing Mobility Profile II examinations in Care of the Adult Client, Care of the Client During Childbearing and Care of the Child, and Care of the Client With Mental Disorder. These examinations must be taken within three years of beginning the senior year.

credits

NLN Mobility Profile II Examinations 34

In addition, *all students must achieve grades of 'C' or better in all courses cited below. These courses may NOT be taken for Passed/Not Passed grades. A cumulative University h.p.a. of 2.00 or above must be maintained.*

credits

BIO 151—(LS) Basic Biology I (Laboratory)	4
BIO 220 — (LS) Introductory Microbiology (Laboratory)	4
BIO 287 —Anatomy and Physiology (Laboratory)	5
CHM 102 —(PS) General Chemistry I (Laboratory)	4
CHM 103 —General Chemistry II (Laboratory)	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 or ENG 303	
—(IC) Intermediate Writing	3
—(IC) Writing the Research Paper	3
PSY 101 —(LS) Introductory Psychology	4
PSY 240 —Developmental Psychology	4
SOC 200 or ANT 210	
—(SS) Understanding Human Society	3
—(SS) Introduction to Anthropology	3
NUR 200 —Conceptual Basis of Professional Nursing Practice	2
NUR 300 —Assessment: History Taking and Physical Examination	3
NUR 330 —Pathophysiology Related to Nursing Practice *	2
NUR 340 —Introduction to Research*	2

General Education Requirements: The student must also demonstrate satisfactory completion of the University General Education Requirements (see page 25), including English Proficiency (EP), Mathematics Competency (MC), Critical Thinking (CT), Computer Literacy (CL) (NUR 111 recommended), Oral Communication (OC), and UGE 100 — (GE) The University and its Libraries.

NOTE: Effective Fall 1991, UGE 100 is not required of students transferring thirteen or more semester credits to Wayne State University.

ADN–MSN Declaration of Graduate Major: Students in the Accelerated ADN–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.

* Not required for students in Accelerated ADN–MSN Program.

DEGREE REQUIREMENTS

Candidates for the Bachelor of Science in Nursing must complete 127 credits in course work in accordance with the academic procedures of the University and the College; see pages 15–43 and 324–326, respectively.

Residency: The last thirty credits of the degree must be taken at Wayne State.

Honor Point Average: A student must maintain an honor point average of at least 2.0 in total residence credit and in all nursing 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 127 credits required for the Bachelor of Science in Nursing, including sixty-two 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 102 —(BC) Introductory College Writing	4
BIO 151 —(LS) Basic Biology I (Laboratory)	4
CHM 102 —(PS) General Chemistry I (Laboratory)	4
PSY 101 —(LS) Introductory Psychology	4
UGE 100 —(GE) The University and Its Libraries	1
Total:	17

Second Semester (Winter)

PSY 240 —Developmental Psychology	4
BIO 287 — Anatomy and Physiology (Laboratory)	5
CHM 103 —General Chemistry II (Laboratory)	4
SOC 200 or ANT 210	
—(SS) Understanding Human Society	3
—(SS) Introduction to Anthropology	3
Satisfaction of Mathematics Competency (MC) Requirement	
Total:	16

Sophomore Year

<i>First Semester (Fall)</i>	
BIO 220 — (LS) Introductory Microbiology (Laboratory)	4
Computer Literacy (CL) proficiency (NUR 111 recommended)	0–2
Critical Thinking (CT)	0–3
NUR 200 —Conceptual Basis of Professional Nursing Practice	2
NUR 211 —Nursing Care of the Well Client	3
NUR 300 —Assessment: History Taking and Physical Examination	3
Total:	12–17

Second Semester (Winter)

NUR 212 —Foundations of Nursing Care in Illness	5
NUR 221 —Nursing Implications of Drug Administration	2
NUR 330 —Pathophysiology Related to Nursing Practice	2
NFS 221 —Human Nutrition	3
Oral Communication (OC)	0–2
Total:	12–14

Junior Year

First Semester (Fall)

NUR 312 —Nursing Care of Adults with Complex Health Needs	10
ENG 301 or ENG 303	
— (IC) Intermediate Writing	3
— (IC) Writing the Research Paper	3
NUR 340 —Introduction to Research	2
Total:	15

Second Semester (Winter)

Philosophy and Letters (PL)	3
Historical Studies (HS)	3
NUR 321 —Nursing Care of Childbearing Families	5
NUR 322 —Nursing Care of Childbearing Families	5
Total:	16

Senior Year

First Semester (Fall)

American Society and Institutions (AI)	3
NUR 411 —Psychiatric/Mental Health Nursing Care of Individuals & Groups	6
NUR 415 — Nursing Care of Acutely Ill Adults	4
Foreign Culture (FC) (NUR 480 recommended)	3
Total:	16

Second Semester (Winter)

NUR 412 —(WI) Community Focused Nursing Practice	6
NUR 422 —Leadership and Management in Nursing Practice	4
NUR 450 —Perspectives in Nursing	3
Visual and Performing Arts (VP)	3
Total:	16
Total B.S.N. Credits	127

Professional Education Requirements for the Second Career/Second Degree Program

Satisfaction of the English Proficiency (EP) requirement and these courses or equivalent courses must be completed *prior to admission*:

BIO 151 — (LS) Basic Biology I (Laboratory)	4
BIO 220 — (LS) Introductory Microbiology (Laboratory)	4
BIO 287 — Anatomy and Physiology (Laboratory)	5
CHM 102 — (PS) General Chemistry I (Laboratory)	4
CHM 103 — General Chemistry II (Laboratory)	4
PSY 240 — Developmental Psychology	4
Satisfaction of the English Proficiency (EP) Requirement	

First Semester (Fall)

NUR 200 — Conceptual Basis of Professional Nursing Practice	2
NUR 211 — Nursing Care of the Well Client	3
NUR 212 — Foundations of Nursing Care in Illness	5
NUR 221 — Nursing Implications of Drug Administration	2
NUR 300 — Assessment: History Taking and Physical Examination	3
NUR 330 — Pathophysiology Related to Nursing Practice	2
NFS 221 — Human Nutrition	3
Total:	20

Second Semester (Winter)

NUR 312 — Nursing Care of Adults With Complex Health Needs	10
NUR 411 — Psychiatric/Mental Health Nursing Care of Individuals & Groups	6
NUR 340 — Introduction to Research	2
Total:	18

Third Semester (Spring/Summer)

NUR 321 — Nursing Care of Childbearing Families	5
NUR 322 — Nursing Care of Childbearing Families	5
NUR 450 — Perspectives in Nursing	3
Total:	13

Fourth Semester (Fall)

NUR 412 — (WI) Community Focused Nursing Practice	6
NUR 415 — Nursing Care of Acutely Ill Adults	4
NUR 422 — Leadership and Management in Nursing Practice	4
Total:	14
Nursing credits	62
Non-Nursing credits	3
B.S.N. Total Credits	65

Senior Level Professional and General Education Requirements for the RN-BSN 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 (if needed) comprise the balance of the 127 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 127) 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.

	<i>credits</i>
NUR 400 — Introduction to Nursing Practice with Groups	3
NUR 412 — (WI) Community Focused Nursing Practice	6
NUR 422 — Leadership & Management in Nursing Practice	4
NUR 450 — Perspectives in Nursing	3
Nursing elective	3
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

Senior/Graduate Level Professional and General Education Requirements for the Accelerated ADN-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 127 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 127) 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.

Required Senior Level Professional and General Education Requirements

NUR 412 — (WI) Community Focused Nursing Practice	6
NUR 422 — Leadership & Management in Nursing Practice	4
Nursing elective	3
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

Required Graduate Level Professional Requirements

NUR 701 — Research in Nursing	3
NUR 710 — Theoretical Foundations of Nursing Practice	3
NUR 719 — Nursing Care of Groups & Families (not required for some grad. majors)	3
Nursing cognate (different for each graduate major)	3
Nursing clinical course (different for each graduate major)	3

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 an additional twenty-two to twenty-six credits in required graduate course work, depending on the nursing major. Graduate majors include: Adult Primary Care, Advanced Medical-Surgical Nursing/Critical Care Nursing, Adult and Child/Adolescent Psychiatric Mental Health Nursing, Community Health Nursing, Nursing, Parenting, and Families, Transcultural Nursing, and Nursing Care Administration.



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' or better.
3. *Unsatisfactory grade* means a grade of 'D' or below, 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 Status* 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 student may not withdraw from a required nursing course unless a leave of absence is granted. Leaves of absence are requested from and granted by the Associate Dean for Academic Affairs, in consultation with the SPA Committee. Contact the Office of Student Affairs for the necessary materials and deadline dates regarding leaves 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.

A student who takes an unauthorized leave of absence will be considered to have voluntarily withdrawn from the program and must reapply for admission 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 diagnostic 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 (2.00) honor point average in both: a) cumulative grades (general education and nursing); and b) professional nursing courses.
2. Students must achieve a 2.00 h.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 2.00 has been achieved.
3. A grade of 'D' 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 2.00 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 Affairs.
7. A student receiving a 'D' grade or less in either the theory or the clinical portion of any nursing course will have recorded no higher than a 'D' for the total course and will be required to successfully complete the re-entry process to repeat it before progressing to the next clinical core 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 honor point average of 2.00.
2. A student is placed on probation if he/she does not maintain a minimum honor point average of 2.00 in professional nursing courses.
3. An honor point average must be returned to a minimum of 2.00 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 43.

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 honor 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 honor 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 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 41.

Financial Assistance

The University Office of Scholarships and Financial Aid, 3 West, Helen Newberry Joy Student Services Center (see page 21), 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 h.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 h.p.a. of 3.0, qualities of leadership, and financial need.

College of Nursing Alumni Male Nurse Scholarship: Award open to any full-time male junior or senior nursing student with a minimum h.p.a. of 3.0, qualities of leadership, and financial need.

Gloria Ann Colquhoun Memorial Scholarship: Award open to any full-time nursing student; selected on the basis of scholastic achievement, qualities of leadership, and financial need.

John Hellman 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 Community-Based Practice Scholarship: Award open to any undergraduate nursing student planning to work in community-based practice in Detroit; selected on the basis of this career commitment, and scholastic achievement. Personal statement documenting community-based practice is required.

Carol Peterson Rosso Award: Award open to senior students with outstanding scholastic achievement and financial need.

Steiger Memorial Scholarship: Award open to any nursing student with demonstrable financial need.

Mabel Wandelt Scholarship: Award open to any registered nurse in the baccalaureate program who has completed sixty per cent of the credits for the BSN degree with an h.p.a. of 3.0 or above, qualities of leadership, and an agreement to enroll at least half-time following the award.

Wayne County Medical Society Auxiliary Scholarship in Nursing: Award open to nursing students with a minimum 3.0 h.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 Services, 1001 Faculty/Administration Building. A twelve-week spring-summer extern program, granting College of Nursing credit for thirty-two hours of paid hospital work and two hours of correlated weekly seminars, is available to nursing majors who have completed NUR 312 and are recommended by faculty for the program.

UNDERGRADUATE COURSES (NUR)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

111. (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)

200. Conceptual Basis of Professional Nursing Practice. Cr. 2

Introduction to the discipline and profession of nursing through the examination of historical aspects, conceptual models and theories, the relationship of research to theory and practice, roles of the professional nurse, standards of nursing practice, and legal and ethical issues related to nursing practice. (F,S)

211. Nursing Care of the Well Client. Cr. 3

Prereq: admission to College of Nursing; pre. or coreq: NUR 200, 300, BIO 220, PSY 240. BCLS-C certification, liability insurance, health clearance required. Focus on basic human needs throughout life span; applications of normal growth and development theories, human interaction and therapeutic relationships. Amplification of use of nursing process; concepts of family, community, culture, and caring. Pharmacologic mathematics competency requirement. (F)

212. Foundations of Nursing Care in Illness. Cr. 5

Prereq: NUR 200, 211, 300; BIO 220; coreq: NUR 221 and 330. BCLS-C certification, liability insurance, health clearance required. Material fee as indicated in *Schedule of Classes*. Basic human needs throughout the life span in times of illness. Nursing process: development of biophysical and psycho-social nursing diagnoses and acquisition of psychomotor skills. Nursing care provided to persons with minimal health care needs. (W)

221. Nursing Implications of Drug Administration. Cr. 2

Prereq: BIO 287, NUR 200, NUR 211; coreq: 212. Focus is on knowledge of the science of drugs and application of this knowledge in providing nursing care. Role and responsibilities of the nurse as related to drug therapy. (F,W)

300. Assessment: History Taking and Physical Examination. Cr. 3

Prereq: admission to the College of Nursing or R.N. licensure in Michigan; anatomy and physiology course; coreq: NUR 211. Material fee as indicated in *Schedule of Classes*. Concepts, knowledge and psychomotor skills for obtaining systematic health history and performing a basic physical examination of the adult. Content and activities relate to all body regions and systems. (T)

312. Nursing Care of Adults with Complex Health Needs. Cr. 5-10

Prereq: NUR 200, 211, 212, 221, 300, 330, NFS 221; coreq: ENG 301 or ENG 303. BCLS-C certification, liability insurance, health clearance required. Holistic health care provided to adults experiencing acute or complex health problems. Comprehensive assessment skills developed to provide and evaluate holistic care. Nursing diagnoses related to complex health problems of adults, ethical decision-making, research utilization, development of psychomotor skills in managing health needs of hospitalized adults. (F,W)

321. Nursing Care of Childbearing Families. Cr. 5

Prereq: NUR 300, 312; prereq. or coreq: 340. BCLS-C certification, liability insurance, health clearance required. Health responses, human care, and environmental factors of the family during the perinatal period, studied from a pluralistic nursing theory framework. Nursing, developmental and family theories, and related research as incorporated within the nursing process. Nursing care focuses on families experiencing childbearing as a situational crisis with potential for growth. (W,S)

322. Nursing Care of Childrearing Families. Cr. 5

Prereq: NUR 300, 312; prereq. or coreq: 340. BCLS-C certification, liability insurance, health clearance required. Nursing, developmental and family theories and related research to promote health and provide care for childrearing families with children experiencing acute and chronic health problems. Promotion of growth development of children with altered health status; functioning of family as a unit. (W,S)

330. Pathophysiology Related to Nursing Practice. Cr. 2

Prereq: an anatomy and a physiology course, including laboratory. No credit after IHS 310 and IHS 320. Pathophysiologic process as related to normal physiology, signs and symptoms of disease, laboratory tests and applications to nursing. (T)

340. Introduction to Research. Cr. 2

Prereq: NUR 200, 212, computer literacy or 111. Introduction to the research process in nursing. Relationship of research methods to the study of nursing problems. (T)

400. Introduction to Nursing Practice with Groups. Cr. 3

Prereq: admission to senior year in nursing; Michigan R.N. licensure. Open only to Registered Nurses; BCLS-C certification, liability insurance, health clearance required. Theories of communication, group process and dynamics, learning theories, principles of teaching, conflict resolution, and decision-making strategies. Nursing is practiced within a community setting, focusing on development of leadership and health promotion skills. (F)

411. Psychiatric/Mental Health Nursing Care of Individuals and Groups. Cr. 6

Prereq: senior standing. BCLS-C 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)

412. (WI) Community Focused Nursing Practice. Cr. 6

Prereq: senior standing. BCLS-C 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)

415. 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)

419. Nurse Externship in Clinical Nursing Practice. Cr. 3

Prereq: senior standing. Expanded theory and professional development of the student nurse in class and clinical setting. Application of theory to practice with groups of clients in the health care system. (S,F)

420. Special Topics in Care of the Physically Ill Adult. Cr. 3

Prereq: senior standing. BCLS-C certification, liability insurance, health clearance required. Student selects one of the following topics for in-depth study: oncology nursing; critical care nursing; general medical-surgical nursing; legal and/or ethical issues in nursing practice. (T)

422. Leadership and Management in Nursing Practice. Cr. 4

Prereq: senior standing, NUR 411, 412. 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)

428. Special Topics in Psychiatric Mental Health Nursing. Cr. 1-4

Prereq: senior standing. BCLS-C certification, health clearance, liability insurance required. Provides senior nursing students with an opportunity to explore in depth an aspect of psychiatric-mental health nursing. Topics: human sexuality and mental health; emotionally disturbed child; psychological responses to physical illness; community mental health nursing. Mental health needs of the adolescent; the after-care of patients; mental health care of the aging person; child psychiatric mental health nursing, addictions nursing. (Y)

429. Special Topics in Community Health Nursing. Cr. 2-4(4 req.)

Prereq: senior standing. BCLS-C certification, liability insurance, health clearance required. Provides students with an in-depth community health nursing experience. Special topics include: community health problems; interdisciplinary collaboration in health care; transcultural nursing, theory and practice; families in crisis. (Y)

450. Perspectives in Nursing. Cr. 3

Prereq: senior standing or consent of instructor. Issues related to nursing education, practice, research, and health care delivery in the United States and other selected countries. Professionalism; responsibilities for provision of and decisions about health care and the profession. (T)

480. (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)

490. Directed Study. Cr. 1-4

Prereq: admission to College of Nursing; written consent of Associate Dean for Academic Affairs. (T)

525. Introduction to Developmental Disabilities. (S W 555)(SED 505)(P T 505). Cr. 3-4

Prereq: junior standing; senior standing for nursing students. Nursing students must elect for four credits. Cross-disciplinary overview of developmental disabilities, e.g., mental impairment, epilepsy, cerebral palsy, autism, through presentation of contrasting theoretical schools of thought and intervention schema. (F)

555. Advanced Assessment: History Taking and Physical Examination. Cr. 1-3

Prereq: NUR 300 or equiv. Offered for undergraduate credit only. Material fee as indicated in *Schedule of Classes*. Individualized self-paced modular approach to learning advanced assessment skills. Content relates to specific body areas and age groups. (T)

605. Nursing Information Systems. Cr. 3

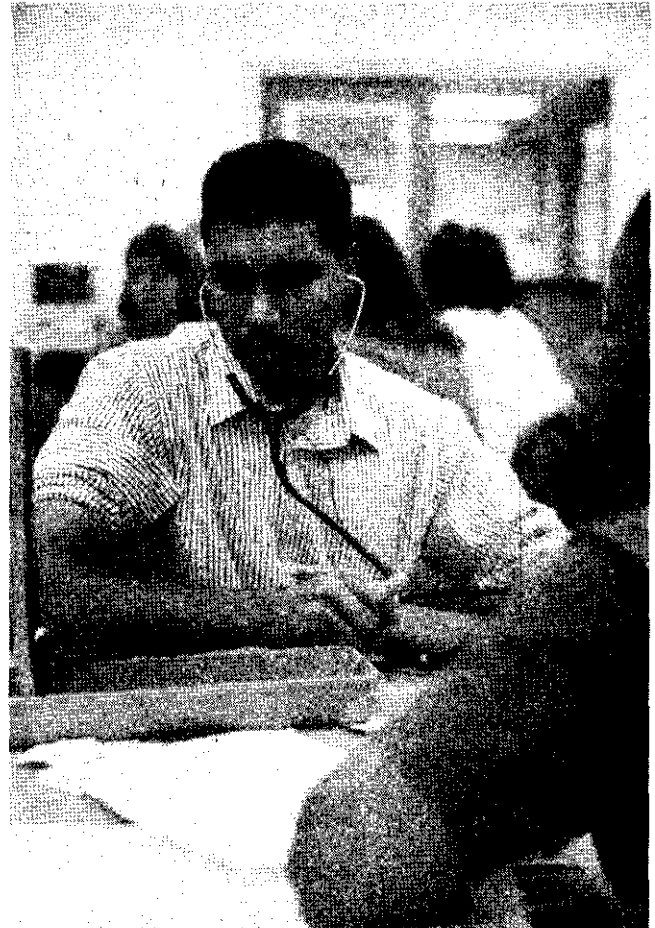
Prereq: computer literacy. Development of proficiency in use of nursing data and information systems for nursing information, clinical management and research. Ethical and moral implications of computerized information systems and proposed future directions for practice. (Y)

651. Nursing and the Health Care Environment. Cr. 3

Exploration of health care in the United States. Interaction of health policy with economics, technology, ethics, and advanced nursing practice in a rapidly-changing health care environment. (F,W)

674. Theoretical Perspectives in Rehabilitation Nursing. Cr. 3

Prereq: B.S.N. or equiv. Developing conceptual framework for providing services to rehabilitation clients. Concepts, theories, current issues of rehabilitation nursing and science. Essential values for practitioners and researchers; role of nurse in rehabilitation setting. (I)



**COLLEGE OF PHARMACY and ALLIED
HEALTH PROFESSIONS**

DEAN: George C. Fuller

Foreword

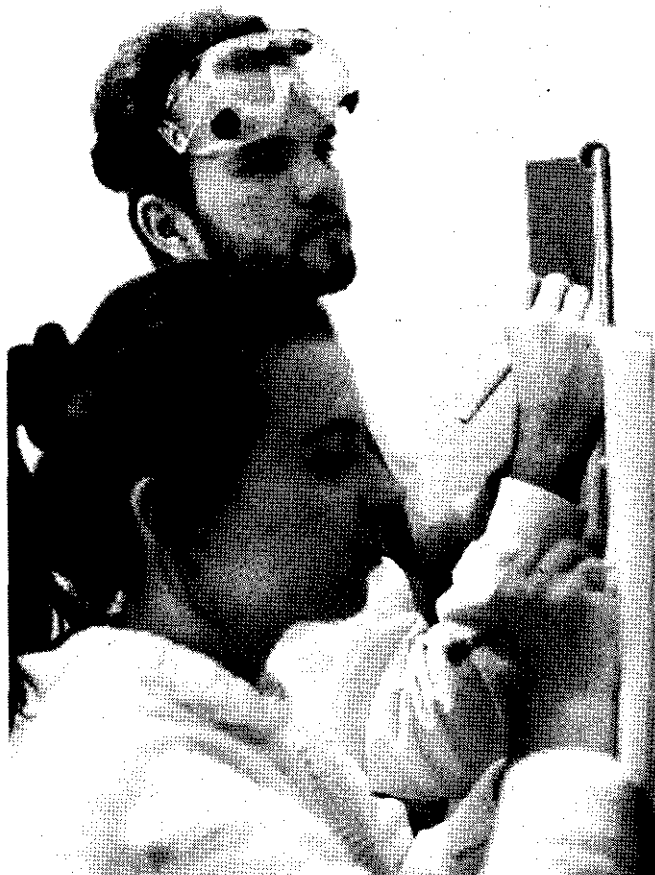
The College of Pharmacy and Allied Health Professions is a unit of the University formed by the administrative affiliation of the College of Pharmacy and the Division of Allied Health Professions of the School of Medicine. The academic programs of the two units maintain autonomous admission requirements, 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 and CERTIFICATES

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 Clinical Laboratory Science

—*Cytotechnology 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

BACHELOR OF SCIENCE in Radiation Therapy Technology

**GRADUATE CERTIFICATE in Experimental Techniques in the Pharmaceutical Sciences*

**DOCTOR OF PHARMACY with a major in Clinical Pharmacy*

**MASTER OF SCIENCE with majors in*

Hospital Pharmacy

Occupational and Environmental Health with specialization in

Industrial Hygiene

Industrial Toxicology

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 IN PHYSICAL THERAPY*

**DOCTOR OF PHILOSOPHY with a major in Pharmaceutical Sciences with specialization in*

Medicinal Chemistry

Pharmaceutics

Pharmacology/Toxicology

* For specific requirements, consult the Wayne State University Graduate Bulletin.

COLLEGE DIRECTORY

Dean:

George C. Fuller 105 Shapero Hall; 577-1574

Academic Services Officer—Allied Health:

Judith L. Kunkle 139 Shapero Hall; 577-2319

Administrative Assistant Dean:

Gerald W. Aldridge 103 Shapero Hall; 577-1708

Assistant Dean and Graduate Officer:

Gary D. Fenn 121 Shapero Hall; 577-0820

Assistant Dean, Student Affairs:

Wynefred H. Schumann 143 Shapero Hall; 577-1719

Assistant to the Dean:

Billie L. Brown 127 Shapero Hall; 577-1574

Business Manager:

Mary R. Donahue 101 Shapero Hall; 577-1576

Continuing Education Programs:

Paul J. Munzenberger 337 Shapero Hall; 577-5384

Minority Recruitment and Retention:

T. Delores Clark 145 Shapero Hall; 577-4814

Registrar:

Larry J. Zimmerman 139 Shapero Hall; 577-1716

Faculty of Pharmacy

Pharmaceutical Sciences:

Hanley N. Abramson 528 Shapero Hall; 577-1737

Fusao Hirata 727 Shapero Hall; 577-1552

Pharmacy Practice:

Richard L. Slaughter 328 Shapero Hall; 577-0824

Jesse C. Vivian 339 Shapero Hall; 577-5389

Faculty of Allied Health Professions

Anesthesia:

Prudentia A. Worth . . . 2V-4, Detroit Receiving Hospital; 745-3610

Clinical Laboratory Science:

Dorothy M. Skinner 233 Shapero Hall; 577-1384

Mortuary Science:

Marylouise Fritts-Williams 102 Mortuary Science; 577-2050

Occupational and Environmental Health Sciences:

David J.P. Bassett 628 Shapero Hall; 577-1551

Occupational Therapy:

Susan Esdale 309 Shapero Hall; 577-1435

Physical Therapy:

Louis R. Amundsen 435 Shapero Hall; 577-1432

Radiation Technology:

Diane K. Chadwell 117 Shapero Hall Annex; 577-1137

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.

The Profession of Pharmacy

The practice of pharmacy is a diverse and challenging health care profession of broad scope. One of the great appeals of the profession of pharmacy is the variety of positions available to pharmacists.

Completion of the pharmacy program qualifies pharmacists for practice in a community pharmacy, hospital or related institution, industrial or distributive complex, governmental or private agency, laboratory, professional organization or other health care settings.

According to State of Michigan law, the practice of pharmacy is a health service, the clinical application of which includes the assurance of safety and efficacy in the prescribing, dispensing, administering, monitoring, and use of drugs and related articles for the prevention of illness, and the maintenance and management of health leading to improved quality of life.

Students who complete the professional programs in pharmacy enter community, hospital practice, or industry. Graduate programs are available to exceptional students who aspire to careers in academia, research, and specialized pharmacy practice.

The Faculty of Pharmacy encourages its students to acquire the education to practice the profession of pharmacy, develop the desire and ability to keep abreast of growing knowledge in the healing arts or health sciences, make contributions to their profession which they gladly share with others, and have a willingness to accept the responsibility of wise community leadership.

Because the profession of pharmacy offers many opportunities, the Faculty is dedicated to preparing its students for broad practice, rather than preparing them for a single place of practice within pharmacy.

Accreditation

The Wayne State University College of Pharmacy and Allied Health Professions is a member of the American Association of Colleges of Pharmacy and is accredited by the American Council on Pharmaceutical Education.

The degree of Bachelor of Science in Pharmacy conferred by the College is recognized by all state boards of pharmacy.

Degree and Certificate Programs

BACHELOR OF SCIENCE in Pharmacy

**GRADUATE CERTIFICATE in Experimental Techniques in the Pharmaceutical Sciences*

**DOCTOR OF PHARMACY with a major in clinical pharmacy*

**MASTER OF SCIENCE with majors in*
hospital pharmacy
pharmaceutical science with specialization in
medicinal chemistry,
pharmaceutics,
pharmacology/toxicology

**DOCTOR OF PHILOSOPHY with a major in*
pharmaceutical sciences with specialization in
medicinal chemistry,
pharmaceutics,
pharmacology/toxicology

* For specific requirements, consult the Wayne State University Graduate Bulletin.

PHARMACY PRACTICE

Office: 328 Shapero Hall; 577-0824

Chairperson: Richard L. Slaughter

Associate Chairperson: Jesse C. Vivian

Academic Director: James G. Stevenson

Professors

Michael J. Rybak, Richard L. Slaughter

Adjunct Professor

Larry K. Shoup

Associate Professors

Thomas G. Burnakis, David J. Edwards, Susan C. Fagan, Gary D. Fenn, Paul J. Munzenberger, Wynefred H. Schumann, Maureen A. Smythe, James G. Stevenson, Jesse C. Vivian

Adjunct Associate Professors

Kenneth H. Fish, Joseph J. Kaurich, Donald P. Levine, Richard L. Lucarotti, Percy R. McClain, Douglas A. Miller, Michael F. Powell, Gregory S. Umstead, Barbara J. Zarowitz

Assistant Professors

Linda A. Jaber, Pramodini B. Kale, Martha Miller, Lynette R. Moser, Tami L. O'Sullivan, Geralynn B. Smith, James E. Tisdale

Adjunct Professors

Richard L. Lucarotti, Douglas A. Miller

Adjunct Associate Professors

J.V. Anandan, Bruce E. Vinson

Adjunct Assistant Professors

Mona Abul-Husn, Richard E. Amenta, Daniel M. Ashby, David S. Bach, Elaine M. Bailey, Albert E. Bajjoka, Cindy M. Bakst, Richard C. Berchou, Julie R. Berman, Ilze Berzins, Paul W. Bush, Patricia Camazzola, Praneetharathi H. Chandrasekar, James E. Cisek, Daniel M. Colaluca, Dorothy L. Coleman, Thomas D. Constance, Michelle L. Dehoorme, William Drake, Gerald L. Emmer, Margo Farber, Dennis M. Gates, Janet L. Hoffman, Stephen M. Janning, Richard H. Jennings, Mathew H. Johnson, Terri L. Koehler, David B. Levy, Ronald H. Lukasiewicz, Elizabeth Lyons, Beatriz Manzor-Mitrzyk, Susan E. Martin, Jill McCullough, John F. Mitchell, Susan A. MonPetite, Rakesh Patel, Kathleen S. Pawlicki, Heidi Pillen, Sheldon J. Rich, Diana Ritkowski, William C. Porter, Cynthia L. Quince, Stephanie A. Rybak, Nada Saad, May Beth Sancimo, Randy F. Schad, May B. Shaba, Cynthia P. Smith, Carl R. Stone, Linda Strausbaugh, Mary Jane Sudekum, Mark A. Touchette, Paul C. Walker, Laurie A. Wesolowicz, David B. Wright, Christopher R. Zimmerman

Adjunct Instructors

Maudestine Bell, Gerald E. Bodendistel, Marija G. Brandoline, Brian O. Brown, Lawrence Cantor, E. Phillip Cole, Glenn R. Currier, John S. Dryps, Carol R. Hillman-Wiseman, Ervin A. Galecki, Sandra M. Gryebet, Dennis B. Halstead, Rayne A. Henderson, Thomas R. Jantz, Kevin L. Kaufmann, G. Richard Krieger, Kerry F. Manseau, Allen N. Marmalad, Ronald A. McEachen, Thomas P. Michalski, Jerome D. Mills, Mark E. Mlynarek, Deborah Njus, Mary E. Peters, Leonard W. Ptak, Thomas F. Rolands, David Ruta, Deborah H. Schweyen, Prakash Shah, Elizabeth A. Simpson, Edward G. Szandzik, Cheryl A. Szof, Steven J. Tebay, Mary C. Thorshy, Virginia Tekieli, Karl W. Widak, Moses C. Wu

PHARMACEUTICAL SCIENCES

Office: 528 Shapero Hall; 577-1737
Interim Chairperson: Fusao Hirata

Professors

Hanley N. Abramson, Harold E. Bailey (Emeritus), Martin Barr (Emeritus),
Raymond J. Dauphinais (Emeritus), Melvin F. W. Dunker (Emeritus),
George C. Fuller, Fusao Hirata, Robert T. Louis-Ferdinand, Janardan B.
Nagwekar, Henry C. Wormser

Adjunct Professors

David J.P. Bassett, Alice M. Young

Associate Professors

Randall L. Commissaris, William J. Lindblad, Richard K. Mulvey
(Emeritus), Craig K. Svensson

Adjunct Associate Professors

Merlin E. Ekstrom, Eun W. Lee, Howard J. Normile, Joel G. Pounds

Assistant Professors

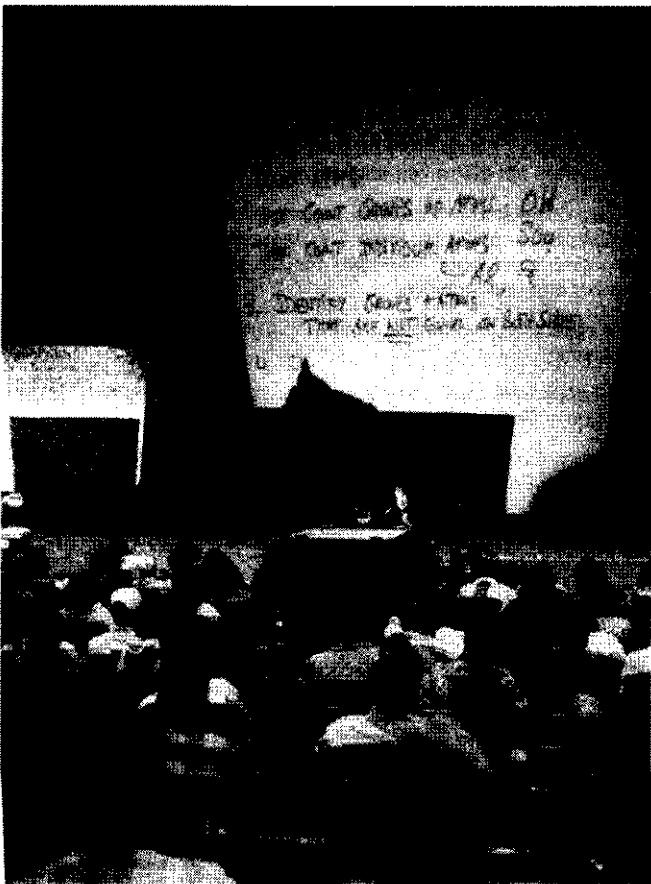
Richard A. Gibbs, David K. Pitts, Maniklal S. Sardesai, Patrick M. Woster

Adjunct Assistant Professors

Michael J. McCabe, Jr., John J. Nagelhout, Steven E. Rose, Bonita G. Taffe

Adjunct Instructors

Aiko Hirata, Edward Roginsky



BACHELOR OF SCIENCE IN PHARMACY

The minimum undergraduate program of all nationally accredited colleges of pharmacy is one of five academic years. Candidates for the degree of Bachelor of Science (Pharmacy) must complete sixty semester credits of acceptable pre-professional courses. These credits may be taken at Wayne State University, another university or college or a community college, and then apply for admission to the professional program of Pharmacy in the College of Pharmacy and Allied Health Professions.

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 application blank 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.

In order to be considered for admission, applicants must have their completed application, including official transcripts and any other records necessary for admissions consideration, in the appropriate office well in advance of the semester for which they are applying.

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 Pharmacy degree. Requirements to be completed prior to admission to the pharmacy curriculum are:

1. Completion of sixty semester credits including the core courses listed below.
2. Completion of each of the following core courses (or their equivalents) with the grade of 'C' (2.0 h.p.a.) or better. Grades of 'C-minus' or below, or numerical grades below 2.0 h.p.a., are not acceptable.

First and Second Years — Preprofessional Core

credits

	credits
BIO 151 —(LS) Basic Biology I (lab required)	4
BIO 220 — (LS) Introductory Microbiology (lab required)	4
CHM 107 —(PS) Principles of Chemistry I (lab required)	4
CHM 108 —Principles of Chemistry II (lab required)	5
CHM 224 —Organic Chemistry I	4
CHM 226 —Organic Chemistry II	4
ECO 100 —(SS) Survey of Economics	4
MAT 201 —Calculus I	4
PHY 213 —(PS) General Physics (lab required)	4
PHY 214 —General Physics (lab required)	4
P S 101 —(AI) American Government	4
STA 102 — Introductory Statistics	3

Basic Composition (BC) Competency: ENG 102, 105. 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 301, 303, 305 preferred; or ENG 205, 210, 211, 212, 221, 231, 239, 257.

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 108.

Oral Communication (OC) Competency: ENG 306, GIS 156, SPB 101. 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.

Critical Thinking (CT) Competency: PHI 105, SPC 211, GIS 326. This competency may be demonstrated by successfully completing an approved course or passing the Critical Thinking Competency Examination.

Computer Literacy (CL) Competency: CSC 100 or 101. 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.

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.

These requirements *must* be completed by August 10 of the year for which professional admission is sought.

Because of rapid changes in technology, preprofessional science credits must be completed within five years prior to admission to the professional program.

Students must complete additional University General Education Requirements (see below, and page 25), 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:

General Education Requirements: see page 25. 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 (contact Pharmacy Registrar for specific course recommendations):

Historical Studies (HS)	3
Foreign Culture (FC)	3
Visual and Performing Arts (VP)	3
Philosophy and Letters (PL)	3
UGE 100 —(GE) The University and its Libraries	1

(Effective Fall 1991, UGE 100 is not required of students transferring thirteen or more semester credits to Wayne State University.)

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 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.

Application Deadline: The pharmacy application must be submitted by March 1, in order to ensure a decision before the Fall Semester begins.

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 honor point average (h.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.
2. Science honor point average (h.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. 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.
4. All applicants must write a professional goal statement as part of the application.
5. All applicants must complete the Wayne State University English Proficiency Requirement.
6. Applicants whose first language is not English must pass the Test of English as a Foreign Language (TOEFL) with a minimum score of 550.
7. 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 College of 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-Degree Students: Students with a baccalaureate degree from this college or another 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 cannot be converted to graduate credit.

Readmission Following an Interruption in Residence: Undergraduate students whose attendance in the pharmacy curriculum has been interrupted for two or more consecutive semesters are required to apply for readmission at the Office of the Registrar, College of Pharmacy and Allied Health Professions, 139 Shapero Hall. Deadline date for such applications is March 1.

Degree Requirements

The Bachelor of Science in Pharmacy program consists of a total of five years of academic study and a minimum of 163 semester credits: sixty-two to seventy-four credits in preprofessional and General Education courses and 101 credits in professional courses. These include the core curriculum required in the pre-pharmacy program (see above, page 334), elective and/or specific courses to satisfy the University General Education Requirements (see page 20), the pharmacy curriculum as outlined below, and the clinical externship (see page 335). All course work must be done in compliance with the academic procedures of the University (see pages 15-43) and the College (see page 340) as well as the following standards:

Residence: a student must have devoted at least three academic years to resident study in an accredited college or colleges of pharmacy, of which the final professional year and last thirty credits must be taken at the Wayne State University College of Pharmacy and Allied Health Professions.

Honor Point Average: a student must maintain an honor point average of at least 2.0 in total residence credit and in all pharmacy 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 shown below, and meet any course prerequisite or corequisite, unless excused from doing so by the Dean.

PHARMACY CURRICULUM

First Professional Year

Fall Semester

	<i>credits</i>
IHS 310 — Basic Mechanisms of Human Disease I	5
PSC 311 — Pharmaceutical Biochemistry I	2
PSC 312 — Dosage Form Design and Biopharmaceutics	4
PSC 313 — Principles of Drug Analysis	2
PPR 311 — Pharmaceutical Calculations	1
PPR 312 — (WI) Jurisprudence	2
Total:	16

Winter Semester

IHS 320 — Basic Mechanisms of Human Disease II	5
IHS 321 — Basic Mechanisms of Human Disease: Laboratory	1
PSC 321 — Pharmaceutical Biochemistry II	3
PPR 321 — Orientation to Pharmacy	1
PPR 322 — Pharmaceutical Compounding and Dispensing	3
PPR 323 — Non-Prescription Medication	3
Total:	16

Spring Semester

PSC 401 — Principles of Drug Disposition	4
PSC 402 — Principles of Drug Action	2
Total:	6

Second Professional Year

Fall Semester

PHA 411 — Autonomic Pharmacology	1
PHA 412 — Fluids and Electrolytes/Renal	1
PHA 413 — Immunology & Inflammatory Disorders; Hematology	2
PHA 414 — Endocrine and Respiratory Systems	2
PHA 415 — Cardiovascular Systems	4
PHA 416 — Gastroenterology/Nutrition	2
PHA 417 — Oncology	2
PPR 411 — Patient Counseling and Education	2
Total:	16

Winter Semester

PHA 421 — Infectious Diseases	4
PHA 422 — Neurology	2
PHA 423 — Psychiatry/Drug Abuse	2
PHA 424 — Clinical Toxicology	1
PHA 425 — Special Patient Populations	1
PPR 421 — (WI) Pharmacy Management	4
Total:	14

Third Professional Year

During the third professional year, students will be required to complete seventeen semester credits of didactic courses to include the following:

PPR 500 — (WI) Drug Literature Evaluation	2
PPR 528 — Ethics and Professional Responsibility	2
PPR 529 — Pharmacy Practice and the Health Care System	3
PPR 611 — Drug-Induced Diseases	2
PPR 612 — Home Health Care	3
PPR 621 — Intravenous Therapeutics	2
Professional Elective	3
Total:	17

In addition, students are required to complete fifteen to sixteen credits in experiential externships/clerkships. Students must consult with academic advisers to plan the third professional year. Completion of the third professional year may require enrollment in spring/summer semester courses.

Clinical Externship Requirement

In order to provide the pharmacy student with training in the application of the scientific knowledge he/she has gained throughout the pharmacy curriculum, an externship is provided. This externship gives the senior student an opportunity to apply his/her pharmaceutical training in a variety of patient-care settings in community and hospital locations within the metropolitan Detroit area. Each student in the externship is individually assigned to varying types of experiences with a total time allocation in excess of 465 hours. The externship is required of all students. The student must provide his/her own transportation and professional liability insurance.

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 approved by the Michigan State Board of Pharmacy beginning after a

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: The Executive Secretary, Michigan State Board of Pharmacy, 611 W. Ottawa Street, P. O. Box 30018, Lansing, Michigan 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 may be taken for graduate credit unless specifically restricted to undergraduate students by individual course limitations. Professional pharmacy courses (PSC, PHA, PPR) require admission to the professional curriculum as a prerequisite. For interpretation of numbering system, signs and abbreviations, see page 461.

INTERDISCIPLINARY HEALTH SCIENCES (IHS)

- 310. Basic Mechanisms of Human Disease I. Cr. 5**
Prereq: BIO 151 or equiv. Material fee as indicated in *Schedule of Classes*. First part of two-semester sequence: anatomy, physiology, and pathology of human organ systems. (F)
- 320. Basic Mechanisms of Human Disease II. Cr. 5**
Prereq: IHS 310. Material fee as indicated in *Schedule of Classes*. Continuation of IHS 310. Second part of two-semester sequence. (W)
- 321. Basic Mechanisms of Human Disease: Laboratory. Cr. 1**
Prereq: IHS 310; coreq: 320. Prosections to understand anatomical relationships. (W)
- 330. Pharmacology for Allied Health Professions. Cr. 1**
Prereq: IHS 310, 320 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)
- 574. Health Alternatives In Contemporary Society. Cr. 3**
Prereq: last professional year standing or consent of instructor. Material fee as indicated in *Schedule of Classes*. Critical evaluation of alternative health claims; preparation of pharmacist to provide public with information on efficacy of medical alternatives. Oral report. (Y)

PHARMACEUTICAL SCIENCES (PSC)

- 311. Pharmaceutical Biochemistry I. Cr. 2**
Prereq: admission to professional curriculum. Material fee as indicated in *Schedule of Classes*. Survey of biological chemistry, mechanisms of action of drug molecules, and other facets pertinent to the pharmaceutical sciences. (Formerly PSC 330) (F)
- 312. Dosage Form Design and Biopharmaceutics. Cr. 4**
Prereq: admission to professional curriculum. Material fee as indicated in *Schedule of Classes*. Principles of dosage form design and introduction to biopharmaceutics. (Formerly PSC 310) (F)
- 313. 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)

- 321. Pharmaceutical Biochemistry II. Cr. 3**
Prereq: PSC 311. Material fee as indicated in *Schedule of Classes*. Continuation of PSC 311. (Formerly PSC 340) (W)
- 401. Principles of Drug Disposition. Cr. 4**
Prereq: IHS 320, IHS 321, PSC 321, PPR 322. Basic principles and applications of pharmacokinetics, drug metabolism, and pharmacogenetics. (Y)
- 402. Principles of Drug Action. Cr. 2**
Prereq: IHS 320, IHS 321, PSC 321. General principles of pharmacology and medicinal chemistry. (Y)
- 530. Fundamentals of Controlled Release Drug Delivery Systems. Cr. 2**
Prereq: PSC 401. Presentation and discussion of the physicochemical and pharmacokinetic principles and rationale utilized in drug delivery systems designed for controlled release of drugs to produce their therapeutic effects with minimum side effects. (W)
- 560. Recreational Drug Use and Drug Abuse. Cr. 3-4**
Prereq: PCL 410, PCL 420; PPR 450, PPR 460; 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 531) (Y)
- 586. Seminar in Pharmaceutics. 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 PHA 589) (T)
- 587. 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 589) (T)
- 590. 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 590) (T)
- 591. Directed Study in Pharmaceutics. Cr. 1-3(Max. 3)**
Prereq: consent of instructor. Open only to undergraduates in good academic standing. (Formerly PHA 590) (T)
- 592. Directed Study in Pharmacology. Cr. 1-3(Max. 3)**
Prereq: consent of instructor. Open only to undergraduates in good academic standing. Material fee as indicated in *Schedule of Classes*. (Formerly PCL 590) (T)
- 600. 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)
- 610. Survey of Pharmacology I. Cr. 3**
Prereq: BIO 340, CHM 226, MAT 201; graduate standing or consent of instructor. Survey of pharmacology for entering graduate students in the pharmaceutical sciences. Emphasis on new drug development. (F)
- 620. Survey of Pharmacology II. Cr. 3**
Prereq: PSC 610. Continuation of PSC 610. (W)
- 630. Computer Applications In the Pharmaceutical Sciences. Cr. 2**
Prereq: last professional year, graduate, or graduate professional standing; consent of instructor. Specialized computer topics in the pharmaceutical sciences, including data manipulation, molecular modeling, and pharmacokinetic analysis. (Y)

660. (PPR 660) Biostatistics. Cr. 3

Prereq: last professional year, graduate, or graduate professional standing. Student computer account required. Use and interpretation of statistical tools in the pharmaceutical and clinical literature. (F)

672. 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)

680. 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)

689. Toxicology and Adverse Drug Reactions. Cr. 3

Prereq: last professional year, graduate, or graduate professional standing. Material fee as indicated in *Schedule of Classes*. Study of toxicology and adverse drug reactions including metabolism, hypersensitivity, carcinogenicity, drug-drug interactions, and other factors hazardous to human health. (Y)

PHARMACY (PHA)

411. Pharmacotherapeutics I: Autonomic Pharmacology. Cr. 1

Prereq: PSC 401, PSC 402, PPR 323. Pharmacy and medicinal chemistry of drugs that act on the autonomic nervous system. (F)

412. Pharmacotherapeutics II: Fluid and Electrolytes/Renal. Cr. 1

Prereq: PSC 401, PSC 402, PPR 323. Pharmacology, medicinal chemistry, therapeutic application, pharmacokinetics of drugs influencing fluid and electrolyte balance and drugs used in the management of renal diseases. (F)

413. Pharmacotherapeutics III: Immunology and Inflammatory Disorders; Hematology. Cr. 2

Prereq: PSC 401, PSC 402, PPR 323. 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)

414. Pharmacotherapeutics IV: Endocrine and Respiratory Systems. Cr. 2

Prereq: PHA 411, 412, 413. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of diseases of the respiratory and endocrinologic systems. (F)

415. Pharmacotherapeutics V: Cardiovascular Systems. Cr. 4

Prereq: PHA 411, 412, 413. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of diseases of the cardiovascular system. (F)

416. Pharmacotherapeutics VI: Gastroenterology/Nutrition. Cr. 2

Prereq: PHA 411, 412, 413. 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)

417. Pharmacotherapeutics VII: Oncology. Cr. 2

Prereq: PHA 412, 413. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of neoplastic diseases. (F)

421. Pharmacotherapeutics VIII: Infectious Diseases. Cr. 4

Prereq: PHA 412, 413. Pharmacology, medicinal chemistry, therapeutic application, and applied pharmacokinetics of drugs that are used in the management of infectious diseases. (W)

422. Pharmacotherapeutics IX: Neurology. Cr. 2

Prereq: PHA 411, 412, 413. Pharmacology, medicinal chemistry, therapeutic application, applied pharmacokinetics of drugs that are used in the management of neurologic diseases including pain. (W)

423. Pharmacotherapeutics X: Psychiatry/Drug Abuse. Cr. 2

Prereq: PHA 422. 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)

424. Pharmacotherapeutics XI: Clinical Toxicology. Cr. 1

Prereq: PHA 414, 415, 416, 417, 421, 423. Study of toxicology, hypersensitivity, carcinogenesis and other factors that are hazardous to human health as a result of ingestion of xenobiotics. (W)

425. Pharmacotherapeutics XII: Special Patient Populations. Cr. 1

Prereq: PHA 424. Pharmacology, medicinal chemistry, pharmacokinetics and therapeutic applications of drugs to special patient populations. (W)

PHARMACY PRACTICE (PPR)

311. 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)

312. (WI) Pharmacy Jurisprudence. Cr. 2

Prereq: P S 101; admission to professional curriculum. Various state and federal regulations affecting pharmacy practice and drug control. (F)

321. 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 305.) (W)

322. Pharmaceutical Compounding and Dispensing. Cr. 3

Prereq: PSC 312, PPR 311, PPR 312. Material fee as indicated in *Schedule of Classes*. Elements of compounding and dispensing. (W)

323. Non-Prescription Medication. Cr. 3

Prereq: IHS 310; coreq: IHS 320, IHS 321. Material fee as indicated in *Schedule of Classes*. Various therapeutic classes of non-prescription medication with particular reference to rationale for use, products available, comparative effectiveness and contraindications. (F)

411. 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)

421. (WI) Pharmacy Management. Cr. 4

Prereq: PPR 321, 322. Principles of management as applied to the hospital/institutional organization and community pharmacy practice. Writing Intensive course in second professional year. (W)

500. (WI) Drug Literature Evaluation. Cr. 2

Prereq: PHA 425. 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)

510. 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)

512. (WI) Hospital Pharmacy Externship. Cr. 4-7

Prereq: PHA 425, PPR 411, PPR 421. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

513. Community Pharmacy Externship. Cr. 4-7

Prereq: PHA 425, PPR 411, PPR 421. 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)

519. 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)

522. 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)

528. Ethics and Professional Responsibility. Cr. 2

Prereq: PPR 421; and 511 or 512 or 513. General ethical principles and how these principles relate to legal duties and rights to guide professional pharmacy practice and conduct. (Y)

529. Pharmacy Practice and the Health Care System. Cr. 3

Prereq: PPR 421. 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)

530. 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)

540. Hospital and Institutional Practice Management. Cr. 3

Prereq: PPR 410. Introduction to policies and procedures in hospital/institutional organization and practice including distribution, use and training of supportive personnel; formulary and bid purchasing. JCAH rules and guidelines. (W)

550. Community Pharmacy Management. Cr. 3

Prereq: PPR 410. Principles of management of a community pharmacy practice: advertising, merchandising, purchasing and inventory control; operating and financial records; financial management, insurance and risk factors; security and pilferage problems; purchasing a pharmacy and alternatives in community practice; contractual relationships in practice. (F)

560. Special Topics in Hospital Pharmacy Practice. Cr. 3

Prereq: last professional year standing. Discussion of current professional problems in hospital and institutional pharmacy practice. (W)

570. Special Topics in Community Pharmacy Practice. Cr. 2

Prereq: last professional year standing. Discussion of current professional problems in community pharmacy practice. (F)

575. Oncology Therapeutics. Cr. 2

Prereq: last professional year standing. Material fee as indicated in *Schedule of Classes*. 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. (Y)

580. 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)

590. Directed Study in Pharmacy Practice. Cr. 1-3(Max. 3)

Prereq: consent of instructor. Open only to undergraduates in good academic standing. (T)

610. Legal Environment in Pharmacy. Cr. 2-3

Prereq: PPR 310 or equiv. 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)

611. Drug-Induced Diseases. Cr. 2

Prereq: PHA 425. Material fee as indicated in *Schedule of Classes*. Understanding the pathology associated with the use of drugs. Mechanisms and examples of how drugs damage different organ systems. (Y)

612. Home Health Care. Cr. 3

Prereq: PHA 425, PPR 411, PPR 421; or graduate or graduate professional standing. Material fee as indicated in *Schedule of Classes*. Review of the availability and applications of surgical appliances and other health-care devices used in patient care. (F)

621. Intravenous Therapeutics. Cr. 2

Prereq: PHA 425, or graduate or graduate professional standing. Material fee as indicated in *Schedule of Classes*. The physiology of fluid balance, fluid balance abnormalities, acid-base balance, treatment of fluid abnormalities, maintenance requirements, electrolyte replacement, and diseases commonly associated with fluid imbalance. (F,W)

660. Biostatistics. (PSC 660). Cr. 3

Prereq: last professional year, graduate, or graduate professional standing. Student computer account required. Use and interpretation of statistical tools in the pharmaceutical and clinical literature. (F)

661. Disease Processes and Therapeutics I: Cardiology. Cr. 2

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: cardiology. (Y)

662. Disease Processes and Therapeutics II: Infectious Diseases. Cr. 2

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: infectious diseases. (Y)

663. Disease Processes and Therapeutics III: Hematology/Oncology. Cr. 2

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: hematology and oncology. (Y)

664. Disease Processes and Therapeutics IV: Psychiatry/Neurology. Cr. 2

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: psychiatry and neurology. (Y)

665. Disease Processes and Therapeutics V: Gastroenterology/Endocrinology. Cr. 2

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: gastroenterology and endocrinology. (Y)

**666. Disease Processes and Therapeutics VI:
Nephrology/Fluid and Electrolytes. Cr. 1-3**

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: nephrology and fluid electrolytes. (Y)

**667. Disease Processes and Therapeutics VII:
Rheumatology, Pediatrics and Patient Assessment.
Cr. 2**

Prereq: admission to Pharm.D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: rheumatology, pediatrics, patient assessment. (Y)

**668. Disease Processes and Therapeutics VIII:
Immunology/Pulmonary/Toxicology. Cr. 2**

Prereq: admission to Pharm. D. program. Material fee as indicated in *Schedule of Classes*. Pathophysiology of disease states, clinical pharmacology and therapeutic application of drugs: immunology, pulmonary, and toxicology. (F)

686. Principles of Pediatric Pharmacy. Cr. 2

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)

687. Geriatric Pharmacy Practice. Cr. 2

Prereq: last professional year standing, graduate or graduate professional standing. Material fee as indicated in *Schedule of Classes*. Topics presented are those concerned with the aging process as it relates to the more common disease states with focus on drug therapy. The role of the pharmacist in the care of the elderly is also emphasized. (Y)



PHARMACY STUDENT and ALUMNI ACTIVITIES

The Pharmacy Student Advisory Board (PSAB) represents organizations of the pharmacy student body, for the purpose of advancing the College, the University, and the profession of pharmacy. This Board consists of a representative from each of the various pharmacy student organizations and the class officers.

The College has a Chapter of the Academy of Students in Pharmacy (ASP), which is an affiliate of the American Pharmacists Association. 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 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, whose fundamental objective is to promote the advancement of the pharmaceutical sciences through the encouragement and recognition of academic excellence. High standards of scholarly attainment are required for election to membership.

Students ranking in the top twenty percent of the class and having at least a 3.0 h.p.a. are eligible for election, which takes place in the beginning of the fourth and fifth year.

Pharmaceutical Fraternities

The following national professional pharmaceutical fraternities maintain active chapters at the College: Kappa Psi, Phi Delta Chi, and Lambda Kappa Sigma.

Kappa Psi Fraternity 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 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 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, foster a professional spirit and promote mutual improvement among alumni, and to support 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 1992 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 'D' or below, 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, 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.

Withdrawal and Leaves of Absence

A student may withdraw from one course during a term, subject to applicable University policy and, when required, the approval of the course instructor/coordinator and the Dean. A student may not withdraw from more than one course during a term unless a leave of absence is granted (see below). Before withdrawing from any course, the student must meet with both the course instructor and his/her faculty adviser to discuss the options. A student who withdraws from a course may not elect any subsequent courses for which that course serves as a prerequisite.

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 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.

Time Limitations

The program must be completed within four 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 four-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 six 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.

Faculty review of cases involving dismissal and/or an extension of the time limitation may be requested within the time period specified in the CAPP notification. All such requests must be in writing. Faculty review of such actions will be limited to documentation previously submitted to the CAPP. The decision of the Faculty in cases involving dismissal and/or an extension of a time limitation is final. Following notice of the faculty decision, procedural review only by the Dean, and ultimately the Provost, may be sought.

Not that this academic review process does not apply to grades. Neither the CAPP nor the Faculty will 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 an honor point average of 3.7 or more for at least twelve credits of course work in a given semester is notified by the Dean of his/her citation for distinguished scholarship and professional progress. The student's name is placed on the Dean's List of Honor Students.

Graduation with Distinction

A candidate eligible for the degree of Bachelor of Science in Pharmacy may receive a diploma designated for scholastic excellence, as evidenced by the cumulative honor point average. The designations, which are University-wide, are: *Cum Laude*, *Magna Cum Laude*, and *Summa Cum Laude*. Graduation with distinction will be indicated on the student's diploma and on the transcript. Criteria for graduation with distinction may be found in the General Information section of this bulletin, page 43.



FINANCIAL AID, SCHOLARSHIPS 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, 2 East, Helen Newberry Joy Student Services Center.

Additionally, the College offers 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 Affairs, 143 Shapero Hall.

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.

Special Interest Scholarships: Information about special interest pharmacy scholarships that are administered outside of the College and the University is available from the Office of Student Affairs, 143 Shapero Hall. Deadlines for special interest scholarships vary.

Scholarships

Pharmacy scholarships are awarded to pharmacy students in good academic standing, based on recommendations from faculty and students and criteria determined by the contributors.

Academy of Health Careers, Inc., Pharmacy Scholarship: A scholarship in the amount of at least \$200 is awarded annually to a third- or fourth-year pharmacy student in good standing with financial need, by the Academy of Health Careers, Inc., and Dick Kuchinsky, R.Ph.

Allen and Hanburys Pharmacy Scholarship: A scholarship in the amount of \$1000 is awarded annually by Allen and Hanburys to a fourth year pharmacy student in good academic standing who has demonstrated involvement in pharmacy-related student affairs and in community service, and is influential with peers. A crystal mortar and pestle and a copy of *Harrison's Principles of Internal Medicine* accompanies this award.

Martin Barr Rho Pi Phi Pharmacy Scholarship: \$100 is awarded annually by Rho Pi Phi Fraternity to a fourth-year student who, in the judgment of the faculty and a fraternity committee, has distinguished himself scholastically and professionally.

Alfred Berkowitz Pharmacy and Allied Health Professions Scholarship: This \$1000 scholarship was established to provide financial assistance to needy students in the College.

Paul C. and Nettie Deutch Scholarship: Two scholarships of \$1,000 are awarded to pharmacy students who have completed a minimum of four academic courses in the professional program with an honor point average of at least 3.0. The applicant must demonstrate financial need and be ineligible for Federal, State, or other governmental financial educational assistance.

Bernard Thomas Downs Pharmacy Scholarship: This scholarship is established to assist Afro-American junior or senior undergraduate pharmacy students. Recipients are selected on the basis of scholastic achievement with a minimum 2.7 overall honor point average, with qualities of character and leadership, and financial need.

Elizabeth Green Wize Scholarship: An award of approximately \$1000 to an African American student with an honor point average of at least 3.0, financial need, and an interest in community pharmacy.

John Helfman Pharmacy Fund: An endowment fund has been established by the estate of John Helfman to be used for the benefit of the College, including \$1000 scholarship support for pharmacy students.

Robert C. Johnson Scholarship: \$1000 is awarded to a pharmacy student with an honor point average of at least 2.8, who has demonstrated leadership, qualities of good character, and an interest in community pharmacy.

Jack Kutnick Pharmacy Scholarship: This annual scholarship for entering fourth-year pharmacy students was established by alumnus Jack Kutnick to provide a \$100 scholarship to a pharmacy student who has demonstrated financial need and scholastic achievement.

Max Milstein Pharmacy Scholarship: The Max Milstein Memorial Scholarship Fund was established by the family and friends of Mr. Milstein, an alumnus of the College, to provide a \$1000 gift to a pharmacy student who has demonstrated financial need, scholastic achievement, and high quality of character and leadership.

National Association of Chain Drugstores Foundation Scholarship: This scholarship, in the amount of \$1250, is established to support undergraduate pharmacy education and encourage talented students to pursue careers in community pharmacy practice. The recipient must be a fourth or fifth professional year student who has expressed an interest in the community practice of pharmacy. When appropriate, the award may be divided between two students.

Oakland County Pharmacist Scholarship: \$250 is presented to a pharmacy student in accordance with established criteria.

Perrigo Pharmacy Scholarship: Presented to a graduating baccalaureate student who has excelled in the non-prescription medication course as well as non-prescription medication components of community pharmacy externship.

Perry Drugstores Inc. Intern Scholarship: \$1000 is awarded to a pharmacy student with an honor point average of at least 2.8. Applicant must be an intern or extern at Perry Drugstores Inc.

Perry Drugstores Inc. Scholarship: \$1000 awarded to a pharmacy student with an honor point average of at least 3.0 and an interest in community pharmacy. Open to all pharmacy students.

Schering Pharmacy Scholarship:

Southeastern Michigan Society of Hospital Pharmacists: \$500 is awarded to a pharmacy student with an honor point average of at least 2.8 and an interest in hospital pharmacy.

Substance Abuse Educator Scholarship: 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 endowment fund has been established by the estate of Frank O. Taylor to provide \$1000 in scholarship funds for students in their last year of undergraduate work or in the graduate program. Eligible students are those indicating an interest in pursuing a career in Industrial Pharmacy.

Wal-Mart Stores, Inc., Pharmacy Scholarship: Wal-Mart, Inc., annually awards a minimum of \$1000 scholarship to a full-time entering fourth-year pharmacy student with an h.p.a. of at least 2.7, who has demonstrated 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 third year pharmacy student, and one scholarship of at least \$500 to a full-time fourth-year pharmacy student. Each student must have a core h.p.a. of at least 2.75 and demonstrated involvement in professional activities.

WSU Pharmacy Alumni Association Scholarship: The pharmacy alumni of the Wayne State University College of Pharmacy and Allied Health Professions award an annual scholarship of at least \$500 to a full-time fourth year pharmacy student with a nh.p.a. of at least 2.8.

The student must have demonstrated leadership in professional activities.

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.

Sidney Barthwell Pharmacy Student Loan: This fund is established to provide financial assistance primarily for African American pharmacy students in good standing for fees and books for a period not to exceed two semesters.

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.

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 an honor 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.

Minnie and Max Millman Memorial Pharmacy Student Loan: This fund established by the Detroit Alumni of Alpha Zeta Omega Pharmaceutical Fraternity, in memory of the Millmans, provides financial assistance to pharmacy students in good academic standing for fees, books and supplies.

Perry Drug Stores, Inc., Loan: Perry Drug Stores, Inc., has established funds to provide short-term financial assistance to pharmacy students in good academic standing.

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.

Awards

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) Certificate: A certificate of commendation is issued annually by the American Pharmaceutical Association 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 Hospital Pharmacists (ASHP) Student Leadership Award: This certificate is given to a fourth-year pharmacy student who has demonstrated unusual personal and professional development and has strong involvement in professional organizations, and ranks in the upper half of the class.

Arbor Drug Award: \$500 and a plaque is awarded annually by Arbor Drug Stores to a graduating student in recognition of superior achievement in community pharmacy practice.

Bristol Award: An appropriate book is awarded annually to the baccalaureate student who, in the judgment of the faculty, has shown the greatest professional growth.

Bristol 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.

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 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.

Hoechst-Roussel Award: Each year, Hoechst-Roussel Pharmaceuticals, Inc., presents a plaque and a copy of Martindale's *The Extra Pharmacopoeia* to the graduating Doctor of Pharmacy candidate who, in the opinion of the practice faculty and the doctor of pharmacy students, has excelled in all aspects of the program and is most likely to make the greatest impact on clinical practice.

Kappa Psi Graduate Chapter Award: A silver bowl or tray 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: A silver tray 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.

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 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.

Lemmon Company Student Award: Upon recommendation of the faculty, a plaque and \$50 is awarded by the Lemmon Company to a graduating baccalaureate student in recognition of superior scholastic performance and outstanding curricular professional involvement.

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.

Martec Recognition Award: Award of \$150 open to a fourth-year professional student who demonstrated academic achievement and leadership in professional and co-curricular activities.

McNeil Mortar and Pestle Dean's Award: A distinctive replica of an antique Revolutionary War mortar and pestle is awarded annually to the fourth year student who, in the judgement of the faculty, exhibits exceptional interest, aptitude, and achievement in pharmaceutical administration. The student is eligible for a competitive \$2000 scholarship.

Merck Award: A set of books consisting of *The Merck Index* and *The Merck Manual* are awarded annually to three graduating students for outstanding academic achievement by attaining the:

1. highest average in the overall pharmacy program;
2. highest average in pharmacology courses;
3. highest average in pharmacotherapeutics;

(In the event the same individual qualifies for both of the last two awards, the second award will be presented to the graduating student with the second highest average in the overall pharmacy program.)

Merck Sharp and Dohme Clinical Award: This annual award consists of the textbook *Principles and Practices of Infectious Diseases* and is presented to the Doctor of Pharmacy (Pharm.D.) student who has demonstrated clinical excellence during the Pharm.D. Clerkship in Infectious Diseases Pharmacotherapy.

Michigan Pharmacists' Association Martin Barr Award: This annual award is presented to the graduating student selected by the current Dean, in honor of the previous Dean, as most likely to achieve leadership in pharmacy practice and advance the ethics and standards of the profession of pharmacy.

Mylan Pharmaceuticals Excellence in Pharmacy Award: A distinctive certificate and a \$500 U.S. Series E Savings Bond or 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 be in the top twenty per cent of the graduating class.

Perry Pharmacy Achievement Award: \$100 is awarded annually by Perry Pharmacies, Inc. to the student who has earned the highest scholastic average in the area of pharmaceutical administration.

Pfizer Pharmaceuticals Community Pharmacy Externship Award: Upon recommendation of the practice faculty, a suitably engraved plaque is awarded by Pfizer Laboratories to a graduating student in recognition of excellence in the community pharmacy component of the externship program.

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.

Phi Delta Chi Award: A \$100 check is awarded annually by the Phi Delta Chi Fraternity to a fourth year student in the College, selected from at least three nominees in the top twenty-five percent of their class recommended by the faculty, and determined by the awards committee of the Fraternity to have demonstrated potential leadership in intraprofessional activities by the second professional year of the pharmacy program.

Roche Pharmacy Communications Award: Roche Laboratories presents an annual award to the graduating student who has demonstrated knowledge application in the practice of pharmacy to patients and to other health practitioners, who has served as a role model to other students in the capacity of a professional; and who has provided guidance to patients in the clinical practice component and demonstrated compassion towards patients and superior commitment to the practice of pharmacy.

Sandoz Doctor of Pharmacy Award: Upon recommendation of the practice faculty, an engraved plaque and \$200 is awarded by Sandoz Pharmaceuticals to a graduating Doctor of Pharmacy candidate in recognition of outstanding performance in the doctoral program.

Smith Kline Beecham Award: A plaque is presented annually to a graduating baccalaureate student in recognition of superior achievement in clinical pharmacy practice.

Faculty Awards

Syntex Laboratories Preceptor of the Year Award: Upon recommendation of the graduating pharmacy students, a suitably engraved plaque is awarded by Syntex Laboratories to a pharmacy practitioner in recognition of outstanding participation in the externship component of the pharmacy curriculum.

WSU Fifth Year Pharmacy Student Faculty Awards of the Year: Upon recommendation and selection by the graduating class, two faculty members receive the Faculty of the Year Award for outstanding contribution to the class.

WSU Fourth Year Pharmacy Student Faculty Award of the Year: Upon recommendation and selection by the fourth year class, one faculty member receives the Faculty of the Year Award for outstanding contribution to the class.

WSU Third Year Pharmacy Student Faculty Award of the Year: Upon recommendation and selection by the third year class, one faculty member receives the Faculty of the Year Award for outstanding contribution to the class.

Pharm.D. Instructor of the Year: Upon recommendation and selection by the first-year class, one faculty member receives this Faculty of the Year award for outstanding contribution to the class.

FACULTY of ALLIED HEALTH PROFESSIONS

Programs

Anesthesia, clinical laboratory science, occupational and environmental health, occupational therapy, physical therapy and radiation therapy 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 hospital 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.

Occupational and Environmental Health:* 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 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Occupational Therapy:* Education in occupational therapy prepares the student to assist individuals who have limitations in the performance of tasks required in normal routines of daily living, i.e., self-care, work and play. To be competent therapists, students learn to utilize concepts of treatment related to the restoration, development and maintenance of physical, psychological, social, emotional and cognitive functions. The 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 provide the client the means for assessing his/her abilities to function as independently as possible. Seeing this accomplished provides the therapist the satisfaction of fulfilling a needed role in society.

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.

Radiation Therapy: The program in radiation therapy technology is designed to prepare students to administer treatment with ionizing radiation to patients with malignant diseases. The didactic portion of the curriculum provides the mathematics, physics, basic science and psychology as a background which the student then learns to apply in a clinical setting. The clinical portion of the curriculum places considerable emphasis on learning the practical skills and techniques required to handle the various materials and operate the sophisticated machinery of a radiation therapy facility. The clinical training also provides opportunity for the student to interact with physicians and graduate technologists in the treatment planning process and with patients who are receiving treatment with ionizing radiation.

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.

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, physical therapy and radiation therapy technology 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 an honor point average of 2.5 ('A'-4.0) or better.

Students applying to the physical therapy and radiation therapy technology programs must have taken the Allied Health Professions Admissions Test (AHPAT), a standardized evaluation procedure that has been developed similar to the Medical College Admissions Test. It provides admissions officers throughout the country with comparative data on an applicant's verbal and quantitative abilities, reading comprehension and science preparation. This test will be administered several times each year at Wayne State University as well as other locations throughout the country. Applicants should plan to take this test no later than December or February preceding entry into the professional programs. Application forms and detailed information can be obtained from the Academic Services Officer for Allied Health Professions in the Registrar's Office, 139.1 Shapero Hall, College of Pharmacy and Allied Health Professions.

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 honor 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 honor 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 Shapiro Hall.

Dean's List of Honor Students

Full-time students whose honor 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.

Student Government

The Pharmacy and Allied Health Professions Executive Council (PAHPEC) is the official governing body for students in the College. PAHPEC consists of one student representative from each of the health disciplines within the College of Pharmacy and Allied Health Professions. The primary purpose of PAHPEC is to concern itself with any projects or problems which affect the entire student body of the College.

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 (see pages 348-362). Following are general College and University policies governing baccalaureate programs.

University General Education Requirements

For complete description, see section beginning on page 25.

University Requirement in American Government—see pages 25 and 29.

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 25-35.

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 21.

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 43.

CLINICAL LABORATORY SCIENCE

Office: 233 Shapero Hall; 577-1384

Chairperson: Dorothy M. Skinner

Associate Professor

Dorothy M. Skinner

Assistant Professors

Janet Brown Castillo, Bouchra Harake, Ann Wallace

Adjunct Professor

A. William Shafer

Adjunct Associate Professors

Barbara Anderson, Aaron Lupovich, Gerald Mandell

Adjunct Assistant Professors

James Adams, Ursula Bedrossian, Mara Christiansen, Pradeep P. Dhital, Jean Garza, Grace Hill, Ofelia Juco-Centeno, Deanna Klosinski, Joyce Salancy, Thomas Veniek

Adjunct Instructors

Debbie Chapman, Kathleen Hay, Carol Hillman-Wiseman, Ross LaVoie, Rose Maron

Cooperating Faculty

L. McCoy, D. Walz

Degree Programs

BACHELOR OF SCIENCE in Clinical Laboratory Science

BACHELOR OF SCIENCE in Clinical Laboratory Science with a concentration in cytotechnology

**MASTER OF SCIENCE in Clinical Laboratory Science with specializations in clinical laboratory instrumentation, education management, and hematology*

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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

While the majority of clinical laboratory scientist 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.

The programs offered by the Department of Clinical Laboratory Science utilize the facilities of the College of Science, 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 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 consists of 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:

	<i>high school units</i>
Physics	1
Chemistry	1
Algebra	1.5
Geometry	1
Trigonometry	0.5

Recommended: Latin, German or French, or proficiency in one or more computer programming languages (e.g., BASIC, FORTRAN).

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 093 or 095 (see page 407). 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

Courses in this program are taken under direction of the College of Science and the College of Liberal Arts:

First Year

	<i>credits</i>
BD 151 —(LS) Basic Biology I	4
CHM 105 or CHM 107	
—(PS) Introductory Principles of Chemistry	6
—(PS) Principles of Chemistry I	4
CHM 108 —Principles of Chemistry II	5
CSC 101 —(CL) Fundamentals of Computer Science	3
ENG 102 —(BC) Introductory College Writing	4
CLS 208 — Clinical Laboratory Science Seminar	1
MAT 180 —Elementary Functions	4
SPB 101 —(OC) Oral Communication: Basic Speech	2
UGE 100 —(GE) The University and its Libraries	1

Second Year

BIO 287 —Anatomy and Physiology	5
CHM 224 —Organic Chemistry I	4
ENG 301 —(IC) Intermediate Writing	3
HIS 110 —(HS) The Ancient World *	3
PHI 105 —(CT) Critical Thinking *	3
P S 101 —(AI) American Government *	3-4
SOC 200 —(SS) Understanding Human Society *	3
Humanities (VP, PL) electives	6
Foreign Culture (FC) elective	3

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 honor 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) 2.3 or greater combined science average (biology, chemistry, computer science, mathematics and physics).

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.

* Preferred course to satisfy University General Education requirement.

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 Chairperson, Department of Clinical Laboratory Science, College of Pharmacy and Allied Health Professions.

Degree Requirements

Candidates for the Bachelor of Science in Clinical Laboratory Science must complete 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 Year

	<i>credits</i>
BCH 501—General Biochemistry Lectures	2
IM 550—Principles of Immunology	2
IM 551—Bacteriology, Virology and Mycology	5
CLS 302—Hematology I	2
CLS 304—Immunohematology	2
CLS 305—Hematology II	2
CLS 306—Serology	3
CLS 307—Urinalysis/Hemostasis	3
CLS 308—Clinical Lab. Methods and Instrumentation	3
CLS 309—Clinical Laboratory Science Professional Seminar	1
CLS 310—Clinical Laboratory Science Parasitology	2
CLS 312—Hematology I: Laboratory	2
CLS 314—Immunohematology Laboratory	2
CLS 315—Hematology II: Laboratory	2
CLS 318—Clinical Lab. Methods and Instrumentation Laboratory	2
CLS 328—Introduction to Clinical Chemistry	4
CLS 404—Laboratory Administration and Instruction	2
CLS 593—(WI) Writing Intensive Course in CLS	0

Fourth Year

CLS 400—Clinical Hematology	6
CLS 401—Clinical Chemistry	9
CLS 402—Clinical Blood Bank	4
CLS 403—Clinical Microbiology	7
CLS 406—Clinical Serology	2
CLS 507—Clinical Pathology Correlation	2

CLS 400, 401, 402, 403, and 406 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, nor will they be admitted to the clinical year with less than a 2.5 overall h.p.a.

Any student with a semester h.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 h.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.

Residence: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 348.

Time Limitation: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 348.

Bachelor of Science in Clinical Laboratory Science 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 Clinical Laboratory Science with a concentration in cytotechnology. The four-year program fulfills the requirements for cytotechnology education of the Committee on Allied Health Education and Accreditation 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 Clinical Laboratory Science with a concentration in cytotechnology are:

	<i>high school units</i>
Algebra	1.5
Biology	1
Chemistry	1
Geometry	1
Physics	1
Trigonometry	0.5
Typing	0.5

Recommended: Latin, German, and/or French, and proficiency in one or more computer languages (e.g., BASIC, FORTRAN).

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 093 or 095 (see page 407). 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.*

First Year	<i>credits</i>
BIO 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	4
CHM 105 or CHM 107*	
—(PS) Introductory Principles of Chemistry	6
—(PS) Principles of Chemistry I	4
CHM 108 —Principles of Chemistry II	5
ENG 102 —(BC) Introductory College Writing	4
MAT 180 —Elementary Functions	4
SPB 101 —(OC) Oral Communication: Basic Speech	2
UGE 100 —(GE) The University and Its Libraries	1

* A qualifying examination in high school chemistry is prerequisite to electing CHM 107.

** Preferred course to satisfy University General Education requirement.

Second Year

BIO 287 —Anatomy and Physiology	5
BIO 220 —(LS) Introductory Microbiology	4
ENG 301 —(IC) Intermediate Writing	3
P S 101 —(AI) American Government**	4
Humanities (VP) Elective	4
Foreign Culture (FC) Elective	3
PHI 105 — (CT) Critical Thinking	3
CSC 100 or CSC 101	
— (CL) Introduction to Computer Science	3
— (CL) Fundamentals of Computer Science	3

Residence: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 348.

Time Limitation: See the section above on Academic Procedures for the Faculty of Allied Health Professions, page 348.

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 349. For further information, write: Department of Clinical Laboratory Science, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

Degree Requirements

Candidates for the allied health sciences degree Bachelor of Science with a concentration in cytotechnology must complete 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 College of Science and the staff of the affiliated clinical institutions. The third year begins ONLY in September.

Third Year

	<i>credits</i>
BIO 385 or 307	
— Human Heredity	3
— Genetics	4
BIO 563 —Histology	4
CLS 302 —Hematology I	2
CLS 312 —Hematology I Laboratory	2
CLS 305 —Hematology II	2
CLS 315 —Hematology II Laboratory	2
CLS 310 —Clinical Laboratory Science Parasitology	2
CLS 449 —Cytotechnology Technique: Female Genital Tract	4
STA 102 —Elementary Statistics	3
HIS 110 —(HS) The Ancient World**	3
Humanities (PL) elective	3
SOC 200 —(SS) Understanding Human Society**	3
CLS 338 —Basic Cytotechnology Technique and Research	3
CLS 593 —(WI) Writing Intensive Course in CLS	0

Fourth Year

CLS 450—Cytotechnology Non-Gynecological Technique I	13
CLS 451—Cytotechnology Non-Gynecological Technique II	16

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 350.

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 student. For further information, contact the Department secretary, 233 Shapero.

In addition, the Michigan Society of Clinical Laboratory Scientists offers a scholarship or loan to qualified junior or senior students in the professional program. Also, student loan funds have been established to assist students in good standing in clinical laboratory science; they include: the Clinical Laboratory Science Student Loan Fund, and the W. K. Kellogg Foundation Loan Fund.

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 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 students may participate in the local, state and national organizations of the American Society for Clinical Laboratory Science.

UNDERGRADUATE COURSES

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

BIOCHEMISTRY (BCH)

501. General Biochemistry Lectures. Cr. 2

Prereq: CHM 101 or equiv. Structural biochemistry; metabolism of carbohydrates; lipids, proteins and nucleic acids; molecular biology. (F,W)

CLINICAL LABORATORY SCIENCE (CLS)

208. Clinical Laboratory Science Seminar. Cr. 1

Offered for S and U grades only. Introduction to clinical laboratory sciences. Opportunities and responsibilities. (F,W)

290. 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)

302. Hematology I. Cr. 1–2

Prereq: junior in clinical laboratory science program or consent of instructor. Basic study of blood-forming organs and components of blood; explanation of basic hematological procedures. (F)

304. 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)

305. Hematology II. Cr. 2

Prereq: CLS 302. In-depth study of blood and blood forming organs (normal and pathological) from the standpoint of interpretation and diagnosis. (W)

306. Serology. Cr. 3

Prereq: junior in clinical laboratory science or consent of instructor. Material fee as indicated in *Schedule of Classes*. Theoretical and practical information on serology theory and laboratory methodology. (F)

307. Urinalysis/Hemostasis. (PSL 307). Cr. 2–3

Prereq: junior in clinical laboratory science or consent of instructor. Material fee as indicated in *Schedule of Classes*. Theory of diagnostic analysis of urine and other body fluids; correlation of test results with pathophysiology. Theoretical information on hemostasis, coagulation and fibrinolysis. Lecture and laboratory. (F)

308. Clinical Laboratory Methods and Instrumentation. Cr. 2–3

Prereq: junior standing in clinical laboratory science or consent of instructor. Material fee as indicated in *Schedule of Classes*. Introduction to fundamental laws of electronics, the theoretical basis of instrument design, and quality control in laboratory testing. Application of instrumental methods, including spectrophotometric, fluometric, electroanalytical, and chromatographic methods to the clinical laboratory. (W)

309. 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)

310. Clinical Laboratory Science Parasitology. Cr. 2

Prereq: registration in clinical laboratory science program, consent of instructor. Material fee as indicated in *Schedule of Classes*. Discussion and practical considerations of parasitic organisms as disease agents in man, their epidemiologic, clinical pathological significance and practical diagnostic methodology. (S)

312. Hematology I: Laboratory. Cr. 1-2

Prereq: junior in clinical laboratory science program. Material fee as indicated in *Schedule of Classes*. Laboratory exercises relative to the basic study of the blood forming organs and the components of blood. (F)

314. Immuno-hematology Laboratory. Cr. 2

Prereq: junior in clinical laboratory science program. Material fee as indicated in *Schedule of Classes*. Practice of procedures employed in the clinical blood bank. (S)

315. Hematology II: Laboratory. Cr. 2

Prereq: CLS 312. Material fee as indicated in *Schedule of Classes*. Laboratory exercises relative to in-depth study of blood and blood forming organs; normal and pathological blood forms. (W)

318. Clinical Laboratory Methods and Instrumentation Laboratory. Cr. 1

Prereq: CLS 308. Material fee as indicated in *Schedule of Classes*. Introduction to the function and use of clinical laboratory instruments. (F)

328. Introduction to Clinical Chemistry. Cr. 4

Prereq: CLS 318. Material fee as indicated in *Schedule of Classes*. Methodologies and interpretations of results of clinical chemistry diagnostic tests. (W)

338. Basic Cytotechnology Technique and Research. Cr. 3

Prereq: junior standing in clinical laboratory science, cytotechnology concentration. Material fee as indicated in *Schedule of Classes*. 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. (F)

400. Clinical Hematology. Cr. 6

Prereq: senior standing in clinical laboratory science program. Theory and principles for evaluation of the quantity, morphology and function of cellular components of blood together with assessment of coagulation factors. (S)

401. Clinical Chemistry. Cr. 9

Prereq: senior standing in clinical laboratory science program. Biochemical analysis of blood and other body fluids to determine levels of various chemical substances. Automation, special chemistry and nuclear medicine. (F)

402. 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)

403. Clinical Microbiology. Cr. 7

Prereq: senior standing in clinical laboratory science. Obtaining, culturing, identification and quantitation of microorganisms causing infection or infestation. Determination of most effective antibiotic. (W)

404. 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)

406. Clinical Serology. Cr. 2

Prereq: senior standing in clinical laboratory science. Theory and procedures for identification of antibodies produced as a result of infection by microorganisms, collagen diseases and auto-immune disorders. (W)

449. 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)

450. 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)

451. Cytotechnology Non-Gynecologic Technique II. Cr. 1-16

Prereq: CLS 450. Study and analysis of cells from effusion, the eye and CSF including cytopreparatory methodology. Cytologic emphasis on detection and diagnosis of cancerous cells. (W)

490. 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)

507. 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)

593. (W) Writing Intensive Course in Clinical Laboratory Science. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: any 300-level or higher course in the department with 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)

IMMUNOLOGY and MICROBIOLOGY (IM)

550. Principles of Immunology. Cr. 2

Open only to medical technology program students. Material fee as indicated in *Schedule of Classes*. Lectures and laboratory exercises in basic immunology, including the relevance to human medicine. (F)

551. Bacteriology, Virology and Mycology. Cr. 5

Open only to juniors in Medical Technology program. Material fee as indicated in *Schedule of Classes*. 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. (W)

MORTUARY SCIENCE

Office: 627 W. Alexandrine; 577-2050

Chairperson: Mary L. Fritts-Williams

Associate Professor

Mary L. Fritts-Williams

Assistant Professors

Laurie Burda-Mastrogianis (Clinical), Robert C. Huntoon (Clinical),
Stephen R. Kemp (Clinical), Vincent Nathan

Part-Time Instructors and Instructional Assistants

Karen Appoloni, John D. Canine, Ross Corio, Terry R. Danol, John P. Davis, Barbara Feleo, Karen K. Frade, Peter D. Frade, George Jewell, Elizabeth McCormick, Michael Wilk, Robert Will, Thomas E. Zaremba

Adjunct Associate Professors

Peter D. Frade, Gilbert Herman, Edward J. Kerfoot, Eugene V. Perrin

Degree Programs

BACHELOR OF SCIENCE in Mortuary Science

BACHELOR OF SCIENCE in Pathologists' Assistant

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 recognized by the American Association of Pathologists' Assistants.

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, 627 W. Alexandrine, Detroit, Michigan 48201; 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 346, respectively. The following additions and amendments pertain to the Department of Mortuary Science.

Attendance/Exclusion

Students are expected to adhere to departmental attendance requirements. Anticipated absence from lecture or laboratory classes should be reported to the appropriate faculty member. A student may be excluded from the 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 faculty committee, they fail to maintain appropriate standards of conduct and practice.

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. Inquiries should be directed to the Executive Director, Michigan Funeral Directors' Association, P.O. Box 27158, Lansing, Michigan 48909.

Scholarships are available from the American Board of Funeral Services Education; consult the Department for details.

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.

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 National 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 (*).

	credits
* 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 110 or 120 recommended)	4
PHI 105 — (CT) Critical Thinking	3
PHI 232 — (PL) Introduction to Ethics	3
American Society & Institutions (AI)	4
Visual & Performing Arts (VP)	4
(SS) SOC 200 or ECO 101 and 102	4-8
Foreign Culture (FC)	3
MAT 180 — Elementary Functions	4
UGE 100 — (GE) The University and its Libraries	1

Credit granted by examination (e.g., CLEP) is acceptable.

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 honor point average of 2.5.
3. have been admitted to Wayne State University.
4. have successfully taken the English Proficiency Examination.

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 an honor 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 honor 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 a completed physical examination form to the Department upon admission to the Mortuary Science program. Immunization against HBV is strongly advised.

Time Limitation: Students are strongly encouraged to enroll full-time for three consecutive semesters. Part-time enrollment will be limited to six consecutive semesters.

Third Year

Fall Semester	credits
M S 310 — Chemistry	3
M S 330 — Religions, Values, and Death	3
M S 350 — Embalming I	3
M S 380 — Mortuary Management I	4
M S 383 — Psychology of Death and Dying	3
M S 405 — Human Anatomy and Physiology	3
Total: 18	

Winter Semester

M S 340 — Mortuary Law	4
M S 351 — Embalming II	3
M S 360 — Restorative Art and Modeling I	2
M S 381 — Mortuary Management II	3
M S 384 — Psychosocial Aspects of Grief	3
M S 425 — Medical Microbiology	3
Total: 18	

Spring/Summer Semester

M S 099 — Practicum	0
M S 361 — Restorative Art and Modeling II	2
M S 376 — Past and Future Trends in Funeral Service Practices	3
M S 430 — (WI) Introduction to the Study of Disease	2
M S 445 — Small Business Financial Management	3
M S 535 — (WI) Applied Grief Counseling: Aftercare	3
Total: 13	

DEGREE REQUIREMENTS: The candidate for the degree of Bachelor of Science in Mortuary Science must satisfactorily complete, with an honor 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 596.

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 honor point average;
2. Complete, with at least a 2.5 honor 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 Board of Mortuary Science, Ottawa Towers, 611 W. Ottawa, P.O. Box 30018, Lansing, Michigan 48909 (telephone: (517) 373-3105; Fax: (517) 373-2795).

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 bugetary, 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, 627 W. Alexandrine, Detroit, MI 48201 (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 h.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 26);
4. have submitted three letters of recommendation (including one employer and one science faculty member).

In addition, if the prospective applicant will be transferring to Wayne State, application for admission must be made to the University.

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 an honor 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. AAPA Certification recommendations are also fulfilled.

Preprofessional Program:

First Year

	<i>credits</i>
BIO 151 — (LS) Basic Biology I	4
BIO 152 — Basic Biology II	4
CHM 102 — (PS) General Chemistry I	4
CHM 103 — General Chemistry II	4
ENG 102 — (BC) Introductory College Writing	4
MAT 180 — Elementary Functions	4
PHI 105 — (CT) Critical Thinking	4
SPB 101 — (OC) Oral Communication: Basic Speech	3
Social Science (SS) elective	3
UGE 100 — (GE) The University and its Libraries	1
Total:	35

Second Year

BIO 220 — (LS) Introductory Microbiology	4
CSC 100 — (CL) Introduction to Computer Science	3
ENG 305 — (IC) Technical Communication I	3
Historical Studies (HS) elective (HIS 110 or HIS 120 preferred)	4
Visual and Performing Arts (VP) elective	4
PHI 232 — (PL) Introduction to Ethics	4
Foreign Culture (FC) elective	4
American Society and Institutions (AI) elective	4
Total:	30

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.

Third Year

Fall Semester

BIO 563 — Histology	4
M S 405 — Human Anatomy and Physiology	4
SOC 536 — Introduction to Medical Sociology	3
M S 410 — Medical Photography	3
CLA 124 — Etymology: Medical Terms from Greek and Latin	2

Winter Semester

BIO 561 — Vertebrate Embryology	4
M S 415 — Histochemistry	3
BCH 501 — General Biochemistry Lectures	2
M S 425 — Medical Microbiology	3
M S 442 — Laboratory Management	3

Spring/Summer Semester

PTH 500 — Fundamentals of Pathology	2
M S 420 — Introduction to Forensic Science	3
M S 430 — (WI) Introduction to the Study of Disease	2

Fourth Year

M S 450 — Clinical Anatomic Pathology	8
M S 455 — Clinical Histopathologic Technique	3
M S 460 — Clinical Forensic Pathology	3
M S 465 — Clinical Surgical Pathology	8
M S 470 — Clinical Laboratory Rotation	2
M S 480 — Clinical Photography	2
M S 485 — Clinical Laboratory Management	4

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 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. Courses in which a grade of 'D' is earned must be repeated. Students earning a grade of 'E' or a second grade of 'D' will be reviewed by the Academic Committee and may be dismissed from the program. 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.

UNDERGRADUATE COURSES (M S)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses in the following list numbered 500-699 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 461.

099. Practicum Cr. 0

Prereq: admission to department and successful completion of one semester of M S 350. 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)

310. Chemistry. Cr. 3

Material fee as indicated in *Schedule of Classes*. Review of general inorganic chemistry; survey of organic and biochemistry; applications to postmortem changes, biologic preservation, and embalming chemistry. (F)

330. 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)

340. Mortuary Law. Cr. 4

Legal methods of disposition of human remains; legal responsibilities of the funeral service practitioner; common and statutory laws, state laws regulating funeral service practices and establishments; interment and disinterment; probate law; cemetery regulations; transporting of human remains. (W)

350. Embalming I. Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (F)

351. Embalming II. Cr. 3

Prereq: M S 350. Material fee as indicated in *Schedule of Classes*. Continuation of M S 350. (W)

360. Restorative Art and Modeling I. Cr. 2

Material fee as indicated in *Schedule of Classes*. 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. (W)

361. Restorative Art and Modeling II. Cr. 2

Prereq: M S 360. Material fee as indicated in *Schedule of Classes*. Continuation of M S 360. (S)

376. Past and Future Trends in Funeral Service Practices. Cr. 3

Historic role of the funeral service practitioner, temporally and socially; projected directions and functions of the funeral service profession; ethical and legal implications of changing trends related to funeral

service practices; influence of social and governmental requirements and expectations of the funeral service profession. (S)

380. Mortuary Management I. Cr. 4

Funeral service practices, terminology, ethics; procedures pertinent to planning, building, and establishing a funeral home; personnel management; religious, ethnic, fraternal, and military practices; merchandising; vital statistics records and forms, public relations. (F)

381. Mortuary Management II. Cr. 3

Prereq: M S 380. Continuation of M S 380. (W)

383. Psychology of Death and Dying. Cr. 3

Psychology of grief and bereavement; role of the funeral director in counseling the bereaved; sociology of change as related to death, dying and disposition; psychology of funeral service practices. (F)

384. Psychosocial Aspects of Grief. Cr. 3

Communicative skills as applicable to concepts and theories of human thoughts and responses; social role of the funeral service practitioner in the dynamics of grief; psychosocial interpretations of the changing attitudes toward death. (W)

405. Human Anatomy and Physiology. Cr. 3-4

Offered for three credits to persons seeking Michigan funeral service licensure. Material fee as indicated in *Schedule of Classes*. Detailed systemic study of human anatomy and physiology. Three-credit lab: demonstration and selected dissections; emphasis on vascular anatomy and adjacent structural relationships; anatomic guides. Four-credit lab: full human dissection. (F)

410. Medical Photography. Cr. 3

Theory and behavior of light and lenses; principles of exposure, color, and filters; macro- and microphotography. (F)

415. Histochemistry. Cr. 3

Prereq: M S 405; coreq: BIO 563. Material fee as indicated in *Schedule of Classes*. Study of techniques involved in the preparation of tissues prior to microscopic examination. (W)

420. Introduction to Forensic Science. Cr. 3

Early signs of death, medical investigation of the cause of death, methods utilized for the identification of remains, medico-legal aspects of forensic science. (S)

425. Medical Microbiology. Cr. 3

Material fee as indicated in *Schedule of Classes*. 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. (W)

430. (W) Introduction to the Study of Disease. Cr. 2

Causes of disease; tissue reactions to injury, gross and microscopic; neoplasia; select systemic pathologies; comparative roles of various specialties in pathology. (S)

442. Laboratory Management. Cr. 3

Interpersonal and technical management techniques for the laboratory setting. (W)

445. Small Business Financial Management. Cr. 3

Prereq: ACC 302. Financial aspects of starting and operating a small business; dealings with fellow professionals and government agencies. (S)

450. Clinical Anatomic Pathology. Cr. 2-8

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)

455. 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)

460. Clinical Forensic Pathology. Cr. 3

Prereq: senior standing in pathologist assistant program. 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)

465. Clinical Surgical Pathology. Cr. 2-8

Prereq: senior standing in pathologist assistant program. Obtaining clinical histories, selection of specimens for laboratory evaluation, maintaining pertinent records. (T)

470. Clinical Laboratory Rotation. Cr. 2

Prereq: senior standing in pathologist assistant program. Students become familiar with the operational requirements of the clinical chemistry and microbiology laboratories. (T)

480. Clinical Photography. Cr. 2

Prereq: senior standing in pathologist assistant program. Techniques required to photographically record gross and microscopic specimens. (T)

485. Clinical Laboratory Management. Cr. 2-4

Prereq: senior standing in pathologist assistant program. Knowledge and skills required for efficient and effective laboratory management. (T)

515. Current Issues in Death and Dying. Cr. 3-4

Prereq: junior standing or above. Death and dying in contemporary society: definition of death, process of dying, grief and bereavement in American society. (W)

535. (W) Applied Grief Counseling: Aftercare. Cr. 3

Specific factors in the dynamics of grief; grief manifestations in death and in states of chronic diseases; development of general counseling and referral skills; resolution of normal grief responses; role of society in the human life cycle with emphasis on the aging population and the elderly in need of health care. (S)

555. 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)

590. Directed Studies in Mortuary Science. Cr. 3

Open only to mortuary science baccalaureate degree applicants. Library and/or laboratory study of current or pending professional development; study of an existing problem, study or development of new procedure or technique. Assigned project under the guidance of departmental faculty member. (T)

596. Mortuary Science Senior Seminar. Cr. 2

Prereq: mortuary science degree applicant. (T)

OCCUPATIONAL THERAPY

Office: 311 Shapero Hall; 577-1435

Chairperson: Susan Esdaile

Professors

Susan Esdaile, Miriam C. Freeling (Emerita), H. Barbara Jewett (Emerita)

Associate Professors

Suesetta McCree, Nancy J. Powell

Assistant Professors

Karmen Brown, Georgiana Herzberg

Instructor

Celest Latcha

Adjunct Assistant Professor

Elisabeth Olson

Adjunct Instructor

Diane Brazen

Part-Time Faculty

Janet Andrews, Angie Bayci, Linda Lutze, A. Ann Tai

Cooperating Faculty

William Crossland, Merlin Ekstrom, Rita Granda, Amelia Jones, Eberhard Mammen, Jerry Mitchell, Howard Normile, Martha Rodin, Thomas Sullivan, C. Winnega

Michigan Field Work Supervisors

Karen Allen, Robin Alley, Diane Ardent, Kathy Anderson, Mary Audia-Vallier, Annette Babinski, Marian Baker, Mary Barclay, Cindy Batts, Angie Bayci, Bonnie Bell, Kathy Berman, Pat Bernier, Hope Brucki, Donna Byrd, Ann Campbell, Sandra Carr, Ann Carson, Fred Cavataio, Sherrie Coaster, Gerri Conti, Sharon Costa, Cindy Creighton, Judy Crispen, Judy Cross, Mary Kay Curry, Linda Cyburt, Jennifer Daffell, Pam Damman, Kevin Davis, Yvonne Davis, Leon Debien, Mary Delamora, Beverly Dellon-Ekkens, Kathy DeFault, Donna Dykstra, Tammy Bakins, Tamara Eisenhardt, Renee Ettinger, Louise Fragnoli, Gail Gala, Cheryl Gamett, Ann Gildea, Marilyn Gilin, Jenifer Hallman, Cheryl Hawkins, Katie Higgins, Gerri Howard, Susanna Ickes, Sherrie Jaarsma, Amelia Jones, Charles Kanmann, Vicki Kienman, Cindy Knapp, Paulette Knicely, Terry Korhorn, John Kolks, Bernadette Kosir, Susan Koziatsek, Sue Kosub, Sharon Last, Sherry Lewis, Christopher Licavoli, Donna Mack, Sheila Mack, Sue Mack, Sue Maddux, Dawn McDuffy, Debbie McMahon, Douglas Mitchell, Suzanne Meyer, Lori Meyers, Florence Monnier, Linda Netzel, Patty Obrzut, Kim Pace, Murry Palmer, Debbie Petit, Debbie Pfaff, Kay Pfeifer, Donna Pinterpe, Rasa Poorman, Mary Ann Provancher, Gregory Ratchford, Rita Ray, Joyce Rayford, Nancy Rehan, Jacqueline Row, Beverly Sabolewski, Linda Schmidt, Barbara Schriber, Suzanne Schultz, Denise Seidl, Sally Shimp, Susan Smith, Donna Sokoly, Kathleen Stadwick, Judy Steam, Joan Stofflet, Lucretia Taylor, Rebecca Taylor, Mary Theeck, Sandy Thom, Jill Titus, D'Ane Ventimiglia

Degree Programs

BACHELOR OF SCIENCE in Occupational Therapy

**MASTER OF SCIENCE in Occupational Therapy*

* For specific requirements, see the Wayne State University Graduate Bulletin.

Occupational therapy is the use of purposeful activity with individuals who are limited by physical injury or illness, psychosocial dysfunction, developmental or learning disabilities, poverty and cultural differences, or 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 the handicapped. These services are provided individually, in groups, or through social systems.

Programs: This department offers occupational therapy education leading to either a baccalaureate degree or a post-bachelor certificate. 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. The post-bachelor certificate program is for the student who holds a baccalaureate degree acceptable to Wayne State University, who has satisfactorily completed all professional requirements and who does not wish to qualify for the degree, Bachelor of Science in Occupational Therapy. However, a student who holds a baccalaureate degree may wish to satisfy preprofessional and professional requirements and receive a Bachelor of Science in Occupational Therapy as 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. Both degree and certificate students must be formally accepted by the College of Pharmacy and Allied Health Professions before admission to the professional courses.

Accreditation: Wayne State University offers courses of study which are accredited by the American Occupational Therapy Association, and which prepare the student to take the national certification examination.

Bachelor of Science in Occupational Therapy

Admission

Preprofessional: 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.

PREPROFESSIONAL PROGRAM

	<i>credits</i>
American Society and Institutions (AI) course	3
BIO 105—(LS) An Introduction to Life	4
BIO 287—Anatomy and Physiology	5
CHM 102—(PS) General Chemistry I	4
CSC 100—(CL) Introduction to Computer Science	3
ENG 102—(BC) Introductory College Writing	4
ENG 301—(IC) Intermediate Writing	3
Foreign Culture (FC) course	3
Historical Studies (HS) course	3
Mathematics Competency (MS) course	3
PHI 105—(CT) Critical Thinking	3
Philosophy and Letters (PL) course	3
PHY 102—(PS) Conceptual Physics: The Basic Science	4
PSY 102—(LS) Elements of Psychology	3

Social Sciences (SS) course (except GEG)	3
SPB 101—(OC) Oral Communication: Basic Speech	3
UGE 100—(GE) The University and its Libraries	1
Visual and Performing Arts (VP) course	3
Electives	2
Total:	60

Professional Program Admission: An application for admission to the professional program may be submitted to the Department of Occupational Therapy any time up to January 15 of the year the student wishes to be considered for enrollment. In addition to the application, the student must:

1. hold a minimum cumulative honor point average of 2.5 (A=4.0) for the sixty preprofessional credits listed above.
2. hold a minimum combined honor point average of 2.5 for the following science courses: Biology 105, 287, Chemistry 102, and Physics 102.
3. hold a combined honor point average of 2.5 for the following behavioral courses: Psychology 102, one American Institutions (AI) course, and one Social Sciences (SS) course.
4. 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 be forty. Documentation must be completed by the therapist(s) with whom the student had the contact experience(s). Completion of O T 320 and O T 205 may be used as ten contact hours each; the professor(s) of the course(s) must document the contact hours.
5. complete the University English Proficiency Requirement.

Degree Requirements

The Bachelor of Science degree requires 135 credits in course work including sixty credits in preprofessional study (see above), and seventy-six credits in 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 American Occupational Therapy Certification Board.

PROFESSIONAL PROGRAM

	<i>credits</i>
ANA 303—Anatomy	3
ANA 304—Human Neuroanatomy and Neurophysiology	2
IHS 310—Basic Mechanisms of Human Disease I	5
NUR 330—Pathophysiology Related to Nursing Practice	2
O T 300—Introduction to Occupational Therapy	3
O T 302—Developmental Assessment & Performance Techniques	2
O T 310—Clinical Psychiatry	4
O T 330—Concepts in Kinesiology for Occupational Therapy	3
O T 340—Clinical Medicine	4
O T 407—Roles and Functions I	2
O T 408—Roles and Functions II	2
O T 420—Theory and Practice I	4
O T 421—Theory and Practice II	4
O T 422—Theory and Practice III	3
O T 423—Theory and Practice IV	5
O T 426—Level I Field Work Experience	1
O T 427—Mental Health Level I Field Work Experience	1
O T 430—Client Issues in Occupational Therapy	2
O T 435—(WI) Occupational Therapy Seminar	3
O T 450—Social and Organizational Aspects of Health Care	2

OT 460—Group Process as an Occupational Therapy Modality	1
OT 498—Field Work I (see below)	5
OT 499—Field Work II (see below)	5
OT 593—(W) Writing Intensive Course in OT	0
Total: 68	

Courses required if not completed as preprofessional program electives:

OT 205—Leisure/Play as Occupation	2
OT 320—Life Tasks	2
AED 526—Methods and Material: Wood, Metal, and Plastic	2
Total: 75	

Field Work: During the final portion of the curriculum, the student must participate in two full-time three-month field experiences (OT 498, 499) 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. 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 certificate program must comply with the professional program admission requirements 2 through 4 (see above), as well as complete the following preprofessional courses or their equivalents:

credits

BIO 105—(LS) An Introduction to Life	4
BIO 287—Anatomy and Physiology	5
CHM 102—(PS) General Chemistry I	4
PHY 102—(PS) Conceptual Physics: The Basic Science	4
PSY 102—(LS) Elements of Psychology	3

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 Ruth Marion Miller Memorial Student Loan Fund provides loans to qualified occupational therapy students.

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.

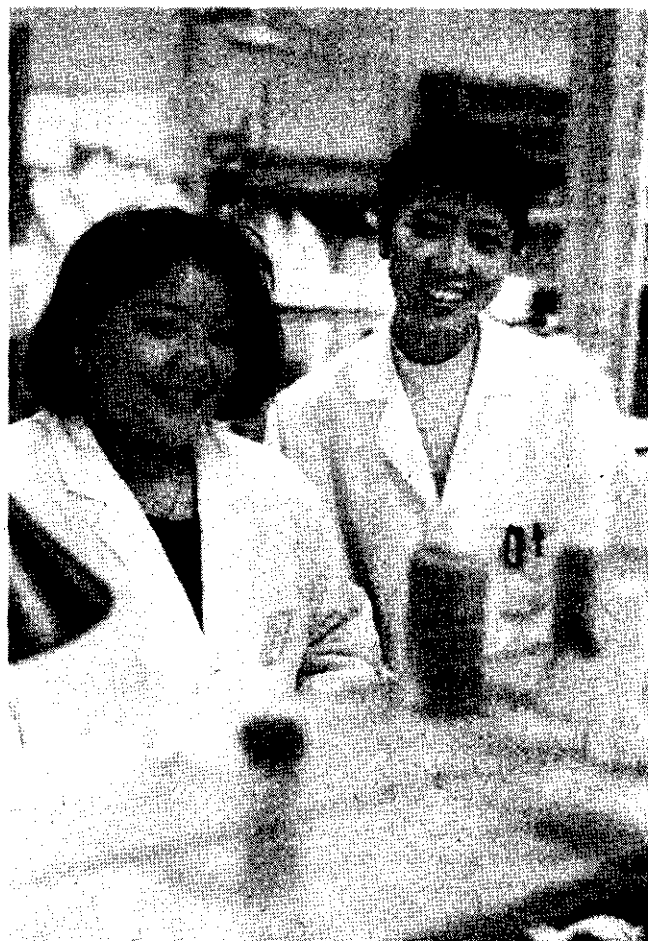
Student Professional Activities

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 twenty-five percent of the class, 2) have achieved a 3.3 (4.0=A) 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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

205. Leisure/Play as Occupation. Cr. 2

Lectures, discussions, demonstrations and practical experience involving the leisure/play occupation. Issues, concepts and application as related to lifestyles. (F,W)

300. Introduction to Occupational Therapy. Cr. 3

Prereq: admission to the occupational therapy professional program. Material fee as indicated in *Schedule of Classes*. 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. (F)

302. Developmental Assessment and Performance Techniques. Cr. 2

Prereq: PSY 102; BIO 105, BIO 287; SOC 200; admission to OT professional program. Material fee as indicated in *Schedule of Classes*. 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. (F)

310. 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)

320. Life Tasks. Cr. 2

Material fee as indicated in *Schedule of Classes*. 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. (T)

330. Kinesiology Concepts for Occupational Therapy. Cr. 3

Prereq: PHY 213, ANA 303. Material fee as indicated in *Schedule of Classes*. Lecture and laboratory on human movement concepts prerequisite to the understanding of occupational therapy procedures applicable to patients with physical or sensory-integrative dysfunction. (F)

340. Clinical Medicine. (P T 340). Cr. 4

Prereq: consent of adviser. Material fee as indicated in *Schedule of Classes*. 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. (W)

407. 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)

408. 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. (W)

420. Theory and Practice I. Cr. 4

Prereq: O T 310 and consent of adviser. Material fee as indicated in *Schedule of Classes*. Occupational therapy in mental health practice; evaluation, treatment planning, reporting and an overview of mental health theories. Lecture, class participation and field experience. (F,W)

421. Theory and Practice II. Cr. 4

Prereq. or coreq: O T 340; prereq: 330, consent of adviser. Material fee as indicated in *Schedule of Classes*. 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. (F)

422. Theory and Practice III. Cr. 3

Prereq: O T 421. Material fee as indicated in *Schedule of Classes*. Continuation of O T 421. (W)

423. Theory and Practice IV. Cr. 5

Prereq: ANA 304, O T 340, consent of adviser. Material fee as indicated in *Schedule of Classes*. Study of the neurophysiologically-based treatment approaches in occupational therapy for patients with central nervous system dysfunction; includes occupational therapy in school systems. (F,W)

426. 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)

427. Mental Health Level I Fieldwork Experience. Cr. 1

Prereq: O T 310, consent of adviser. Offered for S and U grades only. Field work experience in affiliating agencies for minimum of thirty-six hours under supervision of registered, on-site occupational therapist. (T)

430. 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)

435. (WI) Occupational Therapy Seminar. Cr. 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. (S)

450. Social and Organizational Aspects of Health Care. Cr. 2

Prereq: introductory sociology courses. Health care systems, organization and financing of health care services. (W)

460. 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)

490. Directed Study. Cr. 1-2(Max. 5)

Prereq: consent of adviser. (T)

498. Field Work I. Cr. 5

Prereq: consent of adviser. Three months of supervised field work experience in affiliated health care agencies. (T)

499. Field Work II. Cr. 5

Prereq: consent of adviser. Three months of supervised field work experience in affiliated health care agencies. (T)

593. (WI) Writing Intensive Seminar in Occupational Therapy. Cr. 0

Prereq: enrollment in occupational therapy program; coreq: O T 300, 408, 435, 498, or 499. 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)

PHYSICAL THERAPY

Office: 439 Shapero Hall; 577-1432

Chairperson: Louis Amundsen

Assistant Professors

Christine Carlson, Ann A. Reeder

Part-Time Faculty

Linda Brabrant, Douglas Creighton, William Dwight, Jacqueline Femminineo, Brian Goslin, Kathleen J. Kovacek, Peter Kovacek, Susan Ludwick, Barbara Rubenstein, Mable Sharp, Susan Talley

Adjunct Assistant Professors

Peter Kovacek, Komelia Kulig, Mable Sharp, Kathleen Vielhaber

Adjunct Instructors

Paula Denison, Suzanne Portner, Martha Schiller

Cooperating Faculty

Maurice Castle, William Crossland, Rita Granda, Felix Hong, Melissa Kaplan, Robert Louis-Ferdinand, Howard Normile, John Wirth

Center Coordinators of Clinical Education

Michelle Allen, Rose Marie Ames, Gita Amini, Roger Anderson, Joy Backstrom, Robert Baker, Rita Ball, Michael Beauvais, Tim Bennett, Patricia Bernier, Ann Bishop, Jocelyn Blaskey, Ellen Bonczyk-Duce, Ron Brickey, Jan Brock, Marj Bryen, Jennifer Cantrell, Robert Carrera, Rick Colaw, Paulette Cebulski, Berry Chesterman, Allan Colestock, Ann Conklin, Sharon Cortley, Nancy Cox, Doug Creighton, Kristin Creighton, David Crowley, Marianne Damon, Paul Davignon, Loren DeVinney, Toni Dickieson, Beverly Edge, Fay Edsall, John Eggart, Sandy Ellery, Gloria Esse, Elizabeth Estes, Sandra Flack, Rebecca Ford, Mary Gantt, Mark Glover, Debra Goldsborough, M. Ellen Gough, Judith Harris, Judy Harris, Kathy Harrison, Diane Harvey, Judy Harvey, Julie Hathaway, Glen Helfer, Stephanie Herle, David Hudson, Cindy Huffman, Walter Hylton, Sharyn Hyman, Sue Ievoli, Diann Inch, Linda Isbell, Patty Jobbitt, Jackie Johnson, Sandra Karcher, Barbara Kaye, Kathy Kelm, Jeanne King, Darrell Knick, Pam Knickerbocker, Lisa Kemp, Michelle Krings, April Lemanski, Margaret Locke, Nancy Lomax, Brenda Lowe-Jackson, Kathleen Lorenz, Monica Luk, Sue Ann Mason, Laura McBey, Jamelli McLellan, Lynne Moran, Theresa Moyer, Merodie Mullis, Susan Munson, Jeanne Newell, Jennifer Nickita, Georgianne Palmer, Willa Parent, Julie Perkins, Janet Perticone, Daniel Phillips, Sheila Polcyn, Kristin Quелlette, Kate Rapley, Karen Reyhl, Neil Richardson, Kim Riley, George Rowley, Nancy Sampson, Robert Sandison, Kim Scalise, Eric Schaefer, Martha Schiller, Paul Schmidt, Michelle Schoel, Chris Sepper, Linda Simonsen, Jeff Sirebian, Kari Skaipek, Anne Smith, Johnny Smith, Ken Soave, Keri Spangenberg, Laura Stenman, Stephen Stewart, Cheryl Strong, Craig Strong, Ralph Sweithelm, Diane Tesner, Denise Tetreault, Jenny Theis, Carrie Thorson, Marilyn Tipljas, Germaine Timlin, Miranda Trazs, Edmond Turton, Ronald Vance, Carolyn Varner, Jearnie Wagner, Laurie Wallace, Patricia Warren, Wendy Wexstein, Carolyn Williams, Richard Wisz, Jan Wohlgemuth, Donna Wolfe, Margaret Wurdeman, Jan Zehms, Tony Zgardinski, Rose Ziaja

Degree Program

BACHELOR OF SCIENCE in *Allied Health Sciences*
—*Pre-Physical Therapy Concentration*

*MASTER OF PHYSICAL THERAPY

* For specific requirements, see the Wayne State University Graduate Bulletin.

The Physical Therapy Profession

Physical Therapy is a health care profession which promotes optimal human health and function through the application of scientific principles to prevent, identify, assess, correct, or alleviate acute or prolonged movement dysfunction. Physical therapy encompasses areas of specialized competence in which the development of new principles and applications meet, more effectively, existing and emerging health needs. This discipline focuses primarily on those individuals whose potential or actual impairment is related to neuro-musculoskeletal, pulmonary and cardiovascular systems.

The scope of physical therapy continues to expand with therapists assuming increased responsibility for non-direct service activities such as program planning and development, consultation, administration, teaching and supervision in a variety of health care settings. The therapists' roles and responsibilities have expanded to include health screening, preventive health care services, health promotion, critical care, and timely referral for extended care in conjunction with educating patients and their families. Physical therapists also teach and conduct research in academic institutions and clinical facilities.

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 applied for an interim accreditation from the Commission on Accreditation in Physical Therapy Education for the transition to the Master in Physical Therapy program. Graduates of the professional program 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 25). 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:

PREPROFESSIONAL PROGRAM

	credits
BIO 151—(LS) Basic Biology I	4
BIO 152—Basic Biology II	4
BIO 340—Principles of Physiology	3
BIO 341—Physiology Laboratory	3
CHM 107 or CHM 105	
—(PS) Principles of Chemistry I	4
—(PS) Introductory Principles of Chemistry	6
BCH 501 or CHM 102	
—General Biochemistry Lectures	2
—(PS) General Chemistry I	4
PHY 213—(PS) General Physics	4
PHY 214—General Physics	4
STA 102—Introduction to Statistics	3
MAT: Math. Proficiency Exam/Math. Competency	
PSY 101—(LS) Introductory Psychology	4
PSY 240—Developmental Psychology	4
ENG 102—(BC) Introductory College Writing	4
ENG 301—(IC) Intermediate Writing	3
P S 101—(AI) American Government	4
HEA 233—First Aid and CPR	3

In addition to the above, the following General Education Requirements (see page 25) must also be satisfied:

- (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. Proof of completion of all science prerequisite classes by January 10 of the year for which admission was sought.
3. 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 honor point average of 3.0 in all preprofessional course work, prerequisite science and mathematics courses, and general education requirements. 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 interview may be scheduled for qualified applicants. The interview will assist the Department in determining whether applicants have the personal qualifications 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

	credits
ANA 303—Anatomy	3
ANA 304—Human Neuroanatomy and Neurophysiology	2
IHS 310—Basic Mechanisms of Human Disease I	5
IHS 320—Basic Mechanisms of Human Disease II	5
IHS 330—Pharmacology for Allied Health Professions	1
P T 312—Human Growth and Development	3
P T 340—Clinical Medicine	4
P T 342—Kinesiology	4
P T 344—Fundamentals of Patient Care	2
P T 346—Integrated Physiology	2
P T 380—Clinical Education I	1
P T XXX—Therapeutic Exercise	1

Electives

P T 414—Introduction to Pediatric Physical Therapy	3
P T 428—Special Topics in Orthopedic Physical Therapy	2-4
P T 490—Directed Study	1-4
P T 500—Perspectives in Geriatrics	3-4
P T 505—Introduction to Developmental Disabilities	3-4

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 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 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 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 090-699, are offered for undergraduate credit. Courses in the following list numbered 500-699 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 461.

ANATOMY (ANA)

301. Introduction to Human Anatomy. Cr. 4

Material fee as indicated in *Schedule of Classes*. A basic human anatomy course with detailed emphasis on the musculo-skeletal system designed for upper division undergraduate students. (Y)

303. Anatomy. Cr. 3

Open only to students in Allied Health Programs. Material fee as indicated in *Schedule of Classes*. Dissection and prosection; emphasis on neuromuscular system and functional correlation. (S)

304. Human Neuroanatomy and Neurophysiology. Cr. 2

Prereq: IHS 310, IHS 320. Study of human central nervous system; emphasis on sensory systems and structures which contribute to normal movement; lecture and laboratory. (S)

512. Principles of Neuroanatomy. Cr. 3

Open only to non-anatomy majors. Histology, physiology, development, gross anatomy and functional aspects of the nervous system of man; emphasis on the brain and spinal cord. (S)

PHYSICAL THERAPY (P T)

312. Human Growth and Development. Cr. 3

Prereq: PSY 242 and consent of instructor. Material fee as indicated in *Schedule of Classes*. 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. (F)

320. Basic Evaluation Procedures. Cr. 3

Prereq: P T 342 or consent of adviser. Basic principles and techniques of manual muscle testing, goniometry, and anthropometric measurements. Posture and gait evaluation. Laboratory. (W)

322. Basic Therapeutic Procedures. Cr. 3

Prereq: P T 310, 342 or consent of adviser. Material fee as indicated in *Schedule of Classes*. Principles and techniques of basic therapeutic procedures, including massage, superficial heat and cold, basic and postural exercises, transfers and gait patterns. Laboratory. (W)

340. (O T 340) Clinical Medicine. Cr. 4

Prereq: IHS 310; coreq: IHS 320 or consent of adviser. Material fee as indicated in *Schedule of Classes*. 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. (W)

341. Special Topics in Clinical Medicine. Cr. 1

Prereq: consent of adviser; coreq: P T 340. Correlation of course content presented in clinical medicine with analysis, treatment and rationale of medical and surgical conditions pertaining to physical therapy. Demonstration and discussion. (W)

342. Kinesiology. Cr. 4

Prereq: ANA 303 or consent of adviser. Students must register for both sections. Material fee as indicated in *Schedule of Classes*. 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. (F)

344. Fundamentals of Patient Care. Cr. 2

Prereq: consent of adviser. Material fee as indicated in *Schedule of Classes*. Theory and practice of basic health care management procedures used by the physical therapist; includes basic patient care procedures and care of medical emergencies which arise in physical therapy practice. Lecture and laboratory. (F)

380. Clinical Education I. Cr. 1

Prereq: consent of adviser. 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)

402. Introduction to Physical Therapy. Cr. 3

Prereq: admission to physical therapy professional program. Historical and sociological perspectives on the profession. Introduction to basic patient care emergency procedures. (S)

428. Special Topics in Orthopedic Physical Therapy. Cr. 2-4

Prereq: P T 427, consent of instructor. Material fee as indicated in *Schedule of Classes*. Special subject matter in orthopedic physical therapy. Topics to be announced in *Schedule of Classes*. (S)

490. 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)

500. Perspectives in Geriatrics. Cr. 3-4

Prereq: P T 312, 380, 480; or consent of adviser. Problem-oriented approach to physiological and pathophysiological changes, with emphasis on functional ability; identification of health problems; prevention strategies; evaluation and management; psychosocial factors and research needs related to physical and mental health of the elderly. (S)

504. (O T 661) Clinical and Experimental Biomechanics. (M E 661). Cr. 4

Prereq: consent of instructor. Interdisciplinary course: quantitative and qualitative assessment of human motion and the analysis of human performance; normal and abnormal movement, motion problems and injuries, design and utilization of adaptive equipment. (Y)

505. (NUR 525) Introduction to Developmental Disabilities. (S W 555)(SED 505). Cr. 3-4

Prereq: junior standing; senior standing for nursing students. Nursing students must elect for four credits. Cross-disciplinary overview of developmental disabilities, e.g., mental impairment, epilepsy, cerebral palsy, autism, through presentation of contrasting theoretical schools of thought and intervention schema. (F)

RADIATION THERAPY TECHNOLOGY

Office: 121 Shapero Annex; 577-1137

Chairperson: Diane K. Chadwell

Assistant Professor

Diane K. Chadwell

Lecturer

Adam F. Kempa

Medical Adviser

John J. Feldmeier

Adjunct Assistant Professors

Rosann Keller, Carmen F. Mesina, Archana R. Somnay

Adjunct Instructors

Linda A. Filipczak, Sheryl A. Janiec, Sharon Prokop, GERALYN A. QUICK, John C. Merrill

Cooperating Faculty

Suzanne Chungbin, Merlin E. Ekstrom, Gary A. Ezzell, Azucena Garzon, Barbara G. Orton, Colin G. Orton, Jacek G. Wierzbicki

Part-time Faculty

Ann L. Forsyth

Clinical Education Coordinator

Rosann Keller

Clinical Education Supervisors

Susan Capatina, Sandra Hayden, Javed Iqbal, Lorrie Lipa, Gerard Szyndlar

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; this continued contact with the patient is the source of much satisfaction and professional pride.

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, and educational institutions as staff therapists, clinical supervisors, administrators, and educators. A radiation therapist is able to:

—Operate sophisticated radiation equipment to deliver a planned course of radiation therapy;

—Assist the physicist in quality assurance, 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; it 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

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 Department of Radiation Therapy Technology 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.

For additional procedures, refer to the Undergraduate Admissions section for the Faculty of Allied Health Professions, page 346.

PREPROFESSIONAL PROGRAM

Each of the following required preprofessional courses (or its equivalent) must be completed with a minimum grade of 'C.'

First and Second Years

	credits
BIO 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	4
BIO 271 —Comparative Vertebrate Zoology	5
CHM 102 —(PS) General Chemistry I	4
ENG 102 —(BC) Introductory College Writing	4
ENG 301 —(IC) Intermediate Writing	3
MAT 180 —Elementary Functions	4
PHY 213 —(PS) General Physics	4
PHY 214 —General Physics	4
P S 101 —(AI) American Government	4
PSY 101 —(LS) Introductory Psychology	4
PSY 230 —Psychology of Adjustment	4
SPB 101 —(OC) Oral Communication: Basic Speech	3
UGE 100 —(GE) The University and its Libraries	(1)
Foreign Culture (FC) Elective *	3
Historical Studies (HS) Elective *	3
Humanities (VP, PL) Electives *	6
Computer Literacy (CL) Competency: Exam or course (CSC 100 or CSC 101)	(3)
Critical Thinking (CT) Competency: Exam or PHI 105	(3)
Total:	63

* General Education Group requirements.

Professional Program Admission: 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 honor 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 for the College of Pharmacy and Allied Health Professions, with a copy of the student's Wayne State transcript attached. *Mail completed form and Wayne State transcript to: Office of the Registrar, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.*
4. Submission of official transcripts from all college institutions attended (other than Wayne State). *Mail transcripts to: Office of the Registrar, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.*
5. Meeting with a department 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 577-1137.
6. Completion of two clinical visits to affiliate institutions for the program. Appointments are made by calling 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, 583 Student Center. This test should be taken no later than January of the year in which admission is sought.
8. Submission of two reference forms (available from the Department): 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 7, 8 and 9, above, should be submitted to the Chairperson, Department of Radiation Therapy Technology, 121 Shapero Annex, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan 48202.

Application packets, including an application form, reference forms, and current procedural guidelines, are available from University Advising or the Department of Radiation Therapy Technology.

Application Deadline: The deadline for applications is April 1. Applications which are incomplete by April 1 or are submitted after that date will be considered only with the approval of the Chairperson. 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: The Department of Radiation Therapy Technology will review all applications 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 Department of Radiation Therapy Technology typically notifies each applicant of the final admission decision in June.

Degree Requirements

Candidates for the degree Bachelor of Science in Radiation Therapy Technology 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 College of Pharmacy and Allied Health Professions. 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 almost all the required courses are scheduled during usual daytime hours, students are required to attend some laboratory or lecture sessions in early evening or Saturday hours.

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 regarding the program from the Department of Radiation Therapy Technology, Wayne State University; telephone: 577-1137.*

PROFESSIONAL PROGRAM

Third Year

	<i>credits</i>
BIO 287 — Anatomy and Physiology	5
NUR 330 — Pathophysiology Related to Nursing Practice	2
IHS 321 —Basic Mechanisms of Human Disease: Laboratory	1
RT 300 —Clinical Care Procedures	2
RT 301 —Introductory Radiation Physics	3
RT 302 —Clinical Radiation Physics	4
RT 311 —Clinical Aspects of Radiation Therapy	3
RT 314 —Topographical Anatomy and Medical Imaging	2
RT 318 —Design & Construction of Treatment Accessories	1
RT 320 —Therapeutic Interactions in Oncology Care	2
RT 331 —Clinical Practicum I	3
RT 332 —Clinical Practicum II	4
RT 333 —Clinical Practicum III	4
Total:	36

Fourth Year

RT 411 —Clinical Radiation Oncology	4
RT 412 —Basic Clinical Dosimetry	3
RT 414 —Radiation Pathology	2
RT 415 —Radiobiology for the Technologist	2
RT 422 —Radionuclide Physics	3
RT 424 —Radiation Therapy Technology Seminar	3
RT 430 —Quality Assurance	2
RT 435 —Clinical Practicum IV	4
RT 436 —(W) Clinical Practicum V	4
RT 437 —Clinical Practicum VI	4
Elective	3
Total:	34

Scholarship: Students in the professional program are subject to high academic and professional standards. A grade of 'C' or above is required in each professional course, and the student must maintain a term honor point average of 2.50 throughout the program. A grade of 'D' must be repeated; an 'E' grade or a second 'D' grade will result in review by the Academic Committee for possible dismissal. Current academic standards and program probation policies are published annually and are available upon request from the Department of Radiation Therapy Technology.

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 Department, 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 090–699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

300. Clinical Care Procedures. Cr. 2

Material fee as indicated in *Schedule of Classes*. Procedures and ethics related to the care and examination of the radiation oncology patient. (F)

301. Introductory Radiation Physics. Cr. 3

Basic introduction of radiation physics including the x-ray machine, physical principles and circuitry; principles of mathematics. (F)

302. Clinical Radiation Physics. Cr. 4

Prereq: R T 301. Principles of radiation exposure; radiation producing and measuring devices; clinical application of radiation physics. (W)

311. 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)

314. Topographic Anatomy and Medical Imaging. Cr. 2

Material fee as indicated in *Schedule of Classes*. 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; fundamentals of radiographic exposure techniques and film processing. (W)

318. Design and Construction of Treatment Accessories. Cr. 1

Material fee as indicated in *Schedule of Classes*. 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. (S)

320. Therapeutic Interactions in Oncology Care. Cr. 2

Open only to radiation therapy technology students. Material fee as indicated in *Schedule of Classes*. 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. (S)

331. 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)

332. Clinical Practicum II. Cr. 4

Prereq: R T 331. Closely supervised practice in the delivery of prescribed doses of radiation utilizing common types of radiation producing equipment. Observation and performance of clinical care procedures pertinent to radiation oncology patients. Development of communication skills in patient/technologist relationships. Correlation of knowledge of medical imaging techniques to diagnostic workup and treatment planning. (W)

333. Clinical Practicum III. Cr. 4

Prereq: R T 332. Expanded supervised practice in the delivery of radiation therapy treatments. Submission of essay on radiation oncology topic. (S)

411. Clinical Radiation Oncology. Cr. 4

Material fee as indicated in *Schedule of Classes*. 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. (F)

412. Basic Clinical Dosimetry. Cr. 3

Prereq: R T 411. Material fee as indicated in *Schedule of Classes*. Basic concepts of clinical dosimetry and treatment planning; various

external beam techniques, depth dose data, and summation of isodose curves. (W)

414. Radiation Pathology. Cr. 2

Material fee as indicated in *Schedule of Classes*. Basic principles of neoplasia, including types of growth, causative factors, biological behavior, and significance of staging procedures. Pathology of radiation injury. (F)

415. Radiobiology for the Technologist. Cr. 2

Biological effects of ionizing radiation on living tissue. Cell and tissue radiosensitivity; radiation syndromes and related effects. Basic principles of clinical radiation biology. (W)

422. Radionuclide Physics. Cr. 3

Prereq: R T 302. Natural radioactivity; isotopes and nuclear structure; techniques of radiation measurement. The clinical use of radionuclides. Radiation safety. (F)

424. Radiation Therapy Technology Seminar. Cr. 3

Open only to radiation therapy technology students. Material fee as indicated in *Schedule of Classes*. 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 bioethical issues which influence professional practice. (W)

430. Quality Assurance. Cr. 2

Open only to radiation technology students. Material fee as indicated in *Schedule of Classes*. 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. (S)

435. Clinical Practicum IV. Cr. 4

Prereq: R T 333. 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. (F)

436. (WI) Clinical Practicum V. Cr. 4

Prereq: R T 435. Continued clinical practice under limited supervision. Submission of essay on radiation oncology topic. (W)

437. Clinical Practicum VI. Cr. 4

Prereq: R T 436. Material fee as indicated in *Schedule of Classes*. 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. (S)

COLLEGE OF SCIENCE

DEAN: John D. Petersen

Foreword

The College of Science, formed in 1992, consists of nine departments: Biological Sciences, Chemistry, Communication Disorders and Sciences, 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 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 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 senior 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

Students admitted to the College of Liberal Arts before Fall 1992 have the option of obtaining their degrees from the College of Science if their major is in any of the following departments: Biological Sciences, Chemistry, Communication Disorders and Sciences, Computer Science, Geology, Mathematics, Nutrition and Food Science, Physics and Astronomy, and Psychology.

BACHELOR OF ARTS with majors in:

Biological Sciences	Information Systems
Chemistry	Linguistics
Communication Disorders and Sciences	Mathematics
Computer Science	Nutrition and Food Science
Geology	Physics
	Psychology

BACHELOR OF ARTS HONORS with majors in:

Biological Sciences Honors	Nutrition and Food Science Honors
Chemistry Honors	
Geology Honors	

BACHELOR OF SCIENCE with majors in:

Geology
Mathematics
Nutrition and Food Science
Psychology

BACHELOR OF SCIENCE HONORS with majors in:

Communication Disorders and Sciences Honors
Geology Honors
Mathematics Honors
Nutrition and Food Science Honors
Psychology 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	Mathematics
Chemistry	Mathematical Statistics
Communication Disorders and Sciences	Nutrition and Food Science
Computer Science	Physics
Linguistics	Psychology

**MASTER OF ARTS IN HUMAN DEVELOPMENT*

* For specific requirements, consult the Wayne State University Graduate Bulletin.

***MASTER OF ARTS IN TEACHING COLLEGE MATHEMATICS**

***MASTER OF SCIENCE with majors in**

- | | |
|-------------------------|---------------|
| Biological Sciences | Nutrition and |
| Chemistry | Food Science |
| Computer Science | Physics |
| Geology | |
| Molecular Biotechnology | |

***DOCTOR OF PHILOSOPHY with majors in**

- | | |
|-------------------------|---------------|
| Biological Sciences | Mathematics |
| Chemistry | Nutrition and |
| Communication Disorders | Food Science |
| and Sciences | Physics |
| Computer Science | Psychology |

COLLEGE DIRECTORY

Dean:

John D. Petersen . 2226 Faculty/Administration Bldg.; 577-2515

Associate Dean:

Martin T. Wechsler 2226 Faculty/Administration Bldg.; 577-2516

Administrative Assistant Dean

Sheryl Lamarand . . 2226 Faculty/Administration Bldg.; 577-8014

Service Areas

- Graduate Office 2226 Faculty/Administration Bldg.; 577-2690
- 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
- Personnel Records 2226 Faculty/Administration Bldg.; 577-2466

Departmental Offices

- Biological Sciences 1360 Biological Sciences; 577-2873
- Chemistry 123 Chemistry; 577-2595
- Communication Disorders and Sciences
585 Manoogian; 577-2943
- Computer Science 431 State Hall; 577-2477
- Geology 130 ASB II; 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

Mailing address for all offices:

(Department Name), College of Science, Wayne State University, 656 W. Kirby, Detroit, Michigan 48202

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 300 or above. Certain curricula may require additional credits above this minimum. (See 'Restrictions on Credit', below.)

Honor Point Average: All students are required to maintain an over-all honor point average of C (2.0) for all degree work elected. See 'Honor Point Average,' page 42.

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 25.

Group Requirements

Group Requirements for students in the College of Science overlap considerably with those of the University General Education Program (see page 27). 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 Cultural Studies (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 33. 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 342 and GSS 151. 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 201 or 211) 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 101 (or 110 and 111), 102, and 201 in one of the following subject area codes: ARB, ARM, FRE, GER, GRK, HEB, ITA, JPN, LAT, POL, RUS, SPA, SWA, and UKR; as well as GRK 111, 112, and 211. 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 316. 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 211; BIO 103, 105, 151; PSY 101, 102.

PHILOSOPHY AND LETTERS (PL) The College list is the same as the University list, except that the College list does not include GUH 271. 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 100, 102, 105, 107, 131; PHY 102, 104, 213, 217, 310.

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 202 and 242. Also, students may elect NFS 221 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 348 and GSS 271. 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 273. One course is required.

CULTURAL STUDIES

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 201; ARM (or GER, POL, RUS, SLA, UKR) 341, ARM (or POL, RUS, SLA, UKR) 371; CBS 210 (SPA 240), 211 (SPA 250); CLA 200; ENG 260, 360; FRE 271; GER 271, 272; GRK 371; HUM 301; ITA 271, 272; N.E 200, 201; RUS 351.

Note: The Junior Year in Germany experience also meets the Cultural Studies requirement.

THE UNIVERSITY AND ITS LIBRARIES as specified in the University General Education Program (see page 29).

UNIVERSITY REQUIREMENT IN AMERICAN GOVERNMENT for students enrolled prior to Fall Term 1987: See General University Information, page 29.

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 376–378.

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 Center. A 2.00 cumulative h.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 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. 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 honor 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. Declaration of the minor will be made by the student only when filing for graduation.

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.

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) honor 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 take, with the approval of their major departments, their junior year's work in Germany under the Junior Year in Munich or Freiburg Program. Four semesters of college German or the equivalent with an average of B or better are prerequisite. Participants will earn credit for one academic year (September through July) as fully enrolled (matriculated) students at the cooperating Universities of Munich or Freiburg. Interested students should contact the Junior Year in Germany offices at 401 or 471 Manogian, or phone 577-4605.



The Wayne at Gordes Summer Camp Program offers up to twelve credits in advanced French, which may be earned during a six-week summer session in the Renaissance village of Gordes in the south of France. French 310 or its equivalent is the prerequisite. Interested students should contact Professor Donald Spinelli at 467 Manoogian, or telephone 577-6241.

Wayne in Italy is a summer program for beginners in Italian as well as for advanced students. Up to twelve credits may be earned during a six week session in Bologna, Italy. Interested students should contact Professor Andrea di Tommaso, 415 Manoogian, or telephone 577-6247.

Since 1980 Wayne has had an exchange agreement with the Jagiellonian University in Krakow, Poland. Up to nine students are selected for a six week summer program; students may earn three to four credits in Polish language and culture courses. Students selected to participate in this exchange program are responsible only for their travel costs; all tuition costs and room and board are covered by the exchange agreement. Interested students should contact the Polish Studies Program, 443 Manoogian, 577-3024.

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 honor point average of 3.0 or above are eligible to elect Honors Program courses. For a description of the Honors Program, see page 401.

'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 qualified 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 h.p.a. at the 'Cum Laude' level (approximately 3.4) and not less than a 3.6 h.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 (577-2690).

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 honor 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 honor points used to identify the lower limits for each designation will be based upon the honor 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 honor point average for students registered for full-time programs of twelve credits or more which contribute to the honor point base; A 4.0 honor 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 42.)

Academic Probation

Low Honor 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 Honor 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 h.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 21), and individual departmental sections below.

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 180, 201 and 202). Students interested in majoring in communication disorders and sciences, nutrition and food science, or psychology may find statistics (STA 102) 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 102 (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 100 (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-Business Administration — See page 61.

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 95 and 214.

Pre-Engineering — See pages 120 - 125.

Pre-Law— See page 201.

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 concentrate

Pre-Clinical Laboratory Science — See page 349.

— Cytotechnology Concentration — See page 351

Pre-Mortuary Science — See page 354.

Pre-Nursing — See page 319.

Pre-Occupational Therapy — See page 359.

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	12-18
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 356.

Pre-Pharmacy — See page 333.

Pre-Physical Therapy — See page 362.

Pre-Radiation Therapy Technology — See page 366.

Pre-Social Work — See page 428.

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 151 —(LS) Basic Biology I	4
BIO 152 —Basic Biology II	4
CHM 105 or CHM 107	
—(PS) Introductory Principles of Chemistry	6
—(PS) Principles of Chemistry I	4
CHM 108 —Principles of Chemistry II	5
CHM 224 —Organic Chemistry I	4
CHM 226 —Organic Chemistry II	4
CHM 227 —Organic Chemistry Laboratory	2
CHM 560 or CHM 662	
—Survey of Biochemistry	3
—Metabolism: Pathways and Regulation	3
MAT 180 —Elementary Functions	4
PHY 213 or PHY 217	
—(PS) General Physics	4
—(PS) General Physics	4-5
PHY 214 or PHY 218	
—General Physics	4
—General Physics	4-5
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 honor 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 Communication Disorders and Sciences. Students earn a B.S. degree with a major in special education — speech impaired. Upon completion of the master's degree in communication disorders and sciences, 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 Communication Disorders and Sciences, 555 Manoogian, as early as possible.



BIOLOGICAL SCIENCES

Office: 1360 Biological Sciences; 577-2873

Chairperson: Jack E. Lilien

Associate Chairperson: R. Anton Hough

Academic Services Officers: Laurie P. Brooks, Laura Hamdan, Julia Sosnowsky, Linda VanThiel

Professors

Robert Arking, Stanley K. Gangwere, R. Anton Hough, Seikichi Izawa, James M. Jay, Jack E. Lilien, Hiroshi Mizukami, William S. Moore, David L. Njus, Howard R. Petty, P. Dennis Smith, John D. Taylor

Emeriti Faculty

Walter Chavin, David R. Cook, Dominic L. DeGiusti, James M. Jay, Willis W. Mathews, Lida H. Mattman, Kazutoshi Mayeda, William Prychodko, Claude M. Rogers, Harold W. Rossmore, Albert Siegel, William L. Thompson

Associate Professors

Kuo-Chun Chen, Hector R. C. Fernandez, D. Carl Freeman, Miriam Greenberg, V. Hari, Leo S. Luckinbill, Allen W. Nicholson, Ann Sodja, Robert S. Stephenson, Curtis J. Swanson

Assistant Professors

Philip P. Cunningham, Lisa Elferink, Edward Golenberg

Degree Programs

BACHELOR OF ARTS with a major in Biological Sciences

BACHELOR OF SCIENCE in Biological Sciences

**MASTER OF SCIENCE with a major in Biological Sciences*

**MASTER OF SCIENCE with a major in Molecular Biotechnology*

**DOCTOR OF PHILOSOPHY with a major in Biological Sciences and specializations in cellular and developmental biology; environmental, evolutionary and systematic biology; microbiology and molecular genetics; regulatory biology and biophysics*

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. The major program incorporates all of the regular College of Science Group Requirements.

Admission requirements for the College are satisfied by the requirements for general undergraduate admission to the University; see page 15. Admission to major status in this department requires completion of BIO 151 and 152 with a grade of 'C' or better in both courses and an overall honor point average of at least 2.0.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College Group Requirements (see page 371) and the University General Education Requirements (see page 25), 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 15-43 and 371-376, respectively. An honor point average of 2.0 ('C') is required for graduation.

Biology Core Requirements: A minimum of twenty-eight credits beyond BIO 151 and 152 are required of the major, including BIO 220, 307, and 340, and 312 or 309. Courses through the 600 level may be elected providing the proper prerequisites have been taken. No course having '8' as the second digit may be used for departmental major credit. At least twelve of the twenty-eight credits must be taken in residence.

Cognate Requirements: All students in biological sciences are required to take CHM 107 (or CHM 105) and CHM 108.

Suggested Program

First Year

<i>Fall Semester</i>	<i>Winter Semester</i>
BIO 151 (LS) 4	BIO 152 4
Chemistry 107 (PS) 4	Chemistry 108 5
(OC) (SPB 101/ENG 306) . 3	Mathematics 180 4
English 102 (BC) 4	(IC) English elective 3
UGE 100 (GE) 1	Total: 16
Total: 16	

Second Year

BIO 220 (LS) 4	BIO elective 4
Chemistry 224 4	Language 102 course 4
Language 101 course 4	(CT) (PHI 105 or SPC 211) 3
(CL) course 3	Chemistry 226 4
Total: 15	Total: 15

Third Year

BIO 340 3	BIO 307 4-5
Chemistry 227 2	BIO 341 or Biol. elective . . . 3
(SS) course 4	(AI) course 4
Language 201 course 4	(VP) course 4
Elective 3	Total: 15-16
Total: 16	

Fourth Year

BIO 312/Biol. elective 4	BIO 309/Biol. elective 3
(PL) course 4	BIO 341/Biol. elective 3
(SS) course 4	BIO elective 1
(HS) course 4	(CL) course 3
Total: 16	(SS) course 4
	BIO 593 (WI) & BIO 597 . . . 2
	Total: 16

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. The major program incorporates all of the regular College Group Requirements.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 371) and the University General Education Requirements (see page 25), 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 15–43 and 371–376, respectively.

Major Requirements: A minimum of twenty-eight credits beyond BIO 151 and 152 are required of the major, including BIO 220, 307, 340, and 312 or 309. Majors must also take either BIO 341 or BIO 307 with laboratory. Courses through the 600 level may be elected providing the proper prerequisites have been taken. No course having '8' as the second digit may be used for department major credit. At least twelve of the twenty-eight credits must be taken in residence.

Cognate Requirements for the B.S. Degree: B.S. majors in biological sciences must include CHM 224, 226 and 227, PHY 213 and 214 or PHY 217 and 218, and MAT 201 and 202 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

First Year

Fall Semester

BIO 151 (LS)	4
Chemistry 107 (PS)	4
(OC) (SPB101/ENG 306)	3
English 102 (BC)	4
UGE 100	1
Total: 16	

Winter Semester

BIO 152	4
Chemistry 108	5
Mathematics 180	4
English/(IC) elective	3
Total: 16	

Second Year

Physics 213 or 217	4
Chemistry 224	4
Mathematics 201	4
(CL) elective	3
Total: 15	

Chemistry 227	2
Chemistry 226	4
(CT) (PHI 105/SPC 211)	3
Mathematics 202	4
Physics 214 or 218	4
Total: 17	

Third Year

BIO 340	3
BIO 307	4–5
Language 101 course	4
(AI) elective	4
Total: 15–16	

Language 102 course	4
BIO 341/BIO elective	3
BIO 309/BIO elective	3
BIO 220 (LS)	4
(PL) elective	3
Total: 17	

Fourth Year

Language 201 course	4
BIO 312/BIO elective	3–4
(SS) elective	3–4
(HS) elective	3–4
Total: 13–16	

BIO electives	4–5
(SS) elective	3
(VP) elective	3
(CS) elective	3
BIO 593 (WI)	0
BIO 597	2
Total: 15–16	

—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 120 credits in course work including satisfaction of the College Group Requirements (see page 371) and the University General Education Requirements (see page 25), 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 15–43 and 371–376, respectively.

Major Requirements: Biological Sciences 151, 152, 602, 616, and an additional eleven credits in biology electives are required. No course having '8' as the second digit may be used for departmental major credit. In the senior year, students should enroll in at least one credit in Biological Sciences 596.

Cognate Requirements consist of the following:

1. Mathematics 201, 202, 203, and 235.
2. Physics 217 and 218 and an additional three credits in physics beyond 218.
3. Chemistry 107, 108, 224, 226, 227, 542 and 544.
4. Either Computer Science 112, Biological Sciences 604, or equivalent. (If BIO 604 is elected, its credit will not count toward the required biology electives, above.)
5. The Writing Intensive (WI) requirement may be satisfied by electing BIO 593 with either BIO 602 or BIO 616.

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

BIO 151 (LS)	4
Chemistry 107 (PS)	4
Language	4
English 102 (BC)	4
Total: 16	

Winter Semester

BIO 152	4
Chemistry 108	5
Language	4
English elective	3
Total: 16	

Second Year

BIO elective	4
Mathematics 201 (MC)	4
Chemistry 224	4
Language	4
Total: 16	

Mathematics 202	4
Chemistry 226	4
Chemistry 227	2
Group Requirement	3
Group Requirement	4
Total: 17	

Third Year

Mathematics 203	4
Physics 217	5
BIO 602	4
BIO 604	4
Total: 17	

Mathematics 235	3
Physics 218	5
BIO elective	2
BIO elective	3
Group Requirement	3
Total: 67	

Fourth Year

Chemistry 542	3	Chemistry 544	4
Physics elective	3	BIO 596	2
BIO 616	3	Group Requirement	4
BIO 596	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 counseling 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-one biology course credits including the following: BIO 105 or 151, 152, 340, 307 and 312 or 309.

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 151 and 152.

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 151 and 152.

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 151 and 152 (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 151 (four credits). Students with a score of 3 or 4 are eligible to register in BIO 152.

UNDERGRADUATE COURSES (BIO)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

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.

103. (LS) Environmental Biology. (Lct: 3; or Lct: 3; Dsc: 1). Cr. 3 or 4

Not for biology major credit. Offered for four credits to Honors students only. Introduction to life science in context of functions of human individuals and populations and their relationships with the environment, including biological consequences of population growth and technology on the environment. (T)

105. (LS) An Introduction to Life. (Lct: 3; or Lct: 3; Lab: 3). Cr. 3 or 4

Meets General Education Laboratory Requirement when elected for 4 credits. For the non-science major and certain pre-professional programs. Material fee as indicated in *Schedule of Classes*. A factual and conceptual treatment of modern biology at the cell, organismal, and population levels of organization. (T)

151. (LS) Basic Biology I. (Lab: 3; Lct: 3). Cr. 3-4

Prereq: high school science or BIO 105. Only Engineering students elect for three credits; all others must elect four credits. BIO 151-BIO 152 required of all biology majors. Material fee as indicated in *Schedule of Classes*. 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. (T)

152. Basic Biology II. (Lab: 3; Lct: 3). Cr. 4

Prereq: BIO 151 or 105 with a grade of C or better. BIO 151-BIO 152 sequence required of all biology majors. Material fee as indicated in *Schedule of Classes*. Physiology, ecology, evolution, and systematics, their principles, strategies and outcomes in both structure and function. (T)

203. Human Ecology. (Lct: 3; Dsc: 1). Cr. 4

Prereq: BIO 152. No credit after BIO 103. Interrelationships of human beings, as organisms and as a population, and the environment. Integration of human biology and environmental biology, including factors influencing population growth and its effects on the environment. Discussions, problem sets, and field trips comparing natural and industrial ecosystems. (B)

220. (LS) Introductory Microbiology. (Lab: 4; Lct: 3). Cr. 4

Prereq: CHE 280 or BIO 151. Material fee as indicated in *Schedule of Classes*. 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. (T)

240. Plants and Human Affairs. (Lct: 2). Cr. 2

The role of plants in human well-being and in the past development and present maintenance of civilization. Special emphasis on the botany, genetics and impact on humans of drug-producing plants such as marijuana, cocaine and peyote. (I)

260. Introduction to Cell Biology. Cr. 3

Prereq: BIO 151, 152, and 220. 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. (Y)

271. Comparative Vertebrate Zoology. (Lab: 6; Lct: 3). Cr. 5
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. Compositive anatomy of the vertebrates. Dissection of vertebrate types to understand interrelations of adult structures in terms of embryology and physiology. (T)

287. Anatomy and Physiology. (Lab: 4; Lct: 3). Cr. 5
Prereq: BIO 151 or 152. Not for biology major credit. Material fee as indicated in *Schedule of Classes*. 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. (T)

307. Genetics. Cr. 4 or 5
Prereq: BIO 151 and 152 or equiv. If elected for five credits, material fee applies. Material fee as indicated in *Schedule of Classes*. Transmission, nature and action of genetic material in organisms. Laboratory experiments to demonstrate principles of genetics. (T)

309. Evolution. (Lct: 3). Cr. 3
Prereq: BIO 307. Evidence for organic evolution; the nature and consequences of the process. (W)

310. Biosynthesis and Metabolism. (Lct: 4). Cr. 4
Prereq: BIO 152, CHM 224. Biosynthesis and metabolism of proteins, carbohydrates, lipids, steroids, amino acids and nucleic acids. The basic principles of enzyme kinetics in living systems. (F)

312. General Ecology. (Lab: 3; Lct: 3). Cr. 4
Prereq: BIO 152, MAT 180. Material fee as indicated in *Schedule of Classes*. Analysis of the factors affecting the distribution and abundance of plants and animals. (F)

340. Principles of Physiology. (Lct: 3). Cr. 3
Prereq: BIO 152; CHM 107 and CHM 108 strongly recommended. Introduction to physiology at the molecular and cellular levels: bioenergetics, metabolism and regulation, membrane permeability and excitability, motility and contractile elements, photosynthesis. (T)

341. Principles of Physiology: Laboratory. (Lab: 3; Lct: 1; Dsc: 1). Cr. 3
Prereq: BIO 340. Material fee as indicated in *Schedule of Classes*. Laboratory exercises demonstrate physiological phenomena at the molecular, cellular and organ levels: nerve and muscle function, osmotic and ionic regulation, respiration and photosynthesis. (W)

390. Directed Study. Cr. 1-4(Max. 8)
Prereq: written consent of instructor and Departmental undergraduate officer; minimum 3.0 h.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)

504. Biometry. (Lct: 3; Lab: 3). Cr. 4
Prereq: MAT 201, MAT 221 or equiv. Student computer account required. Quantitative methods in biology. Statistical approach to data analysis and the design of experiments. Laboratory section permits actual analysis of selected statistical problems. (B)

506. Special Topics. Cr. 1-6(Max. 6)
Prereq: BIO 152, 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)

510. Limnology. (Lct: 3; or Lct: 3; Lab: 6). Cr. 3 or 5
Prereq: BIO 152; one course in chemistry or physics. Material fee as indicated in *Schedule of Classes*. Physical, chemical and biological properties of freshwater environments. (B)

511. Biogeography. (Lct: 3). Cr. 3
Prereq: BIO 152. Introductory study of principles and patterns of plant and animal distribution. (B)

518. Field Investigations In Biological Sciences. (Fld: 6). Cr. 2-12(Max. 20)

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)

523. Environmental Microbiology. (Lct: 3; or Lct: 3; Lab: 6). Cr. 3 or 5

Prereq: BIO 220 and CHM 226. Material fee as indicated in *Schedule of Classes*. Microbiology of air, water, sewage; techniques for enumerating bacteria in water, sewage, milk; principles of disinfection. Field trips. (I)

525. Microbiology of Foods. (Lab: 4; Lct: 3). Cr. 4
Prereq: BIO 220. Material fee as indicated in *Schedule of Classes*. Study of microorganisms in our foods with emphasis on ecological parameters that affect their growth and activity. Laboratory stresses official methodology for determining pathogens and spoilage organisms; and demonstrations of role of ecologic parameters in predicting the activities of microbes in foods. (F)

531. Immunology. (Lct: 3). Cr. 3
Prereq: BIO 220 and CHM 226. Antibody formation, antigen structure, antigen-antibody reactions. (W)

546. Plant Physiology. (Lct: 3). Cr. 3
Prereq: BIO 152; two courses in general chemistry or equivalent. Physiology in relation to form in the intact plant; emphasis on growth and development, nutrition, water economy, plant-soil interactions, and translocation. (W)

547. Plant Physiology Laboratory. (Lab: 6; Lct: 1). Cr. 3
Prereq. or coreq: BIO 546. Laboratory experiments on basic physiological functions of higher plants at organ, cellular, subcellular and enzyme levels; hormones and growth, transpiration, water conduction, photosynthesis, respiration. (W)

548. Plant Pathology. (BIO 748). Cr. 3
Prereq: BIO 152, 220. Principles of plant infection, structure and life cycle of plant pathogens, defense mechanisms, spread and control of plant disease. (B)

555. Systematic Botany. (Lab: 3; Lct: 2). Cr. 3
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. Principles and methods of taxonomy and identification of native vascular plants. (I)

561. Vertebrate Embryology. (Lab: 4; Lct: 3). Cr. 4
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. 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. (W)

562. Developmental Biology. (Lct: 3). Cr. 3
Prereq: BIO 307. An analytical study of the mechanisms which govern the flow of information into and out of the nucleus thereby setting in motion various developmental processes common to many eukaryotic systems. Analysis of the causes of the events depicted in descriptive embryology. (B)

563. Histology. (Lab: 4; Lct: 3). Cr. 4
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. Characteristics and identification of normal mammalian tissues. Micro-anatomy of the mammal. Functional interpretation of microstructure and fine structure. (F)

564. Cancer Biology I. (Lct: 3). Cr. 3
Prereq: BIO 220 or 340; PHY 214; CHM 226 or consent of instructor. Introduction to integrated analysis of cancer and cell biology, pathology, etiology and therapy. (F)

- 569. Animal Behavior. (Lct: 3). Cr. 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. (W)
- 570. Natural History of Vertebrates. (Lab: 3; Lct: 2). Cr. 3**
Prereq: 16 credits in biology. Material fee as indicated in *Schedule of Classes*. Life histories, survival and evolutionary strategies, laboratory and field identification, including study techniques of vertebrates; Michigan wildlife. Field trips. (I)
- 572. Ornithology. (Lab: 3; Lct: 2). Cr. 3**
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. Morphology, systematics, ecology, evolution, physiology and behavior of birds. Field trips. (I)
- 573. Mammalogy. (Lct: 2; Lab: 6). Cr. 4**
Prereq: 16 credits in biology. Material fee as indicated in *Schedule of Classes*. Systematics, geographical distribution, ecology, adaptive radiation, patterns of growth and reproduction, physiology. Field trips. (I)
- 574. Entomology. (Lab: 6; Lct: 2). Cr. 4**
Prereq: BIO 152. Material fee as indicated in *Schedule of Classes*. The systematics, classification, and functional morphology of insects; methods of collection and study of insect specimens. (I)
- 575. Biology of Aging. (BIO 775). (Lct: 3). Cr. 3**
Prereq: BIO 307 or consent of instructor. Aging and senescence viewed as fundamental biological processes common to most organisms. Discussion of investigative methods and accepted facts regarding aging; critical analysis of theoretical interpretation of the data. (B)
- 578. Biology of Parasitism. Cr. 4**
Prereq: BIO 102. Parasitism throughout the animal phyla. Morphology, life history, methods of transmission and control of parasites. (I)
- 593. (W) Writing Intensive Course in Biological Sciences. Cr. 0**
Prereq: senior standing; satisfactory completion of English Proficiency Examination; consent of department; coreq: BIO 597 or 697. 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)
- 596. Senior Research. Cr. 1–2(Max. 3)**
Prereq: written consent of instructor and biology adviser; minimum 3.0 h.p.a. Original research. To be taken under direction of Biological Sciences faculty. (T)
- 597. Senior Seminar. (Smr: 1). Cr. 2**
Prereq: senior standing in Biological Sciences; completion of core courses; consent of instructor; coreq: BIO 593. Aspects of current biological research. (F,W)
- 600. Molecular Cell Biology I. (Lct: 3). Cr. 3**
Prereq: BIO 220 or 340; PHY 214; CHM 226 or consent of instructor. 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)
- 601. Molecular Cell Biology II. (Lct: 3). Cr. 3**
Prereq: BIO 600. 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)
- 602. Methods of Analyses. (Lct: 2; or Lab: 6; Lct: 2). Cr. 2 or 4**
Prereq: one year of chemistry and biology. Material fee as indicated in *Schedule of Classes*. 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. (F)
- 603. Physiological Genetics. (BIO 703) (Lct: 3). Cr. 3**
Prereq: BIO 307. 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. (I)
- 604. Computer Application in Life Sciences. (Lct: 2; Lab: 6). Cr. 4**
Elementary introduction to microcomputers hardware and software; their utility in life science research as laboratory tools and as conceptual models. Programming in a language taught from scratch, interfacing to laboratory instruments, software for data analysis. Recommended for students from other disciplines with interest in biology. (Y)
- 605. Techniques in Electron Microscopy. (Lab: 6; Lct: 2). Cr. 4**
Prereq: written consent of instructor. Material fee as indicated in *Schedule of Classes*. Use of the electron microscope, ancillary sectioning and darkroom equipment in present or future research efforts. Evaluation of publications which use these techniques. (B)
- 606. Molecular Evolution. (Lct: 3). Cr. 3**
Prereq: BIO 307, 309. 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)
- 607. Human Genetics. (Lct: 3). Cr. 3**
Prereq: BIO 307. 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)
- 608. Microbial and Cellular Genetics. (BIO 708). (Lct: 4). Cr. 4**
Prereq: BIO 307 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)
- 609. Evolutionary Genetics. (Lab: 3; Lct: 2). Cr. 3**
Prereq: BIO 307, 309; MAT 180 or equiv. An integrated lecture/laboratory course in the application of genetics to organic evolution. Theoretical population genetics and readings in the original literature are emphasized. The laboratory has an open structure that allows students to conduct several classical experiments in population genetics. (B)
- 611. Molecular Cell Biology Laboratory I. (Lct: 1; Lab: 6). Cr. 3**
Prereq. or coreq: BIO 600. Laboratory exercises demonstrate molecular and subcellular structures and functions of cells. (Y)
- 612. Molecular Cell Biology Laboratory II. (Lct: 1; Lab: 6). Cr. 3**
Prereq. or coreq: BIO 601 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Laboratory exercises illustrate methods and concepts of molecular biology and recombinant DNA analysis. (Y)
- 616. Biophysics and Molecular Biology. (Lct: 3). Cr. 3**
Prereq: one year of biology and chemistry or physics. Analysis of the biologically important aspects of thermodynamics, chemical bonding,

macromolecular structure, biomembranes and transport processes.

(W)

618. Membrane Biology. (Lct: 3). Cr. 3

Prereq: one year of biology and chemistry; BIO 220 or 340; 600 or 616 recommended. Comprehensive analysis of cellular and model membranes integrating molecular structure and physiological properties. Structural, dynamic, and physiological properties examined, including molecular and macromolecular assemblies, physical and chemical analysis of molecular motion, functional aspects including trans-membrane signalling.

(Y)

**625. Biology Instruction for Teachers. (Lct: 2).
Cr. 2 (Max. 10)**

Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Discussion of basic biological principles in light of recent advances.

(Y)

**626. Laboratory Biology for Teachers. (Lab: 1).
Cr. 1 (Max. 5)**

Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Laboratory component of BIO 625; basic laboratory techniques in light of recent advances in the biological sciences.

(Y)

635. Microbial Ecology. (Lct: 2). Cr. 2

Prereq: eight credits in microbiology. The role and significance of microorganisms in soils, waters, and the rumen. Principles of taxonomy of the archaeobacteria and the eubacteria, mineral cycling, and biomass determinations. Effect of microbes on herbicides, pesticides, and other man-made environmental chemicals.

(W)

640. Evolutionary Ecology. (Lct: 3). Cr. 3

Prereq: BIO 307; 309 or 312. The merger of ecology and evolution, principally reproductive strategies.

(I)

664. Advanced Ecology. (Lct: 3). Cr. 3

Prereq: BIO 312. Discussion and analysis of recent topics in ecological theory.

(I)

666. Neurophysiology. (BIO 766). (Lct: 3). Cr. 3

Prereq: BIO 340 and 610, or consent of instructor. Physiology and biophysics of neuronal control systems.

(B)

**667. Comparative Marine Animal Physiology and
Biochemistry. (BIO 767). (Lct: 2; Lab: 9). Cr. 5**

Prereq: 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)

669. Neurochemistry. (BIO 769). (Lct: 3). Cr. 3

Prereq: BIO 340, 610. Biochemistry of signal transmission between nerve cells; neurotransmitter synthesis, storage, and release; receptors and psychoactive drugs; neurotransmitter systems and their integration.

(B)

**684. (PHC 634) Chemical Basis of Pharmacology.
(CHM 634). (Lct: 3). Cr. 3**

Prereq: CHM 226 and BIO 151 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)

690. Honors Directed Study in Biology. Cr. 1-2

Prereq: consent of instructor and department Honors adviser arranged during semester preceding election of course. Open only to junior or senior biology majors. To be taken under direction of Biological Sciences faculty.

(T)

694. Seminar in Molecular Biotechnology. Cr. 1-6

Prereq: admission to molecular biotechnology program or consent of instructor. Faculty associated with molecular biotechnology program describe their laboratory research, and outline opportunities for research training.

(W)

697. Senior Seminar: Honors Program. (Smr: 2). Cr. 2

Prereq: completion of core courses and a minimum of two credits in BIO 690. Open only to Honors students in biology.

(F,W)

699. Terminal Essay: Honors Program. Cr. 2

Prereq: consent of department and Honors adviser; senior standing and BIO 690. 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

Chairperson: Richard L. Lintvedt

Academic Services Officer: Sharon Kelley

Professors

Robert D. Bach, 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, Richard L. Lintvedt, W. Martin McClain, Martin E. Newcomb, Jr., John P. Oliver, John D. Petersen, Colin F. Poole, Wendell H. Powers (Emeritus), Morton Raban, Gene P. Reck, James H. Rigby, Louis J. Romano, David B. Rorabacher, A. Paul Schaap, George H. Schenk (Emeritus), H. Bernhard Schlegel, Calvin L. Stevens, (Emeritus) Tche T. Tchen (Emeritus)

Associate Professors

Ashok S. Bhagwat, David M. Coleman, Shahriar Mobashery, Ronald R. Schroeder, Charles H. Winter

Assistant Professors

Christine S. Chow, Ruth Dusenbery, Robert Levis, Gang-yu Liu, John Montgomery, John Santalucia, Sandra Shaner, Regina Zibuck

Adjunct Professors

Roscoe Carter III, Kenneth V. Honn, Charles King, Lawrence J. Marnett, Erhard W. Rothe, Dennis Schuetzle

Adjunct Assistant Professor

James Proscia

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.

Beginning Chemistry Courses: Students with no prior experience in chemistry may elect Chemistry 100 (for non-science majors); Chemistry 102 (for non-science majors and certain pre-professional students); or Chemistry 105 (for science majors and most pre-professional students continuing on to higher level courses). Students who have had a year or more of high school chemistry or the equivalent may register for Chemistry 107 or 131 (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.

Chemistry 100 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 102 and 103 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.

Chemistry 105 is designed as the beginning chemistry course for science majors, pre-professional students, and other students who have had little or no prior experience in chemistry but desire to obtain a strong background in the fundamentals of this subject.

Chemistry 107 is designed as the beginning course for science majors and pre-professional students who have a strong background in high school chemistry. Eligibility for Chemistry 107 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 131 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 two years of college chemistry. To qualify for Chemistry 131, a student must receive a superior score on the Chemistry 107 Qualifying 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 Merit Scholarship, admission to the Honors Program, etc.).

The sequence of Chemistry 107 (or 105) and 108, or 131 and 132, 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 107 and 108 (nine credits); student is eligible to enroll in Chemistry 224 as well as Chemistry 132 or 312.

Score of 3: Credit awarded for Chemistry 107 (4 credits); student is eligible to enroll in either Chemistry 108 or 131.

Bachelor of Arts with a Major in Chemistry

This curriculum allows students to major with a maximum of fifty-five 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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's degree must complete 120 credits in course work. This must include satisfying the University General Education Requirements (see page 25) and the College Group Requirements (see page 371), 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 15-43 and 371-376, 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 107 (or 105), 108, 224, 226, 227, 302, 312, 540 (or 542 or 544), 555, and at least one of the following: 516, 544, 560, 604, 624, 644, 660 or 662. A minimum of fifteen credits in chemistry must be earned at Wayne State University. Qualified students may substitute 131 and 132 for 107, 108, and 312. Similarly, students may substitute 231 and 232 for 224 and 226.

2. Physics 217 and 218.

3. Mathematics 201 and 202.

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 203 and 225 (or 235), as well as the following chemistry courses in addition to those required for the B.A. degree: Chemistry 542 and 544 (rather than 540), 516, and two additional advanced laboratory courses (551, 557, 599).

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

First Year

Fall Semester

UGE 100	1
Chem. 105 or 107 (or 131)	4-6
English 102	4
Mathematics 201	4
Group Requirement	3
Total:	16-18

Winter Semester

Chemistry 108 (or 132)	5
English (200 level)	3
Mathematics 202	4
Group Requirement	4
Total:	16

Second Year

Chemistry 224	4
Physics 217	5
Group Requirements	6-7
Total:	15-16

Chemistry 226	4
Chemistry 227	2
Physics 218	5
Group Requirement	3
Elective	3
Total:	17

Third Year

Chemistry 312	4	Chemistry 302	3
Language I	4	Chem. 540 (or 542 or 544)	3-4
Group Requirements	8	Group Requirement	4
Total:	16	Language II	4
		Total:	14-15

Fourth Year

CHM Elective (or CHM 555)	2-4	CHM 555 (or CHM elective)	2-4
Language III	4	Electives	12
Electives	3	Total:	14-16
Group Requirement	4		
Total:	13-15		

— With Honors in Chemistry

1. All B.A. requirements in chemistry must be fulfilled including a full year of physical chemistry (CHM 542 and 544) plus one additional elective (CHM 516, 551, 560, 662, or 664).

2. Minimum h.p.a.: 3.3 overall; 3.3 in chemistry courses.

3. Minimum of four credits in independent research (Chemistry 299 or 599). Research should be commenced in the junior year (or earlier).

4. Completion of one semester of an Honors Program 400-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 299 and 598; the recommended chemistry honors courses; the Honors Program 400-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. Presentation of a Public Lecture on the B.A. research. This may be followed by an oral examination by the Honors Subcommittee in Chemistry.

8. Chemistry 131, 132, 231, and 232 are strongly recommended for students intending to earn an Honors degree in Chemistry.

Bachelor of Science in Chemistry

This degree is offered 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 fifty-five 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 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's degree must complete 120 credits in course work including satisfaction of the University General Education Requirements (see page 25) and the College Group Requirements (see page 371), 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 15-43 and 371-376, 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 107 (or 105 or 131), 108 (or 132), 224 (or 231), 226 (or 232), 227, 302, 312 (or 132), 502, 516, 542, 544, 551, 555, 557 and any one of the following: 560, 604, 624, 644, 660, 662 or 664. By the first semester of the senior year, the student must enroll for at least two credits in Senior Research in Chemistry (CHM 599). 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 217 and 218.
3. Mathematics 201, 202, 203, and 225 (or 235).
4. Language requirement: three semesters of any language (German, French, or Russian are preferred).

At least fifteen credits in chemistry plus Senior Research (Chemistry 599) must be earned at Wayne State University. Superior students may elect Chemistry 131, 132, 231, 232 in place of designated lower division courses. Reducing the number of required hours in chemistry will permit such students to elect chemical research (Chemistry 299) as early as the summer following the freshman year. Such students will also be allowed to register for Chemistry 599 in the junior year.

Recommended Program

First Year

Fall Semester

UGE 100	1
CHM 105 (or 107 or 131)	4-6
English 102	4
Mathematics 201	4
Group Requirement	3
Total:	16-18

Winter Semester

Chemistry 108 (or 132)	5
English (200 level)	3
Mathematics 202	4
Group Requirement	3
Total:	15

Second Year

Chemistry 224	4
Chemistry 312	4
Mathematics 203	4
Physics 217	5
Total:	17

Chemistry 226	4
Chemistry 227	2
Chemistry 302	3
Physics 218	5
Group Requirement	3
Total:	17

Third Year

Chemistry 542	3
Chemistry 555	2
Mathematics 235 (or 225)	3
Language I	4
Group Requirement	3
Total:	15

Chemistry 544	4
Chemistry 557	2
Chemistry 516	3
Language II	4
Group Requirement	4
Total:	17

Fourth Year

Chemistry 502	2	Group Requirements	11
Chemistry 551	3	Electives	5
Chemistry 599	2-4	Total:	16
Language III	4		
Advanced CHM Course *	3		
Total:	13-15		

Substitutions in B.S. 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 500 or above from another discipline (such as physics, mathematics, biology, engineering) for the following B.S. requirements: (1) Mathematics 225 (or 235); (2) Chemistry courses numbered 500 or above except 516, 542, 544, and 555. 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 107 (or 105 or 131), 108 (or 132), 224 (or 231), 226 (or 232), 227, 302, 312 (or 132), 516, 540, 551 or 557 (only one required), 555, 660, 661, 662 or 664. By the first semester of the senior year, the student must enroll for at least two credits in Senior Research in Chemistry (CHM 599). 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 217 and 218.
3. Biology 151, 220, and 507 or 600.
4. Mathematics 201, 202, and 203.
4. Language requirement: three semesters of any language (German, French, or Russian are preferred).

At least fifteen credits in chemistry plus Senior Research (Chemistry 599) must be earned at Wayne State University. Superior students may elect Chemistry 131, 132, 231, 232 in place of designated lower division courses. Reducing the number of required hours in chemistry will permit such students to elect chemical research (Chemistry 299) as early as the summer following the freshman year. Such students will also be allowed to register for Chemistry 599 in the junior year.

Recommended Program

First Year

Fall Semester

UGE 100	1
CHM 105 or 107 or 131	4-6
English 102 or 105	4
Mathematics 201	4
Group Requirement	3
Total:	16-18

Winter Semester

Chemistry 108 or 132	5
English (200 level)	3
Mathematics 202	4
Biology 151	4
Total:	16

Second Year

Chemistry 224 or 231	4
Chemistry 312	4
Biology 220	4
Physics 217	5
Total:	17

Chemistry 226 or 232	4
Chemistry 227	2
Chemistry 302	3
Physics 218	5
Group Requirement	3
Total:	17

* May be taken in the winter semester.

Third Year

Chemistry 660	3	Chemistry 540	4
Biology 507 or 600	3-4	Chemistry 555	2
Mathematics 203	3	Chemistry 516	3
Language I	4	Language II	4
Group Requirement	3	Group Requirement	3
Total:	16-17	Total:	16

Fourth Year

Chemistry 598 or 599	2	Chemistry 664	3
Chemistry 551 (or yr 3)*	3	Chemistry 557 (optional)*	2
Language III	4	CHM 598 or 599 (optional)	2
Group Requirements	6	Chemistry 661 (or yr 3)	2
Total	15	Group Requirements	6
		Total	15

— With Honors in Chemistry

1. All regular requirements for the Bachelor of Science in Chemistry degree must be fulfilled (no substitutions).
2. Minimum h.p.a.: 3.0 overall; 3.3 in chemistry courses.
3. Minimum of four credits must be earned in independent research (Chemistry 299, 598); this should be commenced in the junior year (or earlier).
4. Completion of one semester of an Honors Program 400-level seminar (consult the 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. Presentation of a Public Lecture on the B.S. research. This may be followed by an oral examination by the Honors Subcommittee in Chemistry.
7. Chemistry 131, 132, 231, and 232 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 107 (or 105), 108, 224, 226, 227, and at least nine additional credits earned at Wayne State University in Chemistry courses numbered above 300 excluding seminar and research courses (CHM 299, 485, 599, etc.). Typically, the latter nine credits could be satisfied by electing some combination of: Chemistry 302, 312, 502, 516, 540, 542, 544, 560, 644, or 662. Qualified students may substitute Chemistry 131 and 132 for Chemistry 107, 108, and 312.

Financial Aid

Also see Office of Scholarships and Financial Aid, page 21.

George H. Wheatley Scholarship: Award open to full-time undergraduate or graduate students majoring in chemistry with a minimum 3.0 h.p.a. Application deadline is April 30; contact the Office of Scholarships and Financial Aid.

* If Chemistry 551 is taken in the third year, Chemistry 557 may be taken in the Fall Semester of the fourth year, but only one of these courses is required.

UNDERGRADUATE COURSES (CHM)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

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.

100. (PS) Chemistry and Your World. (Lct: 3; Lab: 3). Cr. 3-4

Meets General Education Laboratory Requirement when elected for 4 credits. If elected for 4 credits, fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Facts and theories from analytical, inorganic, organic, and physical chemistry, and from biochemistry; their consequences in life processes and the environment. (F,W)

102. (PS) General Chemistry I. (Lct: 3; Quz: 1; Lab: 3). Cr. 4

Prereq: intermediate high school algebra recommended. Meets General Education Laboratory Requirement. Fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. High school chemistry not required. First course in the terminal sequence consisting of CHM 102 and CHM 103. 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. (F,W)

103. General Chemistry II. (Lct: 3; Quz: 1; Lab: 3). Cr. 4

Prereq: CHM 102. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. 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. (W,S)

105. (PS) Introductory Principles of Chemistry.

(Lct: 4; Quz: 2; Lab: 4). Cr. 6

Prereq: intermediate high school algebra. Meets General Education Laboratory Requirement. Fee cards must be obtained from cashier's office before attending first lab. Only three credits after election of CHM 102. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Principles of chemistry and their applications, atomic and molecular structure, periodicity, states of matter, solutions, chemical bonds, principles of chemical equilibrium. This course is intended for students who have a weak, or no, background in high school chemistry. (T)

107. (PS) Principles of Chemistry I. (Lct: 3; Quz: 1; Lab: 3).

Cr. 4

Prereq: completion of one year of high school chemistry; high school algebra; satisfactory score on qualifying examination in high school chemistry. Meets General Education Laboratory Requirement. Fee cards must be obtained from cashier's office before attending first lab. Only 2 credits after CHM 102; no credit after CHM 105. Material fee as

indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Principles of chemistry and their applications, atomic and molecular structure, states of matter, periodicity, solutions, chemical bonds, principles of chemical equilibrium, and thermochemistry. (F,W)

108. Principles of Chemistry II. (Lct: 3; Quz: 1; Lab: 4). Cr. 5
Prereq: CHM 105 or 107 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Acids and bases; chemical equilibria, especially those of acid-base, oxidation-reduction, complex formation, and precipitation reactions in aqueous solution; properties and reactions of inorganic substances; qualitative analysis of common inorganic ions; chemical thermodynamics and kinetics; electrochemistry; nuclear chemistry. (T)

111. Practical Chemistry I. Cr. 2
Prereq: approval of Departmental Curriculum Committee. Open only to students in Focus Hope Program. Introduction to measurement, chemical reactions, periodic table, acid-based, oxidation-reduction, bonding. (Y)

112. Practical Chemistry II. Cr. 2
Prereq: CHM 111 and approval of Departmental Curriculum Committee. Open only to students in Focus Hope Program. Chemical equilibrium, chemical kinetics, properties of materials. (Y)

131. (PS) Chemical Principles and Analysis I. (Lct: 3; Quz: 1; Lab: 4). Cr. 5
Prereq: one year of high school chemistry and algebra; evidence of superior potential (Merit Scholarship, Honors Program, superior performance on the CHM 107 Placement Examination or similar criteria). Meets General Education Laboratory Requirement. Fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Brief review of basic chemical principles and atomic and molecular structure; application of chemical principles in chemical phenomena with emphasis on chemical reactions in the gaseous and liquid states and in solution. The two-semester sequence of CHM 131 and CHM 132 covers the material in the three semester sequence CHM 107, CHM 108, CHM 312. (F)

132. Chemical Principles and Analysis II. (Lct: 3; Quz: 1; Lab: 4). Cr. 5
Prereq: CHM 131 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Continuation of CHM 131. Qualitative and quantitative determination of selected elements in chemical samples. Chemical equilibrium concepts and calculations. (W)

224. Organic Chemistry I. (Lct: 3; Quz: 1; or Lct: 4). Cr. 4
Prereq: CHM 108 or 132 or equiv. The sequence CHM 224, CHM 226, and CHM 227 meets requirements for premedical, pre dental, pharmacy and chemical engineering students. Required for chemistry majors. Structure, stereochemistry, and physical properties of all important classes of organic compounds. Introduction to organic spectroscopy. Reaction intermediates. (T)

226. Organic Chemistry II. (Lct: 3; Quz: 1; or Lct: 4). Cr. 4
Prereq: CHM 224 or equiv. Continuation of CHM 224. Reactions of aliphatic and aromatic compounds. Reaction mechanisms; multi-step syntheses; heterocyclic compounds, amino acids, proteins, carbohydrates, nucleic acids. (T)

227. Organic Chemistry Laboratory. (Lct: 1; Lab: 5). Cr. 2
Prereq. or coreq: CHM 226 or 232 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Experiments to familiarize students with important laboratory techniques, with methods of identifying organic compounds, with reactions of important classes of aliphatic and

aromatic compounds, and with the scope and limitations of organic syntheses. (T)

231. Organic Structure and Reactions. (Lct: 4). Cr. 4
Prereq: CHM 132 or superior performance in 108. No credit after CHM 224. Structure, stereochemistry, and reactions of organic compounds. The two semester sequence of CHM 231 and CHM 232 covers all of the material in CHM 224 and CHM 226. This sequence is recommended for all chemistry majors and honors students. (F)

232. Organic Synthesis and Spectroscopy. (Lct: 4). Cr. 4
Prereq: CHM 231; coreq: 302. No credit after CHM 226. Continuation of CHM 231. Synthesis and reactions of organic compounds. Introduction to spectroscopic methods in organic chemistry. (W)

299. Honors Research Problems in Chemistry. Cr. 2-4
Prereq: CHM 108 or 132 or equiv. and consent of departmental curriculum committee. Research projects under the direction of a senior faculty member. (T)

302. Intermediate Inorganic Chemistry I. (Lct: 3). Cr. 3
Prereq: CHM 224 or equiv. Emphasizes chemistry of the main group elements and includes basic coordination chemistry of the transition metals. (W,S)

312. Analytical Chemistry. (Lct: 3; Lab: 4). Cr. 4
Prereq: CHM 108 or equiv. No credit after CHM 132. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Theoretical and practical aspects of elementary quantitative determinations involving chemical methods and elementary instrumentation. Equilibrium calculations and statistics. (F,S)

485. Frontiers in Chemistry. (CHM 885). 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)

502. Intermediate Inorganic Chemistry II. Cr. 3
Prereq: CHM 302 and 542 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)

516. Instrumental Analytical Chemistry. Cr. 3
Prereq: CHM 132 or 312, and 540 or 542 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)

540. Biological Physical Chemistry. Cr. 4
Prereq: CHM 108 or 132 or equiv., MAT 202 or equiv.; prereq. or coreq: PHY 217 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)

542. Physical Chemistry I. Cr. 3
Prereq: CHM 108 or 132, MAT 202, or equiv.; prereq. or coreq: PHY 217 or equiv. Only two credits applicable toward degree after CHM 540. Chemical thermodynamics, phase equilibrium, solutions, surface chemistry, electrochemistry. (F,W)

544. Physical Chemistry II. Cr. 4
Prereq: CHM 108 or 132, MAT 202 or equiv.; prereq. or coreq: PHY 217 or equiv. Only two credits applicable toward degree after CHM 540. Kinetic theory, empirical and theoretical kinetics, quantum theory, atomic and molecular structure, molecular spectroscopy, statistical mechanics. (F,W)

551. Chemical Synthesis Laboratory. Cr. 2

Prereq: CHM 226 and 227 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Advanced techniques for the synthesis, purification and characterization of organic compounds. (F)

555. (WI) Physical Chemistry Laboratory. Cr. 2

Prereq. or coreq: CHM 540 or 542 or 544 or equiv., and PHY 218 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Principles of measurement. Fundamental investigations of thermodynamics. Fundamental spectroscopic and kinetic measurements. (F,W)

557. Instrumental Analytical Chemistry Laboratory. Cr. 2

Prereq. or coreq: CHM 516 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. Fundamentals of electronics and instrumentation. Principles and analytical applications of electrochemistry, chromatography, and spectrometry including UV-visible, IR, magnetic resonance, and mass spectrometry. (W)

560. Survey of Biochemistry. Cr. 3

Prereq: CHM 224 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)

574. 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)

598. Honors Thesis Research in Chemistry. Cr. 2-4(Max. 8)

Prereq: consent of adviser. Open only to students in College Honors Program; elect no later than first senior semester. Original investigations under direction of senior staff member. (Y)

599. Senior Research in Chemistry. Cr. 2-4(Max. 8)

Prereq: consent of adviser. Must be elected by B.S. chemistry majors no later than first semester of senior year. Original investigation under the direction of a senior staff member. (T)

604. Chemical Applications of Group Theory. (CHM 704). Cr. 3

Prereq: CHM 502 and 544 or equiv. Symmetry in chemical systems, development and use of character tables. Application of group theory to structure, bonding, spectroscopy and reactions. (F)

624. Organic Spectroscopy. (CHM 724). Cr. 3

Prereq: CHM 226 or 232, and 132 or 312. Application of IR, NMR, UV, and mass spectrometry to the identification of organic compounds. Emphasis on interpretation of spectra. Consideration of fluorescence and phosphorescence emission spectroscopy. Recommended for students intending to do graduate or industrial work in organic chemistry. (W)

634. (PHC 634) Chemical Basis of Pharmacology. (BIO 684). Cr. 3

Prereq: CHM 226 and BIO 151 or equiv. Mechanisms of action and metabolism of commonly-used drugs and toxic substances from the cellular level to whole biological systems. (Y)

644. Computational Chemistry. (CHM 744). Cr. 3

Prereq: CHM 544 or equiv. All fee cards must be obtained from cashier's office before attending first lab. Material fee as indicated in *Schedule of Classes*. Aspects of computational chemistry pertinent to effective use of molecular modeling techniques. Molecular mechanics, semi-empirical and ab initio calculations, molecular dynamics. (W)

660. Structure and Function of Biomolecules. (CHM 760). Cr. 3

Prereq: CHM 224 or 231 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)

661. Biological Chemistry Laboratory. Cr. 3

Prereq: CHM 660 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)

662. Metabolism: Pathways and Regulation. (CHM 762). Cr. 3

Prereq: CHM 660 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)

664. Molecular Biology. (CHM 764). Cr. 3

Prereq: CHM 660 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)

672. Chemical Information Sources and Services. Cr. 1

Material fee as indicated in *Schedule of Classes*. Techniques for locating chemical information in the major sources including Chemical Abstracts and major handbooks and treatises. Development of search strategies for both printed and machine-readable sources of chemical information. (Y)

674. 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)

675. Glassblowing. Cr. 1

Prereq: graduate standing or consent of instructor. Offered for S and U grades only. Material fee as indicated in *Schedule of Classes*. Introduction to the fundamentals of glassblowing as applied to the repair and fabrication of scientific equipment in the research laboratory. (I)

690. Directed Study. Cr. 1-4(Max. 8)

Prereq: undergrad., consent of adviser; grad., consent of adviser and graduate officer. (T)

COMMUNICATION DISORDERS and SCIENCES

Office: 555 Manoogian; 577-3337
Acting Chairperson: Lynn S. Bliss
Graduate Officer: Lynn S. Bliss
Undergraduate Officer: Karen O'Leary
Coordinator of Clinical Programs: Kristine Sbaschnig

Professors

Lynn S. Bliss, John M. Panagos

Assistant Professor

Dana Kovarsky

Lecturers

Karen O'Leary, Kristine V. Sbaschnig

Cooperating Faculty, Department of Audiology, School of Medicine

James A. Kaltenback, William F. Rintelmann, Dale O. Robinson, Lynn Root, Tom Simpson

Adjunct Faculty

Patricia Dukes, Fran Eldis, Sandra L. Hamlet, Joseph Honet, Alex Johnson, Susan E. Langmore, Gregory Mahr, Kathleen Pistono, Mark Simpson, John Spolyar, John Tonkovich

Degree Programs

BACHELOR OF ARTS with a major in communication disorders and sciences

***MASTER OF ARTS** with a major in communication disorders and sciences

***DOCTOR OF PHILOSOPHY** with a major in communication disorders and sciences

Bachelor of Arts with a Major in Communication Disorders and Sciences

The mission of this department is to prepare students to work with speech-language handicapped 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 is considered to be pre-professional course work.

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 371) and the University General Education Requirements (see page 25), 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 15-43 and 371-376, respectively.

It is expected that a major will complete at least thirty but not more than forty-six credits in CDS 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 communication disorders and sciences 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.

Major Requirements for a Bachelor of Arts degree in this discipline consist of the following courses: CDS 508, 509, 530, 531, 532, 536, 646, 648; AUD 540 and 542. In addition, all majors must complete the following courses: PHY 310 or 213; STA 102; GPH 110 or ANT 210; and PSY 101.

Bachelor of Science Option: Students majoring in this discipline also have the option of working toward the Bachelor of Science degree 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 555 Manoogian Hall (577-3337). For further details, consult the *CDS 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. Post-degree students are advised by the Graduate Officer.

Financial Aid: See Office of Scholarships and Financial Aid, page 21. The following awards are available to students in this department:

Theodore Mandell Memorial Scholarship Award: Awarded to majors in the Department or alumni specializing in school speech-language pathology.

Clara B. Stoddard Memorial Award: Awarded to majors in the Department or alumni specializing in school speech-language pathology.

* For specific degree requirements, consult the Wayne State University Graduate Bulletin.

UNDERGRADUATE COURSES (CDS)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

101. Elementary Sign Language (ASL). Cr. 3

Appreciation and use of American Sign Language (ASL). Review of basic grammar coupled with classroom practice to learn to communicate in signs. (I)

102. Advanced Sign Language (ASL). Cr. 3

Prereq: CDS 200. Advanced use of American Sign Language (ASL); grammar and classroom practice for sign communication and teaching. (Y)

180. 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)

201. Using Sign Language (ASL). Cr. 3

Prereq: CDS 300. Practical uses of sign language with special emphasis on fieldwork projects pinpointing application in particular fields, such as law, medicine, speech-language pathology, social work, human services, special education, allied health, nursing, public administration. (Y)

390. Directed Study. Cr. 1-3(Max. 4)

Prereq: written consent of chairperson required if replacing regular course work. Undergraduate study in areas not covered in scheduled curriculum, including library and field work. (Y)

508. Phonetics. (SED 532)(LIN 508). Cr. 3

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiological approaches. (F)

509. Anatomy and Physiology of the Speech Mechanism. (SED 533). Cr. 3

General science of normal speech; anatomy, physiology and mechanics of respiration, phonation, resonance, articulation. (W)

530. Introduction to Communication Disorders. (SED 530). Cr. 3-4

Speech-language pathology in clinical and educational settings; classification of communication disorders and related management strategies. (F,S)

531. Clinical Methods in Communication Disorders. (SED 531). Cr. 3

Prereq: CDS 508, 509, 530, 532. Procedures and materials for clinical diagnosis of articulatory, language, rhythm, and voice deficits of organic and non-organic causation. (W)

532. Normal Language Acquisition and Usage. (SED 536)(LIN 536). Cr. 3

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (F)

536. Clinical Practice in Communication Disorders. (SED 534). Cr. 3

Prereq: CDS 646, 648, and 531, each with grade of B or better. Material fee as indicated in *Schedule of Classes*. Supervised experience in application of methods of diagnosis and treatment of clinical cases. (T)

633. (SED 779) Language Bases of Learning Disabilities. Cr. 3

Open only to learning disabilities/emotional impairment majors. Normal language acquisition and development and language pathology, including neurological process involved in speech reception and production, and assessment of language disorders as they relate to learning disabilities. (S)

636. Advanced Clinical Practice in Communication Disorders. (SED 636). Cr. 3

Prereq: CDS 536 or equiv. with grade of B or better. Material fee as indicated in *Schedule of Classes*. Supervised experience in application of methods of diagnosis and treatment of clinical cases. (T)

638. Diagnostic Tests in Communication Disorders. (SED 638). Cr. 3

Prereq: junior standing; CDS 508, 509, 514, 530, 532. Diagnostic tests and instruments used in the appraisal of speech-language disorders. Test protocol and administration procedure. (W)

646. Communication Disorders I. (SED 646). Cr. 4

Prereq: CDS 508, 509, 530, 532. Introduction to the clinical management of articulation and language disorders. (W)

648. Communication Disorders II. (SED 648). Cr. 4

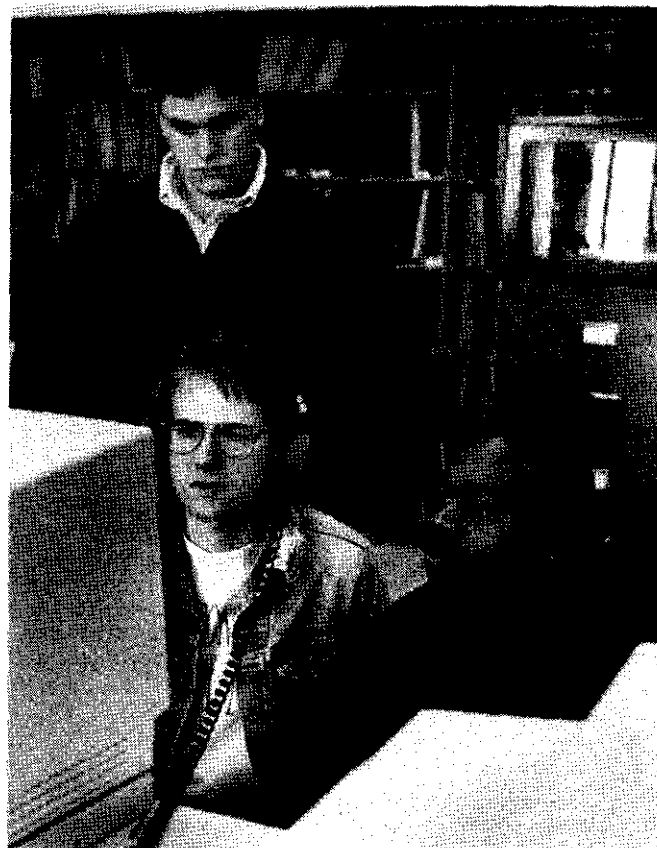
Prereq: CDS 508, 509, 530, 532. Introduction to the clinical management of cleft palate, voice, and stuttering disorders. (W)

662. Introduction to Voice Disorders and Cleft Palate. (SED 662). Cr. 3

Prereq: CDS 530. 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)

664. Language Pathology: Etiology and Diagnosis. (SED 664). Cr. 3

Prereq: CDS 530 and 532. Descriptions, etiology, methods of diagnosis of language disorders in children, including remediation. (F)



COMPUTER SCIENCE

Office: 431 State Hall; 577-2477

Chairperson: Narendra Goel

Assistant to the Chairperson: Debra Mazur

Administrative Assistant: Judith Lechvar

Professors

Michael Conrad, Narendra Goel, William Grosky, Alexis Manaster-Ramer, Vaclav Rajlich, Ishwar Sethi

Associate Professors

Anthony Chronopoulos, Robert Reynolds, Nai-Kuan Tsao, Seymour J. Wolfson

Assistant Professors

Farshad Fotouhi, Lucja Iwanska, Satyendra Rana

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*

**MASTER OF SCIENCE in Electronics and Computer Control Systems — Interdisciplinary*

**DOCTOR OF PHILOSOPHY with a major in computer science*

The Department of Computer Science teaches the principles of design and use 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 resources. For details, see page 396.

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. In some cases, changes in the availability of courses may require the substitution of other courses. However, if the time period for completion of requirements is extended too long, a revision of the requirements may be necessary. Computer science is a rapidly changing discipline. Students should check often with the department for the latest information concerning the program and requirements.

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 computer science course requirements existing at the time of his/her return, and/or retake some of the courses.

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 departmental 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 prerequisites for more advanced study in computer science. Most of the introductory courses require mathematics preparation equivalent to MAT 095 or MAT 180. (See course descriptions regarding the required prerequisites, page 409.) CSC 101 is required for students planning to continue in computer science. CSC 100 is for non-major students who desire to learn BASIC; students who intend to major or minor in computer science will not normally take this course. CSC 112 is primarily intended for engineering students. *Only courses at the 300 level or above may be used to complete the CSC elective requirement.*

CASPER: Students are encouraged to use Computer Assisted Studies Planning and Educational Resources (CASPER), available in the Department office, to get answers to questions about transfer credits, degree requirements, and prerequisite courses, and to plan their courses of study.

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 or for those who are interested in research.

Admission Requirements: See above.

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 25) and the *College Group Requirements* (see page 371). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see page 15-43 and 371-376, respectively.

COURSE REQUIREMENTS:

1. Mathematics 201, 202, 221, and 225.
2. Computer Science course work as follows:
 - (a) Computer Science 101, 110, 211, 220, 320, 410, 411, 442, 450, and 496.
 - (b) Four additional Computer Science courses of at least three credits each, numbered 300 or above, excluding CSC 490 and 495.
 - (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 101, 110, and 211.

Students declaring their major should consult an adviser for a written assessment of current requirements.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

— 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 honor 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 a departmental 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, stating 'Bachelor of Science with Honors'.

Admission Requirements: See page 393.

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 25) and the College Group Requirements (see page 371). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15–43 and 371–376, respectively.

COURSE REQUIREMENTS:

1. Mathematics 201, 202, 221 and 225.
2. Computer Science course work as follows:
 - (a) Computer Science 101, 110, 211, 220, 320, 410, 411, 442, 450, and 496.
 - (b) Four additional Computer Science courses of at least three credits each, numbered 300 or above, excluding CSC 490 and 495.
 - (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 101, 110, and 211.
3. One semester of an Honors Program 400–level seminar.
4. Computer Science 499, Honors Thesis; three or six credits.

The 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 Department).

The student will be assigned a faculty adviser to guide and direct the research. A grade is awarded for CSC 499 after approval by two faculty advisers.

5. An overall Wayne State cumulative honor point average of at least 3.3.
6. A minimum total of fifteen credits in honors–designated course work, including Computer Science 499, 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 degree is designed for those whose interests lie in the application of computers to non–scientific areas and is suitable for those who wish to take extensive additional work in other areas (for example, business, library science, psychology).

While providing a less rigorous background in computer science than the B.S. curriculum, the Bachelor of Arts program provides the minimum computer science and mathematics background for advanced courses and graduate admission. Graduate study in computer science usually requires more mathematics than is required for this degree; students planning to earn a graduate degree in this field are strongly urged to take as much additional mathematics and computer science as their programs allow, to provide an adequate background for graduate work. Although not required for a B.A. degree, please note that CSC 450 is required for admission to the graduate program.

Admission Requirements: See page 393.

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 25) and the College Group Requirements (see page 371). All course work must be completed in accordance with the regulations of the University and the College governing undergraduate scholarship and degrees; see pages 15–43 and 371–376, respectively.

COURSE REQUIREMENTS:

1. Mathematics 201, 202, and 221.
2. Computer Science course work as follows:
 - (a) Computer Science 101, 110, 211, 220, 320, 410, 411, 442, and 496.
 - (b) Three additional Computer Science courses of at least three credits each, numbered 300 or above, excluding CSC 490 and 495.
 - (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 101, 110, and 211.

Students declaring their major should consult an adviser for a written assessment of current requirements.

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. 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 393.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree with a major in information systems must complete at least 120 credits in course work, including satisfaction of the University General Education Requirements (see page 25) and the College Group Requirements (see page 371). All course work must be completed in accordance with the regulations of the University governing undergraduate scholarship and degrees; see pages 15–43 and 371–376, respectively.

COURSE REQUIREMENTS:

1. Mathematics 201, 202, and 221.

2. Computer Science 101, 110, 114, 211, 220, 410, 411, 442, 471, and 496.

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 101, 110, and 211.

Students declaring their major should consult an adviser for a written assessment of current requirements.

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. 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 or she must enroll the following term in Computer Science 495, 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 majoring in computer science. 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 201, 202, and 221.

2. Computer Science course work as follows:

(a) Computer Science 101, 110, 211, 220.

(b) One additional Computer Science course numbered 300 or above, excluding CSC 490 and 495, 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 101, 110, and 211.

Students declaring their minor should consult an adviser for a written assessment of current requirements.

Students may wish to modify the Minor Program to fit 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 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 h.p.a. at the 'cum laude' level (approximately 3.4) and not less than a 3.6 h.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 371) 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 and provides the minimal course requirements for admission to the graduate program in computer science at Wayne State University; students planning to enter the graduate program in computer science are strongly advised to take as many additional mathematics and computer science courses as their programs will allow, to provide an adequate background for graduate work.

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 an honor point average of at least 2.0 from an accredited institution.

2. Mathematics 201, 202, and 221.

3. Computer Science course work as follows:

(a) Computer Science 101, 110, 211, 220, 320, 410, 411, 442, and 496.

(b) Three additional Computer Science courses of at least three credits each, numbered 300 or above, excluding CSC 490 and 495.

(c) A minimum of twenty-three credits in computer science course work must be completed at Wayne State University with an h.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 450 is required for admission to the graduate program.

Facilities

The Department of Computer Science currently has nine laboratories; seven are primarily used for research by faculty and graduate students; one primarily for graduate teaching and another one primarily for undergraduate teaching. These labs are connected by a local area network (LAN) described below. Research labs include: artificial intelligence, biocomputing, computer graphics and animation, distributed computing, information management, software engineering, and vision and neural networks.

The Computer Science Department LAN is composed of a 10 Mbps Ethernet and an AppleTalk network connected by a Shiva FastPath bridge. The Ethernet is physically composed of 10BASE5, 10BASE2 and 10BASET segments connected through repeaters and linking a heterogeneous mixture of about eighty Unix workstations of various types, minicomputers and personal computers located in nine different labs. The AppleTalk network is implemented on the Wayne State University telephone wiring using PhoneNet and Farallon Star Controller and network. The LAN is connected by a pair of AC4140 routers to the central LAN in the Computing Services Center, which in turn is connected to NSFNet by a pair of T1 lines.

The Undergraduate Computing Laboratory is available to undergraduate students both for class projects and for instructor-led discussion classes. The laboratory is equipped with thirty-two Intel 386 workstations connected by a 10 Mbps Ethernet running Novell Netware. Central file storage is provided by a 50 Mhz 486 server. The Laboratory also has a video projector and screen to allow the instructor to display the exercise under discussion in real time as students follow along at their own workstations. The Laboratory also is equipped with a 386 laptop so that the projector may be taken to other classrooms and used to give on-line demonstrations.

The Computer Science Graduate Laboratory is available to graduate students for course work and for research projects. The lab is equipped with thirty SPARCstations, a MicroVAX 3600, and an AT&T 3b2 minicomputer. The SPARCstations are all equipped with 16 Mbytes of RAM and 207 Mbyte hard disks. User files reside on a pair of Sun file servers, a SPARCserver 1+ and a SPARCserver 10/41. Together, the two servers provide a little over 8 Gbytes of user file space. Lab software includes Mathematica, FrameMaker, Software Thru Pictures, Quintus Prolog, Lisp, C, and C++.

The University's Computing Services Center currently has three large IBM and Amdahl computers which support the Department's instructional needs. The University is a participant in the Merit and Telenet Computer Networks, which permit communication throughout the United States, Canada, and much of the rest of the world.

Students have access to the University's computing facilities through two main terminal rooms located on the Main Campus. The computing facilities are readily accessible through the public telephone networks.

Financial Aid

Also see Office of Scholarships and Financial Aid, page 21.

Cray Research Award: Award of \$2000 open to any computer science major with at least sophomore standing. Application deadline is November 17.

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 h.p.a.; awarded on basis of scholastic achievement and leadership.

MichCon—Leon Atchison Scholarship: Awarded 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 h.p.a., be a U.S. citizen, and demonstrate financial need. Application deadline is April 30; contact the Office of Scholarships and Financial Aid.

UNDERGRADUATE COURSES (CSC)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

100. (CL) Introduction to Computer Science. Cr. 3
Prereq: placement out of MAT 095. 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)

101. (CL) Fundamentals of Computer Science. Cr. 3
Prereq: placement out of MAT 095. For computer science majors only. Not open to students who have taken a previous computer programming course. History of computing; computer applications: word processors, spreadsheets; system design; introduction to programming; program translation; hardware components; Boolean algebra; artificial intelligence; computers and society. (T)

105. (CL) Introduction to C and Unix. Cr. 2
Prereq: MAT 180. Student computer account required. No credit for Computer Science students after CSC 102. Introduction to Unix, vi editor, and C Programming Language. Unix development tools and fundamentals of C language discussed. (T)

109. Computers and Mankind. Cr. 2-3
Offered for two credits to lecture students; offered for three credits to students electing lecture and laboratory. Not for computer science majors. Material fee as indicated in *Schedule of Classes*. Basic concepts of computing including organization capability, control of computers, their use in the management of information, and the study of complex processes through simulation; application in various areas of government, industry, education and the arts; future direction of computing; and the impact of computers on society. (T)

110. (CL) Problem Solving and Programming. Cr. 4
Prereq: placement out of MAT 180 and CSC 101. 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)

112. (CL) Introduction to FORTRAN. Cr. 3
Prereq: MAT 180 and CSC 100 or CSC 101. Problem solving; problem formulation, analysis and design of algorithms; data representation: use of flow charts and the FORTRAN programming language in implementing algorithms. (T)

114. (CL) Introduction to COBOL. Cr. 3
Prereq: CSC 100 or 101. 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)

- 200. Introduction to C++ Programming Language. Cr. 3**
Prereq: placement out of MAT 180 and CSC 100 or CSC 101. Elements of C++; classes and objects; arrays, pointers and references; operators and friends; inheritance; derived classes; polymorphism; virtual functions. (I)
- 211. (CL) Introduction to Data Structures and Abstraction. Cr. 4**
Prereq: CSC 110 and MAT 201. 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)
- 220. Data Structures and Algorithm Analysis. Cr. 4**
Prereq: CSC 211, MAT 221. Introduction to analysis of algorithms. Data structures for trees, sets, graphs; external sorting algorithms; hashing; files; advanced tree structures. (T)
- 310. Computer Organization. Cr. 3**
Prereq: CSC 211 or 505. Student computer account required. Data representation; assembly language programming: addressing, subroutine and parameters, input/output programming, interrupts and direct memory access; linkers and loaders. (T)
- 320. Programming Languages. Cr. 3**
Prereq: CSC 220. 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)
- 340. Human-Computer Communication. Cr. 3**
Prereq: CSC 220. Material fee as indicated in *Schedule of Classes*. Devices, user interfaces, menu systems, command languages, features of common interface toolkits, window programming, hypertext systems, fundamentals of computer graphics. (Y)
- 410. Computer Architecture. Cr. 4**
Prereq: CSC 211 or 505. 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)
- 411. Introduction to Software Engineering. Cr. 3**
Prereq: CSC 220. Material fee as indicated in *Schedule of Classes*. Software life cycle; software requirement analysis; software system design; software implementation and testing; software maintenance; team programming; ethics and programmers. (F,W)
- 430. Numerical and Symbolic Computing. Cr. 3**
Prereq: CSC 410. Introduction to the main concerns of mathematical and scientific programming; detection and control of errors in computer arithmetic; iterative approximation methods; overview of applications in the sciences and engineering. (Y)
- 442. Computer Operating Systems. Cr. 3**
Prereq: CSC 410. Offered for undergraduate major credit only. Operating system services; file systems; CPU scheduling; memory management; virtual memory; disk scheduling; deadlocks; concurrent processes. (T)
- 443. Parallel Programming. Cr. 3**
Prereq: CSC 442. Hardware and operating system models; process, shared memory, and simple parallel programs; basic parallel programming techniques; barriers, and race conditions; scheduling nested loops and data dependencies; discrete event, discrete time simulation; semaphores and events. (Y)
- 450. Introduction to Theoretical Computer Science. Cr. 3**
Prereq: CSC 220 or 505. Finite automata and regular expressions; context-free grammars; pushdown automata; Turing machines; hierarchy of formal languages and automata; computability and decidability. (T)
- 471. Information Systems Design. Cr. 3**
Prereq: CSC 220, 411. 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)
- 490. Directed Study. Cr. 1-4(Max. 8)**
Not for graduate credit. Individual study as agreed on by student and supervising faculty. Primarily for material not covered in regular courses. (T)
- 492. Special Topics In Computer Science. Cr. 1-3(Max. 6)**
Prereq: junior or senior standing. Topics to be announced in *Schedule of Classes*. (T)
- 495. 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)
- 496. (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)
- 499. Honors Thesis. Cr. 3 or 6(3 req.)**
Prereq: senior standing. Offered for 6 credits with consent of thesis adviser and undergraduate committee. Student computer account required. Independent study under supervision. (T)
- 505. 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. (I)
- 526. Computer Networks and Distributed Systems. Cr. 3**
Prereq: CSC 442. Introduction to the topic; data communications protocols; local area networks; distributed applications. (Y)
- 588. Introduction to Modeling and Simulation. (I E 518). Cr. 3**
Prereq: CSC 211 or 505 and MAT 221. Review of statistics; queuing analysis; categories of models; general purpose simulation languages; model validation; experimental design; output analysis. (I)
- 571. Design of Intelligent Information Systems. Cr. 3**
Prereq: CSC 471, 580. Object-oriented data modeling; intelligent office information systems; decision support systems; deductive databases; hypertext; specific applications in interfacing commercial databases and expert systems. (Y)
- 580. Expert Systems: Tools and Languages. Cr. 3**
Prereq: CSC 220 or 505. 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)
- 583. Computational Modeling of Complex Systems. Cr. 3**
Prereq: knowledge of a programming language; MAT 201. 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)

586. 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)

587. Computer Graphics I. Cr. 3

Prereq: CSC 220 or 505, MAT 225. 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)

588. 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)

611. Software Engineering. Cr. 3

Prereq: CSC 220 or 505. 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)

614. Knowledge-Based Software Engineering. Cr. 3

Prereq: CSC 411 or 611. 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)

617. Structure of Compilers I. Cr. 3

Prereq: CSC 450 and 320. Lexical analysis; syntactic analysis; error detection; translation into intermediate code; storage allocation; optimization techniques. (I)

624. Program Correctness and Problem Specification. Cr. 3

Prereq: CSC 520. Problem and data specification; predicate and proposition logic, axiomatic theory and its model; many sorted algebras, data types and data abstraction; partial and total correctness (Floyd, Hoare, Dijkstra's proving schemes); structured induction correctness of concurrent program; problem solving and programming methodology. (I)

626. Distributed Systems I. Cr. 3

Prereq: CSC 442. Introduction to distributed systems; distributed systems architecture and design goals; interprocess communication and synchronization; concurrent programming with threads; client-server programming (with Berkeley sockets); distributed applications development using remote procedure calls. (Y)

628. Advanced Operating Systems. (ECE 564). Cr. 4

Prereq: CSC 442 or graduate standing. Design issues in advanced operating systems; distributed real-time operating systems; discussion of case studies such as UNIX, MACH, and AMOEBA. (I)

650. 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)

658. Design and Analysis of Algorithms. Cr. 3

Prereq: CSC 220. 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. (I)

662. Matrix Computation I. (ECE 502). Cr. 4

Prereq: CSC 211, 206, or equiv.; and MAT 225 for computer science students, CHE 304 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)

671. Database Management Systems I. Cr. 3

Prereq: CSC 220 or 505. Data models; entity-relationship, relational, object-oriented; query languages; relational database design; physical data organization; query processing. (Y)

680. Artificial Intelligence I. Cr. 3

Prereq: CSC 580 or 320. 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)

683. Computational Modeling Laboratory. Cr. 3

CSC 583 or consent of instructor. Practical experience in the implementation and documentation of computer models. (I)

686. 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. (Y)

687. Computer Graphics II. Cr. 3

Prereq: CSC 587. Material fee as indicated in *Schedule of Classes*. Representing curves and surfaces; solid modeling; fractal geometry; camera models; illumination models; ray tracing; radiosity methods; transparency; texture; graphics packages. (Y)

688. Theory of Adaptable Systems. Cr. 3

Prereq: senior or graduate standing. Formation 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)

691. 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: 130 Administrative Services Building II; 577-2506

Chairperson: Robert B. Furlong

Professors

Robert B. Furlong, Willard H. Parson (Emeritus), Luciano B. Ronca

Associate Professor

Jeffrey L. Howard

Adjunct Associate Professor

Robert E. Mosher

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 Arts is designed primarily for students who intend to become secondary school earth science teachers, while 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 371) and the University General Education Requirements (see page 25), 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 15-43 and 371-376, respectively.

Major Requirements: Students must complete at least thirty-four credits in geology exclusive of the introductory courses (100-level) and must include the following:

1. Twenty of the thirty-four credits from advanced courses (numbered 300 and above).
2. Geology 213, 316, 330, 340, 500, and 530.
3. Six credits in field mapping and field techniques, to be fulfilled by completing six credits in a summer field course, if such a course is available. 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 calculus (Mathematics 201 and 202 or equivalent), a year of chemistry (or the equivalent of Chemistry 108) and a year of physics. The courses in chemistry should include Chemistry 105 for the student without high school chemistry, followed by Chemistry 108. For the student with some knowledge of chemistry, the Chemistry 107 and 108 sequence is satisfactory. It is recommended that the courses in physics include Physics 217 and 218 (both of these courses require introductory calculus). For those students who will not be able to complete introductory calculus prior to taking physics, Physics 213 and 214 will be acceptable.

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

This program is recommended as a background for secondary school earth science teacher preparation.

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 371) and the University General Education Requirements (see page 25), 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 15-43 and 371-376, respectively.

Major Requirements: Students must complete twenty-six credits in geology beyond Geology 102. These must include Geology 213, 316, 330, 340, 530, 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 180 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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 honor 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 101 and 102. Geology 100, 105, and 137 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 300-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 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

100. 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)

101. (PS) Geology: The Science of the Earth. Cr. 4

Meets General Education Laboratory Requirement. Material fee as indicated in *Schedule of Classes*. 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. (T)

102. Interpreting the Earth. Cr. 4

Prereq: GEL 101 with a grade of C or better. 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)

105. 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)

137. Meteorology: The Study of Weather. Cr. 3

Atmospheric phenomena, weather theory, weather maps, forecasting. Instruments and records. (I)

213. Mineralogy. Cr. 4

Prereq: one course in high school or college chemistry. Material fee as indicated in *Schedule of Classes*. 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. (F)

316. Petrology. Cr. 4

Prereq: GEL 102 and 213. Material fee as indicated in *Schedule of Classes*. Origin, occurrence, alterations, classification, methods for determination of important rocks based on megascopic and microscopic characteristics. (W)

330. Structural Geology. Cr. 4

Prereq: GEL 102 and high school trigonometry or equiv. Material fee as indicated in *Schedule of Classes*. Description and interpretation of features which result from the origin or deformation of rock masses. (F)

340. Principles of Sedimentology and Stratigraphy. Cr. 4

Prereq: GEL 102, 213 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Processes which produce sediments, environments of deposition, changes after deposition. Relationship between tectonics and sedimentation. Origin of sedimentary strata. Facies and correlations. (W)

390. Directed Study. Cr. 2-6(Max. 10)

Prereq: consent of instructor, adviser, and chairperson. Primarily for honors students. (T)

486. Research. Cr. 3-4(Max. 8)

Prereq: consent of instructor, adviser, and chairperson. Primarily for honors students. Independent laboratory and field work. (T)

500. Geological Site Assessment. Cr. 4

Prereq: GEL 101; 100 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)

512. Environmental Geochemistry. Cr. 4

Prereq: GEL 316, 340 and two semesters of college chemistry or consent of instructor. Material fee as indicated in *Schedule of Classes*. Introduction to the chemistry of the earth materials and methods of geochemical analysis. Common chemical reactions and processes related to environmental problems. (W)

515. Soils and Soil Pollution. Cr. 4

Prereq: GEL 101, CHM 107, CHM 108. Physical, chemical and mineralogical properties and classification of soils. Behavior of pollutants in soils and methods for reclamation. (Y)

530. Statistical and Computer Methods in Environmental Geology. Cr. 4

Prereq: consent of instructor. Student computer account required. Principles of statistics, probability and computer programming; application to the geological sciences; sampling procedures, population, confidence limits, regressions, correlations and time series, practical applications to geological problems. (B)

545. Hydrogeology. Cr. 3

Prereq: GEL 101, 213, 316, 330; 340 recommended. Characteristics and behavior of groundwater in earth materials. Groundwater geology of southeastern Michigan. Water well technology and methods for exploration. (Y)

593. (WI) Writing Intensive Course In Geology. Cr. 0

Prereq: junior standing; satisfactory completion of English Proficiency Examination; consent of instructor; coreq: GEL 316 or 330 or 340 or 345. 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)

HONORS PROGRAM

Office: 2311 Faculty/Administration Building; 577-3030

Director: Stanley Shapiro

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. Instruction in honors courses is highly individualized with small classes exclusively taught by full-time regular faculty members.

Eligibility: To enroll in honors courses, students must have at least a 3.0 cumulative honor point average at Wayne State University. Entering freshmen should have a high school honor point average of at least 3.5, and students transferring from a community college a 3.3 h.p.a. 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 courses, honors-option courses, courses with an honors component, and honors directed studies. Students will normally earn many of their honors-designated credits in courses that also fulfill University General Education Requirements (see page 25).

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 fifteen credits in honors-designated course work, including (2) a senior essay or thesis done in the student's major department, and (3) at least one 420-level seminar offered through the Honors Program (HON 420-429). An h.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 fifteen honors credits.

Students pursuing a degree with *University Honors* will follow a course of study consisting of (1) at least thirty credits in honors-designated course work, including (2) a senior thesis or essay, and (3) one 420-level seminar offered by the Honors Program (HON 420-429). An h.p.a. of 3.3 or higher is required for graduation.

A student who satisfactorily completes a Departmental Honors curriculum or the University Honors Program will receive the appropriate Honors designation on both the diploma and the transcript. The 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), and the opportunity to participate in honors student groups.

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*. Departmental honors thesis or essay courses are listed only under the respective departmental headings in this bulletin and the *Schedule of Classes*. For a description of the following courses, see the appropriate Departmental sections of this bulletin.

ANT 311	Detroit Minorities: Arabs, Hispanics, and Blacks
AH 112	(VP) Renaissance through Modern Art Survey
BIO 103	(LS) Environmental Biology
BIO 105	(LS) An Introduction to Life
BIO 151	(LS) Basic Biology I
BIO 152	Basic Biology II
CHM 131	(PS) Chemical Principles and Analysis I
CHM 132	Chemical Principles and Analysis II
CHM 231	Organic Structure and Reactions
CHM 232	Organic Synthesis and Spectroscopy
CLA 200	Greek Mythology
CLA 210	(PL) Honors Classical Origins of Western Thought
ECO 201	(SS) Principles of Microeconomics
ECO 202	(SS) Principles of Macroeconomics
ENG 105	(BC) Freshman Honors: English I
ENG 205	(IC) Freshman Honors: English II
ENG 491	Honors Seminar
FRE 270	(PL) Anguish and Commitment: European Existentialist Literature
GER 270	(PL) Anguish and Commitment: European Existentialist Literature
HIS 130	(HS) Europe and the World: 1500-1945
HIS 140	(HS) The World Since 1945
HIS 595	Honors Seminar
HUM 220	(PL) Sophomore Honors Colloquium in Humanities
HUM 222	(PL) Constructs of Human Experience: Histories, Novels, Philosophies
ITA 270	(PL) Anguish and Commitment: European Existentialist Literature
MAT 201	Calculus I
MAT 202	Calculus II
MAT 203	Calculus III
MAT 235	Elementary Differential Equations
NFS 221	Human Nutrition
PHI 102	(PL) Honors Introduction to Philosophical Systems
PHI 186	Honors Introductory Symbolic Logic
PHI 232	(PL) Introduction to Ethics
PHI 355	(PL) Metaphysics
PHI 360	Space, Time and the Philosophy of Physics
P S 101	(AI) American Government
P S 281	World Politics
PSY 101	(LS) Introductory Psychology
PSY 208	Introduction to Drugs, Behavior and Society
PSY 260	Psychology of Social Behavior
PSY 331	Abnormal Psychology
RUS 270	(PL) Anguish and Commitment: European Existentialist Literature
SOC 587	Violence in the Family
SPA 270	(PL) Anguish and Commitment: European Existentialist Literature
SPB 101	(OC) Oral Communication: Basic Speech
UGE 100	(GE) The University and Its Libraries

Honors-Option Coursework

The Honors Option allows a student in any course taught by a full-time regular faculty member to elect honors level work, provided the instructor agrees to furnish commensurate extra instruction. If a grade of 'B' or above is earned in the course, 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 first week of classes. The completed form must then be returned to the Honors Program Office at the end of the semester.

UNDERGRADUATE COURSES (HON)

The following courses, numbered 090-699, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

210. (CLA 210) (PL) Honors Classical Origins of Western Thought. Cr. 3

Open only to Honors Program students. 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. (Y)

420. (PL) Seminar In Philosophy and Letters. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

421. (SS) Seminar In Social Sciences. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

422. (LS) Seminar In Life Science. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

423. (PS) Seminar in Physical Science. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

424. (VP) Seminar In Visual and Performing Arts. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. Analysis of ways the visual or performing arts may be appreciated, evaluated, and criticized. Honors variant of an approved VP course in General Education Program. (Y)

425. (HS) Seminar In Historical Studies. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. Studies of periods of history in which there have been major transitions or changes. Honors variant of an approved HS course in General Education Program. (Y)

426. (FC) Seminar In Foreign Culture. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.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. (Y)

427. (AI) Seminar in American Society and Institutions. Cr. 3 (Max. 9)

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. Study of American society, its institutions and social change. Honors variant of an approved AI course in General Education Program. (Y)

428. General Honors Seminar. Cr. 3

Prereq: junior or senior standing; minimum 3.0 cumulative h.p.a. In-depth exploration of important concepts and approaches in liberal studies. Topics to be announced in *Schedule of Classes*. (Y)

490. Directed Study. Cr. 2-4(Max. 16)

Prereq: written consent of director.

498. University Honors Thesis. Cr. 3-6

Prereq: junior or senior standing. 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

Director: Martha Ratliff

Participating Faculty

Ellen Barton, *Associate Professor, English*

Lynn Bliss, *Professor, Communication Disorders and Sciences*

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*

John Mullennix, *Assistant Professor, Psychology*

Ljiljana Progovac, *Assistant Professor, English*

Martha Ratliff, *Associate Professor, English*

Aleya Rouchdy, *Professor, Near Eastern and Asian Studies*

Eli Saltz, *Professor, Psychology*

Patricia Siple, *Associate Professor, Psychology*

Rebecca Treiman, *Professor, Psychology*

Frances Trix, *Assistant Professor, Anthropology*

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. The program offers courses from the major areas of the field, including (a) the structural aspects of sentences (syntax), words (morphology), and speech sounds (phonology), (b) the historical development of language, (c) the semantic and pragmatic basis of language interpretation in sentences and discourses, (d) language variation and use in social contexts (sociolinguistics), (e) the processing and acquisition of language (psycholinguistics), and (f) the application of language to other areas of human knowledge.

Training in linguistics prepares students for advanced work in linguistic research, as well as for employment in teaching English and foreign languages; computer programming (especially in natural language processing); civil service and diplomatic work; broadcasting, mass media and public relations; and generally any profession requiring the precise use or the 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, consult 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 25), the College Group Requirements (see page 371), 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 15–43 and 371–376, respectively.

The bachelor of arts program consists of a core of linguistics courses which all majors must complete. In addition to the core courses, the student must pursue one of the following concentrations: a) Linguistics and a Language; b) Formal Linguistics: Syntax and Semantics; c) Psycholinguistics; d) Sociolinguistics; e) Individualized Program.

A student must complete a minimum of twenty-eight credits in core and concentration courses to satisfy the major requirements.

CORE COURSES:

	<i>credits</i>
LIN 529—Phonology	3
LIN 530—Theory of Syntax	3
LIN 570—Introduction to Linguistic Theory	3

CONCENTRATIONS:

A. Linguistics and a Language

The student must complete fifteen credits in advanced language skills or in the linguistics of the chosen language beyond the basic courses. In addition, the student must elect an appropriate course in historical linguistics. The fifteen credits in advanced language skills should be planned in consultation with the adviser.

B. Formal Linguistics: Syntax and Semantics

Required Courses:

	<i>credits</i>
LIN 185—Introductory Symbolic Logic	3
LIN 557—Philosophy of Language	4
LIN 572—Topics in Language: Morphology	3
LIN 572—Topics in Language: Semantics	3

Elective courses to complete 28-credit major requirements:

LIN 505—Advanced Symbolic Logic	4
LIN 520—Modal Logic	4
LIN 563—Twentieth Century Analytic Philosophy I	4
LIN 671—Psycholinguistics	3
PHI 535—Logical Systems I	4
PHI 539—Logical Systems II	4
PHI 564—Twentieth Century Analytic Philosophy II	4

C. Psycholinguistics

Required Courses:

LIN 308—Cognitive Psychology: Fundamental Processes	3
LIN 671—Psycholinguistics	3

Elective courses to complete 28-credit major requirements:

LIN 508—Phonetics	3
LIN 620—Development of Memory	3
PSY 301—Statistical Methods in Psychology	4
PSY 490—Directed Study and Research (credit max. 9)	2-4
PSY 695—Advanced Special Topics (elect with consent of adviser)	3

D. Sociolinguistics

Required Courses:

LIN 531 or LIN 576	
—Language and Culture	3
—American Dialects	3
LIN 532 or LIN 577	
—Language and Society	3
—Sociolinguistics	3

Elective courses to complete 28-credit major requirements:

LIN 576—American Dialects	3
LIN 577—Sociolinguistics	3
LIN 671—Psycholinguistics	3
SPC 504—Rhetoric of Racism	3
SOC 410—(SS) Social Psychology	3
SOC 628—Social Statistics	4
ANT 520—Social Anthropology	3
ENG 560—Studies in Folklore	3

E. Individualized Program

A student may design concentrations to meet an individualized program. Plans of work for special concentrations must be approved by the Committee for the Linguistics Program before the student has completed a maximum of twelve credits in the major.

Minor in Linguistics

The minor in linguistics requires at least six courses for a total of eighteen credits. These courses must include:

	<i>credits</i>
LIN 529—Phonology	3
LIN 530—Theory of Syntax	3
LIN 570—Introduction to Linguistic Theory	3

The other three courses must be either (a) all from one of the four areas of concentration (A, B, C, or D, above); or (b) all LIN courses from departments in the College of Science or the College of Liberal Arts.

UNDERGRADUATE COURSES (LIN)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

170. (ENG 170) 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. (Y)

185. (PHI 185) Introductory Symbolic Logic. Cr. 3

The logic of propositions; the general logic of predicates and relations. (T)

186. (PHI 186) Honors Symbolic Logic. Cr. 3

Open only to Honors students. See LIN 185. (T)

272. (ENG 272) (PL) Basic Concepts in Linguistics. Cr. 3

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 and animal communication, and language in social interaction. (T)

273. (ENG 273) Languages of the World. Cr. 3

Prereq: ENG 102. 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)

308. (PSY 308) Cognitive Psychology: Fundamental Processes. Cr. 3

Prereq: PSY 101 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)

505. (PHI 505) 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 metatheory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. (Y)

508. (CDS 508) Phonetics. (SED 532). Cr. 3

Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiological approaches. (F)

520. (PHI 520) Modal Logic. Cr. 4

Prereq: PHI 185 or PHI 186 or consent of instructor. The logic of necessity, possibility, and other modal notions as they occur in epistemic and deontic contexts. (B)

521. (ARB 521) Arabic Sociolinguistics. 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)

523. (ARB 523) Structure of Arabic. Cr. 3

Prereq: ARB 202 or consent of instructor. No knowledge of Arabic required. Survey of historical constitution and theoretical structure of Arabic. (Y)

529. (ENG 571) Phonology. Cr. 3

Prereq: LIN 570. 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)

530. (ENG 574) Theory of Syntax. Cr. 3

Prereq: LIN 570. 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)

531. (ANT 531) Language and Culture. Cr. 3

Prereq: ANT 210 or ANT 520 or S S 191 or SOC 201 or consent of instructor. An introduction to the structure of language and to the ways that humans use language in the construction of human worlds. Diversity of the world's languages and universal properties of language will be discussed. Theories of language change will be introduced. (F)

532. (ANT 532) Language and Society. Cr. 3

An introduction to the functions of language in many kinds of human groups. Languages used to express social roles and statuses, caste, class, and ethnic diversity. Such aspects of language variability as "street" or vernacular languages, literary standard languages, pidgin and creole languages, and multilingualism. (W)

536. (CDS 532) Normal Language Acquisition and Usage. (SED 536). Cr. 3

Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. (Y)

557. (PHI 557) Philosophy of Language. Cr. 4

Prereq: PHI 185 or PHI 186 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)

563. (PHI 563) Twentieth Century Analytic Philosophy I. Cr. 4

Prereq: PHI 185 or PHI 186 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. (B)

570. (ENG 570) 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)

572. (ENG 572) 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)

573. (ENG 573) Traditional Grammar. Cr. 3

Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. (T)

575. (ENG 575) Theory of English as a Second Language. Cr. 3

Detailed examination of theories of language and language acquisition relevant to the non-native speaker of English. Review of research in language acquisition and language learning. (I)

576. (ENG 576) American Dialects. Cr. 3

Survey of chief social and geographic dialects of American English and introduction to theory of language variation. (I)

577. (ENG 577) 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)

593. (W) Writing Intensive Course in Linguistics. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: LIN 529 or 530 or 572 or 577. 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)

620. (PSY 620) Development of Memory. Cr. 3

Prereq: PSY 309 and PSY 240 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)

671. (PSY 671) 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 and memory, discussed within the framework of the behaviorist, generative linguistic and information processing approaches to language. (Y)

MATHEMATICS

Office: 1150 Faculty/Administration Building; 577-2479

Chairperson: Pao-Liu Chow

Associate Chairperson: Lowell J. Hansen

Academic Services Officer: Mary Klamo

Professors

Gregory F. Bachelis, Robert D. Berman, Lawrence J. Brenton, Leon Brown, Paul A. Catlin, Pao-Liu Chow, William S. Cohn, Daniel S. Drucker, Daniel E. Frohardt, David H. Gluck, David Handel, Chong-Shi Houh, John M. Irwin, Rafail Z. Khasminskii, Alexander Korostelev, Leonid Makar-Limanov, Charles A. McGibbon, Jose L. Menaldi, Boris Mordukhovich, Togo Nishiura, Frank Okoh, Jingyal Pak, Choon-Jai Rhee, Yury Rodin, Claude L. Schochet, Bertram M. Schreiber, Tze-Chien Sun, Martin T. Wechsler

Associate Professors

John C. Breckenridge, Robert R. Bruner, Lowell J. Hansen, David W. Jonah, Steven M. Kahn, Tachen Liang, Peter Malcolmson, Stephen A. Williams, Gang Yin

Assistant Professors

Su-Yun Chen Huang, Lisa Langsetmo, Kay Magaard

Adjunct Associate Professors

David E. Bindschadler, Lance K. Heilbrun

Professors Emeritus

Bertram J. Eisenstadt, D. Clarence Morrow

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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Mathematics Placement Examination

All students, including transfer students, who plan to take MAT 095, 105, 111, 150, 180, 201 or 516 as their first mathematics course at Wayne State, must take the Mathematics Placement Examination. Results of the examination are used in determining into which course the student is placed. Students intending to take MAT 093 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 201. The exam has three 'cutoff scores' corresponding to the three levels of placement indicated below. Passing at the first level allows entry into MAT 095 or 105. Passing at the second level allows entry into MAT 111, 150, 180 or 516. Passing at the third level allows entry into MAT 201.

Mathematics 095 and 105: Students qualify for entry into MAT 095 or MAT 105 by having completed one of the following within the previous two semesters: a) satisfactory score on the Mathematics Placement Examination, or b) MAT 093 with the recommendation of the MAT 093 instructor to enter MAT 095 or MAT 105. For placement at this level, students should have command of arithmetic and beginning algebra, corresponding approximately to one year of high school algebra.

Mathematics 111, 150, 180 and 516: Students qualify for entry into MAT 111, 150, 180 or 516 by having completed one of the following within the previous two semesters: a) satisfactory score on the Mathematics Placement Examination, or b) MAT 105, or c) MAT 095 with the recommendation of the MAT 095 instructor to enter MAT 111, 150 or MAT 180. For placement at this level, students should have command of algebra and basic geometry, corresponding approximately to three years of college-preparatory mathematics.

Mathematics 201: Students must qualify for entry into MAT 201 by having completed one of the following within the previous two semesters: a) MAT 180; 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. It is important for the student to review thoroughly before taking the Examination. A student may take the Examination only once during a testing period.

Time Limitation: Scores on the Mathematics Placement Examination will be honored only for two semesters: the semester immediately following the testing period and its subsequent semester.

Studying for the Exam: Students should review thoroughly before taking the exam and should obtain the 'Study Guide' available from the Department's main 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, all of his or her course elections must be signed by a departmental adviser.

Degree Requirements

Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of the College Group Requirements (see page 371) and the University General Education Requirements (see page 25), 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 15–43 and 371–376, 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 560. (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 560.)
2. Physics 217 and 218.
3. Computer Science 110 (former 102).
4. One course elected from the following: BIO 151, CHM 105, 107, 131, GEL 101, NFS 221, and PSY 101.

The Department recommends that the Group Requirement in Foreign Language be satisfied by the election of French, German, or Russian.

Honor Point Average: For majors, the cumulative honor point average in mathematics (MAT) courses must be at least 2.0.

Curricular Alternatives

Combined Curriculum for Secondary Teaching: Under the Combined Curriculum (see Teacher Preparation Curricula, page 378), it is possible to earn a bachelor's degree in mathematics concurrent with a secondary teaching certificate. Students in this curriculum may satisfy the mathematics part of their degree requirements by any of the degree options specified above. Though Option C is specifically designed for such purposes, students are not restricted to Option C. However, no matter what option they choose, all students in this program should take MAT 286 and MAT 614.

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 235 and have a choice of probability courses MAT 570 or MAT 221. Additionally, students can take certain courses that satisfy both mathematics and computer science requirements simultaneously. Specifically, MAT 510 can be used as a computer science elective and one of CSC 568, 586, 587, 650, 658, 662, or 689 (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 331, 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 201, 202, 203, 225, and 235).
2. Advanced Calculus (MAT 507).
3. Algebra I (MAT 542).
4. Analysis I (MAT 560).
5. Probability (MAT 570).

6. Algebra II or Analysis II (MAT 543 or 561).

7. One course elected from the following: MAT 523, 543, 552, 553, 561, and 582.

8. One additional course elected from (a) mathematics courses numbered above 500, excluding service courses and MAT 615, or from (b) CSC 568, 650, 658, 662, or 689 (depending on the topic). Students in the Combined Curriculum for Secondary Teaching should take MAT 614.

Option B

This option is for students interested in a broad range of topics.

1. The Basic Sequence (MAT 201, 202, 203, 225, and 235).
2. Mathematics 507.
3. Mathematics 542.
4. Mathematics 570.
5. (MAT 560 is required for the B. S. degree. It is not required for the B. A. degree.)
6. Three additional mathematics courses numbered above 500, excluding service courses and MAT 615, or two such courses and one elected from the following: CSC 568, 650, 658, 662, and 689 (depending on the topic). Students in the combined Curriculum for Secondary Teaching should elect MAT 614.

Option C — Concentration in Secondary Teaching

This option is recommended for students in the Combined Curriculum for Secondary Teaching.

1. The Basic Sequence (MAT 201, 202, 203, 225 and 235).
2. Mathematics 221 and 286.
3. Mathematics 507.
4. Mathematics 614.
5. Mathematics 540 or 552.
6. Mathematics 542.
7. (MAT 560 is required for the B. S. degree. It is not required for the B. A. degree.)
8. One additional mathematics course numbered above 500, excluding service courses, or one computer science course numbered above 510.

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. Mathematics 201–203, and 225.
2. Mathematics 286 or 186–187.
3. Mathematics 507.
4. Mathematics 510.
5. Mathematics 542.
6. Mathematics 570 or 221.
7. (MAT 560 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 500, excluding service courses and MAT 615, or one such course and one course elected from: CSC 568, 586, 587, 650, 658, 662, and 689 (depending on the topic). Students in the Combined Curriculum for Secondary Teaching should elect MAT 614.

NOTE: The Computer Science Department accepts MAT 510 as a computer science elective numbered above 210 but not above 510.

Option E — Concentration in Actuarial Science

This Option is for students interested in an actuarial career.

1. Mathematics 201–203, and 225.
2. Mathematics 507
3. Mathematics 510.
4. Mathematics 542.
5. Mathematics 570.
6. Mathematics 577.
7. Mathematics 582.
8. (MAT 560 is required for the B. S. degree. It is not required for the B. A. degree.)
9. MAT 235 or one additional mathematics course numbered above 500, excluding service courses and MAT 615, or one computer science course numbered above 510. Students in the Combined Curriculum for Secondary Teaching should elect MAT 614.

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 honor 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 400–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 401).
4. Completion of a Senior Task, for which a student registers under Mathematics 490, Directed Study, Honors Program. These MAT 490 honors credits count toward the fifteen–credit requirement.

Honors Sections in the Basic Sequence: Honors sections in Mathematics 201 and 203 are taught in the fall semester and in Mathematics 202 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 180, 201, and 202, 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 and who would enjoy working in groups. Students who place into the level below MAT 180 are encouraged to take MAT 105 and 106 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 201, 202, 203, 225, and either (a) three mathematics courses numbered above 500, excluding service courses and MAT 615, or (b) MAT 215 or 235 or 221 or 286 and two mathematics courses numbered above 500, excluding service courses and MAT 615.

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.

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 510
Algebra I	MAT 542
Operations Research	MAT 577
Probability Theory	MAT 570
Statistical Methods, Applied Time Series and Design of Experiments	MAT 582, 583

Engineering and Physical Applications: The Mathematics Department has several sequences in applied mathematics which 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 510
Applied Analysis	MAT 522, 523
Probability Theory and Random Processes	MAT 570, 770, 771
Graph Theory and Combinatorial Mathematics	MAT 640, 641
Differential Geometry	MAT 553

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 which begin with Mathematics 560, and 542, respectively, and MAT 660. These courses will help them to understand and work with abstract concepts in advanced courses.

Statistics

Beginning students are referred to Statistics (STA) 102. Those whose work demands a good foundation in mathematical statistics are referred to Mathematics 570 and 582. Mathematics 583 is useful for students interested in applied statistics.

UNDERGRADUATE COURSES (MAT)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

NOTE: A minimum grade of 'C' is required in every prerequisite course.

Courses Open Only to Undergraduates

091. (MC) Basic Concepts in Mathematics. Cr. 3

Prereq: ENG 102; 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 108.) (T)

093. Beginning Algebra. Cr. 3

Offered for S 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)

095. Intermediate Algebra. Cr. 3

Prereq: one of the following within previous two semesters; satisfactory score on placement exam or MAT 093 with recommendation of instructor to enter 095. Offered for S 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)

105. Algebra with Trigonometry for Engineers and Scientists. Cr. 5

Prereq: one of following within previous two semesters: satisfactory score on placement exam or MAT 093 with recommendation of instructor to enter 105. Only two credits apply toward degree. Algebra: solving equations and inequalities, lines, the conic sections, introduction to functions and graphing, logarithms. Geometry and trigonometry: basic concepts, solving right triangles, Law of Cosines, Law of Sines. Elements of pre-Calculus and Calculus. (T)

106. Problem Solving for Algebra with Trigonometry. Cr. 2

Coreq: MAT 105. Offered for S and U grades only. Only one credit applies toward degree. Workshop for MAT 105. Students work in groups on challenging problems in algebra, geometry and trigonometry. Preview of Calculus; techniques of problem solving. (T)

180. Elementary Functions. Cr. 4

Prereq: one of following within previous two semesters: satisfactory score on placement exam or MAT 105, or 095 with recommendation of instructor to enter 180. Only two degree credits after MAT 150. The properties and graphs of polynomials, rational functions, trigonometric functions, exponentials and logarithms. (T)

186. Discrete Mathematics for Computer Science I. Cr. 4

Prereq: MAT 180. Logic, sets, induction, relations, functions, sequences, matrices, combinatorics, computer science, applications. (T)

187. Discrete Mathematics for Computer Science II. Cr. 4

Prereq: MAT 186 or consent of instructor. Analysis of algorithms, recurrence relations, combinatorics, graphs, Boolean algebra, application to computer science. (T)

190. Precalculus Workshop. Cr. 2

Coreq: designated section of MAT 180. 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)

201. Calculus I. Cr. 4

Prereq: satisfactory score on qualifying exam or MAT 180 within previous two semesters. No credit after MAT 151. 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)

202. Calculus II. Cr. 4

Prereq: MAT 201. Vectors; partial derivatives; differentiation of vector functions; techniques and applications of integration. (T)

203. Calculus III. Cr. 4

Prereq: MAT 202. Multiple integrals; sequences and infinite series; Taylor Series; vector analysis. (T)

211. Calculus Workshop I. Cr. 2

Coreq: designated sections of MAT 201. 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 201. Computational and theoretical mathematics, taught through discovery rather than by lecture. (T)

212. Calculus Workshop II. Cr. 2

Coreq: designated sections of MAT 202. 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 202. Computational and theoretical mathematics, taught through discovery rather than by lecture. (W)

215. Differential Equations and Matrix Algebra. Cr. 4

Prereq: MAT 203 or equiv. Differential equations and applications; basic operations of matrices from linear algebra. (T)

221. (MAT 615) Elementary Probability and Statistics. Cr. 4

Prereq: MAT 201. No credit after MAT 570. 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)

225. Elementary Linear Algebra. Cr. 3

Prereq: MAT 202. Topics include: systems of linear equations, matrices, vector spaces, inner products, linear transformations and eigenvalues. Applications presented. (T)

235. Elementary Differential Equations. Cr. 3

Prereq: MAT 203 or equiv. Topics include: first order equations, higher order linear equations, Laplace transforms, linear systems. Applications presented throughout the course. (T)

286. (MAT 613) Discrete Mathematics. Cr. 4

Prereq: MAT 202. No credit after MAT 187. 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)

331. Actuarial Mathematics. Cr. 1

Prereq: MAT 203 and 225. Problem solving course based on material covered on first Actuarial Exam. Subjects include: differential and integral calculus, multivariate calculus, elementary linear algebra. (Y)

401. Introduction to Abstract Mathematics and Proof Writing. Cr. 3

Prereq: MAT 225 or 286 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)

490. Directed Study: Honors Program. Cr. 1–4(Max. 8)

Prereq: admission to Honors Program by Mathematics Honors Committee. (I)

Courses Open to Undergraduates and Graduates

507. Advanced Calculus. Cr. 4

Prereq: MAT 203, and 225 or 235. The Real Numbers; limits; continuity; sequences and series of functions; uniform convergence; power series; Fourier series; basic properties and topology of Euclidean n -space; transformations, the Jacobian; implicit and inverse function theorems; improper integrals and functions defined by improper integrals; Lagrange multipliers. (T)

510. Numerical Methods. Cr. 3

Prereq: MAT 203, 225 and CSC 102 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)

522. Partial Differential Equations and Boundary Value Problems. Cr. 4

Prereq: MAT 507. Boundary value problems of mathematical physics; Sturm–Liouville problems; eigenvalues and eigenfunctions; Green's functions; variational principles; the Rayleigh–Ritz method. (B)

523. Complex Variables and Applications. Cr. 4

Prereq: MAT 507. No credit after MAT 660. 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)

528. Methods of Differential Equations. Cr. 3

Prereq: MAT 235. Linear n th order differential equations; linear systems of differential equations (constant and periodic coefficients); oscillation and comparison theorems for second order differential equations; boundary value problems; stability theory (Liapunov's direct method and frequency domain stability criteria); asymptotic solutions; autonomous non-linear systems; classification of singularities. (B)

535. (PHI 535) Logical Systems I. Cr. 4

Prereq: PHI 185 or PHI 186 or MAT 560 or MAT 542 or consent of instructor. 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)

539. (PHI 539) Logical Systems II. Cr. 4

Prereq: PHI 535 or MAT 535 or consent of instructor. Detailed proofs of Godel's incompleteness results, Tarski's Theorem, and Church's Theorem; formal axiomatic treatment of set theory; applications. (B)

540. Elementary Theory of Numbers. Cr. 3

Prereq: MAT 203 and 225. Unique factorization theorem; order of magnitude of arithmetic functions; congruences, quadratic residues, law of reciprocity; continued fractions; elements of geometry of numbers; second pearl of number theory. (Y)

541. Applied Linear Algebra. Cr. 4

Prereq: MAT 203 and 225, 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)

542. Algebra I. Cr. 4

Prereq: MAT 203 and 225. 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)

543. Algebra II. Cr. 4

Prereq: MAT 542. Group theory continued: Sylow Theorems, finite abelian groups. Ring Theory: rings, integral domains, fields of quotients, homomorphisms, ideals, quotient rings, P.I.D.s, U.F.D.s, polynomial rings. Advanced topics in linear algebra: canonical forms. Field theory: extensions, splitting fields, finite fields, geometric constructions. (T)

552. Introduction to Topology. Cr. 3

Prereq: MAT 203, and 225 or 235. No credit toward graduate degree in mathematics or statistics. An introduction to topology, mostly through an intuitive approach. Topics: 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)

553. Elementary Differential Geometry and Its Applications. Cr. 3

Prereq: MAT 203 and 225. 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)

560. Introduction to Analysis I. Cr. 4

Prereq: MAT 507 or consent of instructor. Completeness, convergence, compactness and continuity in the context of Euclidean spaces; applications to differential and integral calculus. (T)

561. Introduction to Analysis II. Cr. 3

Prereq: MAT 560. Point-wise and uniform convergence of sequences and series of functions; power series; introduction to analytic functions; Fourier series; possible additional topics. (T)

570. Introduction to Probability Theory. Cr. 4

Prereq: MAT 203, 225 or 235. Only two credits after MAT 221 or MAT 615. Probability spaces, combinatorial analysis; independence; discrete and continuous random variables; expectations; normal, Poisson, binomial distribution; joint, marginal, conditional distribution functions; law of large numbers; central limit theorems. (T)

571. Introduction to Stochastic Processes. Cr. 3

Prereq: MAT 570 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)

577. Mathematical Models in Operations Research. Cr. 3

Prereq: MAT 203, 225, and 221 or 570 or consent of instructor. Mathematical models (deterministic and/or probabilistic) applied to dynamic programming; games; queues and inventories. (B)

582. Statistics I. Cr. 3

Prereq: MAT 570 or consent of instructor. Survey of statistical methods. Topics include sampling distributions; point and interval estimations; Bayesian statistics; testing hypotheses; sequential methods; linear models, and others. (Y)

583. 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)

587. Methods of Optimization. Cr. 3

Prereq: MAT 235. Introduction to basic mathematical theory and computational methods of optimization; optimality conditions in various optimization problems; numerical methods. (Y)

589. Special Topics in Mathematics. Cr. 3–4(Max. 12)

Prereq: MAT 203, and 225 or 235. Material currently of interest to students and faculty. Topics announced in *Schedule of Classes*. (I)

590. 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)

593. (WI) Writing Intensive Course in Mathematics. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor, MAT 203 and 225; coreq: 542 or 616. 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)

613. Topics In Mathematics for High School Teachers I. (MAT 286). Cr. 4

Prereq: MAT 202. No credit after MAT 187. 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)

614. Topics In Mathematics for High School Teachers II. Cr. 3

Prereq: MAT 203, and 225 or 235. Axiomatic geometry: logic, methods of proof, models; Hilbert's axioms; the Parallel Postulate; "Neutral," Euclidean and non-Euclidean geometries; Hyperbolic geometry; Poincare models. (Y)

615. Topics In Mathematics for High School Teachers III. (MAT 221). Cr. 4

No credit after MAT 570. 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)

640. Graph Theory. Cr. 4

Prereq: MAT 542 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)

641. Combinatorics. Cr. 4

Prereq: MAT 542 or consent of instructor. Enumeration: the classical theory, principle of inclusion and exclusion, generating functions, the Moebius 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)

650. Topology I. Cr. 4

Prereq: MAT 561 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)

660. Complex Analysis. Cr. 2 or 4

Prereq: MAT 561 or consent of instructor. Offered for two credits only if student has taken MAT 523. Complex differentiation; elementary functions; Cauchy's integral theorem; power series; Laurent expansions; singularities; residue theorem; entire and meromorphic functions; Reimann mapping theorem. (Y)

683. Design of Experiments. Cr. 3

Prereq: MAT 582. Randomized blocks; Latin and Graeco-Latin squares; factorial designs; confounding; split plot; fractional replication; balanced incomplete blocks. (I)

Service Courses

111. Mathematics for Elementary Teachers I. Cr. 3

Prereq: one of following within previous two semesters: satisfactory score on qualifying exam, or MAT 105, or 095 with recommendation of instructor to enter 111. No degree credit in Colleges of Science and Liberal Arts. Open only to students in teacher preparation curricula. Whole numbers, integers, geometry. (T)

112. Mathematics for Elementary Teachers II. Cr. 3

Prereq: MAT 111. No degree credit in Colleges of Science and Liberal Arts. Open only to students in teacher preparation curricula. Rational numbers, geometry, probability, statistics, number theory. (T)

150. Finite Mathematics for the Social and Management Sciences. Cr. 3

Prereq: one of following within previous two semesters: satisfactory score on qualifying exam or MAT 105, or 095 with recommendation of instructor to enter 150. Only one degree credit after MAT 180. Finite mathematical methods for model building in the social and management sciences. Polynomial, exponential, and logarithmic functions, matrices, and linear programming. (T)

343. Applied Differential and Integral Calculus. (E T 343). Cr. 4

Prereq: MAT 180. No degree credit in Colleges of Science and Liberal Arts. Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. (T)

345. Applied Calculus and Differential Equations. (E T 345). Cr. 4

Prereq: MAT 343. No degree credit in Colleges of Science and Liberal Arts. Continuation of MAT 343, including logarithmic and exponential functions, first and second order ordinary differential equations, vectors, polar coordinates, Laplace transforms, Taylor series, and Fourier series. (T)

516. Mathematics for Elementary School Teachers I. (MAE 505). Cr. 3

Prereq: one of following within previous two semesters: satisfactory score on qualifying exam or MAT 105, or 095 with recommendation of instructor to enter 516. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 505 only; undergraduate credit for MAT 516 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. (Y)

517. Mathematics for Elementary School Teachers II. (MAE 506). Cr. 3

Prereq: MAT 516. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 506 only; undergraduate credit for MAT 517 only. 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. (Y)

518. Mathematics for Middle/Junior High School Teachers I. (MAE 510). Cr. 3

Prereq: MAT 516 and 517 or consent of instructor. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 510 only; undergraduate credit for MAT 518 only. Development of Euclidean geometry as a mathematical system; related historical topics; introduction to other geometries; selected topics such as transformations and tessellations. (Y)

519. Mathematics for Middle/Junior High School Teachers II. (MAE 511). Cr. 3

Prereq: MAT 518. No credit toward a major or minor for secondary mathematics teaching. Graduate credit for MAE 511 only; undergraduate credit for MAT 519 only. Trigonometry and analytical geometry. (Y)

NUTRITION and FOOD SCIENCE

Office: 3009 Science Hall; 577-2500

Chairperson: David M. Klurfeld

Administrative Assistant: Laura Lee Birnie-Lindemann

Professors

Mary Jane Bostick (Emerita), Esther D. Callard (Emerita), David M. Klurfeld, K.-L. Catherine Jen, Leora A. Shelf

Assistant Professors

Doh-Yeel Lee, Ifendu Nnanna

Lecturers

Tonia Reinhard, Dana Wassmer

Field Coordinators/Instructors

Paula Alfien (DMC Nursing and Convalescent Center); Susan Ayres (Tretco, Inc.); David Bach (Grace Hospital); Jean Gondoly (Providence Hospital—Southfield); Joan Govan (Southfield Dialysis Center); Janet Jones (Greenfield Health Systems); Susan Jonietz (Crittenton Hospital); Cecelia B. Karr (Macomb Hospital Center); Marye Miller (Older Persons Commission); Tina Miller (Children's Hospital of Michigan); Carrie Nelms (Wayne County Health Department); Chacella Newton (Macomb Intermediate School District); Ann Potteiger (Grosse Pointe Woods North High School); Joanne Reid (Hutzel Hospital); Sylvia Simmons (Detroit Receiving Hospital); Doreen Stuart (Mt. Clemens General Hospital); Ann Wassell (Grace Hospital—Dialysis)

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

**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 managerial positions in a variety of food service establishments.

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 371) and the University General Education Requirements (see page 25), 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 15-43 and 371-376, respectively.

Bachelor of Arts with a Major in Nutrition and Food Science

This curriculum allows students to major in nutrition and food science with additional course work in management and exposure in other cognate fields. It is recommended for students interested in managerial positions in food service establishments and requires a less rigorous background in chemistry and other natural science courses than is required for the B.S. degree in this discipline. The student is provided with skills in personnel management, food and nutrition, materials management, and cost control and other data processing systems. Employment opportunities include 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 213, 214, 221, 513, 522, 535, 613, 616, 685
and an additional three credits in upper division NFS courses
Biological Sciences 105, 220
Chemistry 102, 103
Economics 201, 202
Mathematics 150
Psychology 102
Accounting 301
Management 451, 570, 574
Marketing 430

COMMUNITY COLLEGE COURSES

Candidates for the degree must complete one course in each of the following areas: 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

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-one credits in science courses of which at least thirty must be in the major subject, nutrition and food science:

CORE COURSES

Nutrition and Food Science 213, 214, 221, 513, 514, 523, 525, 616, 685 and an additional three credits of upper division course work in Nutrition and Food Science.
Biological Sciences 151, 152, 220, 287
Chemistry 105 or 107, 108, 224, 226, 227
Mathematics 180
Physics 213, 214
Statistics 102

Bachelor of Science in Dietetics

The coordinated dietetics program 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 an 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: 213,* 214,* 221,* 513, 514, 522, 523, 525, 535, 685
Anthropology 210 * or Sociology 200 *
Biological Sciences 151,* 220,* 287 *
Chemistry 105 or 107,* 108,* 224 *
Economics 201 *
Psychology 102 *
Statistics 102 *
Biochemistry 501 *
Management 451 *
Instructional Technology 511, 512

DEGREE REQUIREMENTS: Candidates for this degree must complete at least 130 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 371 and 25, respectively).

DIETETICS

Nutrition and Food Science 320, 321, 322, 420, 421, 422, 436

Honors Program

Admission: A minimum honor point average (h.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 h.p.a. of 3.5 may be accepted into the program without having taken the NFS 221 Honors section.

Honors Requirements:

1. Enroll in the Honors section of Nutrition and Food Science 221
2. Complete at least one 400-level Honors Program seminar.
3. Complete at least three credits in an independent research project (NFS 596)
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 590, Honors Directed Study, or in any other department of the College. (For a listing of honors courses offered each semester, see the *Schedule of Classes* under 'Honors Program'.)

Students must have an overall honor point average of 3.3 and maintain an overall honor 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 213, 214, 221, 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 h.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.

UNDERGRADUATE COURSES (NFS)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

203. (LS) Introductory Nutrition. Cr. 3-4

Meets General Education laboratory requirement, and breakage and material fees apply, when elected for four credits. Material fee as indicated in *Schedule of Classes*. Breakage fee as indicated in *Schedule of Classes*. 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. Laboratory component illustrates physiological and biochemical principles of nutrition. (T)

213. 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)

214. Introductory Food Science Laboratory. Cr. 1

Coreq: NFS 213. Material fee as indicated in *Schedule of Classes*. Experimental study of principles discussed in NFS 213. For students interested in the scientific study of food. (F,W)

221. Human Nutrition. Cr. 3-4

Prereq: CHM 103, BIO 287. 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)

320. Introduction to Dietetics. 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)

321. Dietetic Practice I. Cr. 4

Prereq: admission to the program; coreq: NFS 320. Open only to students in coordinated dietetics program. Material fee as indicated in *Schedule of Classes*. Introduction to dietetic practice. Beginning-level supervised practice experiences in food service, clinical and community dietetics in a variety of settings throughout the greater Detroit metropolitan area. (F)

322. Dietetic Practice II. Cr. 4

Prereq: NFS 321; coreq: 525. Open only to students in coordinated dietetics program. Material fee as indicated in *Schedule of Classes*. Supervised practice experience in clinical dietetics; nutrition assessment, care plan development, implementation, evaluation and documentation for persons with acute and chronic health problems; examination of interface between food service and clinical dietetics in an acute care setting; national nutrition month promotional activities. (W)

420. Advanced Dietetics. Cr. 3

Prereq: NFS 320, 523, 525; coreq: 522. Open only to students in coordinated dietetics program. Development and refinement of dietetic practitioner skills through applications in critical care and specialty practice areas and in community agencies; theoretical basis for individual counseling and group process. (F)

421. Dietetic Practice III. Cr. 5

Prereq: NFS 322, 523, 525; coreq: 420, 522. Open only to students in coordinated dietetics program. Material fee as indicated in *Schedule of Classes*. 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. (F)

422. Dietetic Practice IV. Cr. 8

Prereq: NFS 421. Open only to students in coordinated dietetics program. Material fee as indicated in *Schedule of Classes*. 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. (W)

436. Management of Nutritional Care and Services. Cr. 2

Prereq: NFS 420; coreq: 422. Open only to students in coordinated program in dietetics. Application of management theory and principles in the three areas of dietetic practice; career planning and professional role development. (W)

490. Directed Study. Cr. 1-4

Prereq: written consent of instructor. (T)

513. Food Chemistry. Cr. 3

Prereq: NFS 213 or equiv., CHM 224. Study of the chemical constituents of foods, their relationship to the biological and physical properties, and overall food quality. (W)

514. Laboratory Techniques in Nutrition and Food Science. Cr. 4

Prereq: NFS 213 and 221 or equiv.; CHM 108 or equiv. Material fee as indicated in *Schedule of Classes*. 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. (Y)

522. Community Nutrition. Cr. 4

Prereq: NFS 213, 214, 221, 523, 525. 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)

523. Nutrition and Metabolism. Cr. 4

Prereq: NFS 221, BIO 287 or equiv.; BCH 501 or equivalent course in biochemistry. The physio-biochemical properties of nutrients and their nutritional 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)

525. Nutrition and Disease. Cr. 4

Prereq: NFS 523. 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)

526. Practicum in Nutrition. Cr. 2-4

Prereq: NFS 525 or consent of instructor. Offered for S and U grades only. Open only to seniors. Supervised participation in professional experiences in community agencies or nutrition clinics, diet counseling for individuals and small groups included. (F,W)

535. Organization and Management of Food Service Systems. Cr. 4

Prereq: NFS 213, 214, 221. 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)

590. Honors Directed Study. Cr. 1-4(Max. 6)
Prereq: College honors standing; 3.3 h.p.a. (T)

592. Supervised Field Experience. Cr. 2-4
Prereq: written consent of instructor. Supervised field experience designed to correlate classroom theory with practical work. (T)

596. Research In Food Science and Nutrition. Cr. 2-4(Max. 6)
Prereq: written consent of instructor. Minimum of 3 hours of lab research for each credit. Research projects under direction of faculty active in research. (T)

606. Research Problems In Nutrition and Food Science. Cr. 4
Prereq: consent of instructor. Research orientation: acquaintance with published data, principles of design, methods of collecting data, and basic statistical analysis. (B)

613. Food Preservation. (CHE 613). Cr. 4
Prereq: BIO 220, NFS 213, and NFS 513 or equiv. Material fee as indicated in *Schedule of Classes*. Fundamentals of food preservation: refrigeration, freezing, thermal processing, dehydration and concentration, salting and smoking, chemical preservation, radiation preservation, fermentation. (F)

616. Food Laws and Regulations. Cr. 3
Prereq: NFS 221 and 513 or equiv. 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)

621. Nutrition through the Life Cycle. Cr. 3
Prereq: NFS 221. Biological growth and nutritional requirements from fetal stages of development through aging. Nutritional standards in light of current epidemiological data and scientific research. (S)

623. Nutrition and Physical Performance. (NFS 723). Cr. 3
Prereq: NFS 221, advanced biochemistry course. How nutrients affect physical fitness and physical performance; how physical performance can be improved by adopting optimal dietary practice and how exercise and optimal nutrition can prevent human diseases. (B)

625. Nutrition Instruction for Teachers. Cr. 2
Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Biochemical and physiological bases of nutrition. (Y)

626. Nutrition Laboratory for Teachers. Cr. 1
Prereq: consent of instructor. Offered only for graduate credit; for teachers only. Laboratory component of NFS 625. Experiments which can be performed in a high school setting using students as subjects. (Y)

685. (WI) Seminar. Cr. 2-4(Max. 6)
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

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Associate Chairperson: William P. Beres

Assistant Chairperson: Talbert S. Stein

Administrative Services Officer: Gayle Chlebrik

Professors

George B. Beard (Emeritus), William P. Beres, Henry V. Bohm (Emeritus), Jhy-Jiun Chang, Juci-Teng Chen, Thomas M. Cormier, Harry H. Denman (Emeritus), Gerald L. Dunifer, Lawrence D. Favro, David M. Fradkin (Emeritus), Suraj N. Gupta (Distinguished), Walter E. Kauppila, Paul H. Keyes, Yeong Wook Kim, Pao-Kuang Kuo, William B. Rolnick, Alvin M. Saperstein, Martin Stearns (Emeritus), Talbert S. Stein, Melbourne G. Stewart (Emeritus), Robert L. Thomas, Jogindra M. Wadehra, Lowell E. Wenger

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William E. Dorenbusch, Caroline G. Morgan, Karur R. Padmanabhan

Assistant Professors

Rene Bellweid, Simon J. Bennett (Research), V.M. Rao Bidthanapally (Visiting), Philip R. Dee (Visiting), Jerry R. Hall, James M. Johnson (Research), Myung Keun Kim, Ching-Kwan Kwan (Research), Julian T. Murgatroyd (Visiting), Ratna Naik, Scott E. Pratt (Research), Claude A. Pruneau, Gerd M. Welke, William K. Wilson (Research), Kaihui Zhao (Visiting)

Adjunct Professors

Gary L. Besley, Robert C. Jaklevic, Eleftherios M. Logothetis, Chi-Chung Jeffrey Yang

Adjunct Associate Professors

Y.T. Cheng, 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.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

Faculty members in this Department are devoted to teaching and research and hold national and international reputations in their areas of specialization, which include: atomic physics, the physics of condensed matter, material science, mathematical physics, optics, applied physics, nuclear 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 371) and the University General Education Requirements (see page 25), 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 15–43 and 371–376, 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 685; (2) for the Bachelor of Arts degree and the pre-medical physics option of the Bachelor of Science in Physics degree, through PHY 560. 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 217, 218, 330, 520, 560 (total 20 credits).
2. Elementary mathematics sequence—MAT 201, 202, 203, 235 (total 15 credits).
3. Chemistry 107 (four credits).
4. Satisfaction of all University and College group and competency requirements.

— 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 530, 620, 630, 650, 651, 660, 680, 681, and the Modern Physics laboratory courses PHY 685 and 689 (total 29 credits). PHY 631 (three credits) is not required, but is recommended.
2. MAT 507 and 522 (total eight credits).

Typical General Physics Sequence *

— including University and College Group Requirements

Fall Semester

Chemistry 107	4
Mathematics 201	4
University Group Req.	3–4
English (BC)	4
UGE 100	1
Total:	16–17

Winter Semester

Freshman Year

Physics 217	5
Mathematics 202	4
University Group Req.	3–4
English (IC)	3–4
Total:	15–17

Sophomore Year

Physics 218	5	Physics 330	3
Mathematics 203	4	Physics 520	3
(LS) elective	4	Mathematics 235	3
University Group Req.	3–4	College Group Req.	3–4
Total:	16–17	University Group Req.	3–4
		Total:	15–17

Junior Year

Physics 530	3	Physics 685	2
Physics 560	4	Physics 620	4
Mathematics 507	4	Physics 660	3
College Group Req.	3–4	Mathematics 522	4
Total:	14–15	College Foreign Lang. I	4
		Total:	17

Senior Year

Physics 650	3	Physics 651	3
Physics 630	3	Physics 631 (recommended)	3
Physics 689	2	Physics 681	3
Physics 680	3	College Foreign Lang. III	4
College Foreign Lang. II	4	University Group Req.	3–4
Total:	15	Total:	16–17

— Applied Physics Option

This option is intended to provide the diverse kinds of training which are required for a variety of applied fields and still provide the essential understanding of the physical foundations of those fields. It combines a thorough training in fundamental physics with sufficient flexibility for the student to take courses in other areas such as chemistry, biology, computer science, mathematics, geology or engineering. While many graduates may proceed directly into industrial positions (particularly in engineering fields) many may go on to graduate school in areas such as biophysics, electrical engineering, etc.

Additional requirements beyond the basic ones listed above:

1. PHY 650, 530, and the laboratory courses PHY 562 and 685 (total 13 credits).
2. A total of at least six additional credits in Physics. PHY 535 is recommended; other applied physics courses are: PHY 689, 686, 687, and 635.
3. MAT 507 is not required but is recommended (four credits).
4. Electives in applied physics, mathematics or other scientific or technical departments in order to meet the University minimum total requirement of 120 credits.

* Not including an oral communication (OC) course and/or a critical thinking (CT) course.

Typical Applied Physics Sequence **
— including University and College Group Requirements

Fall Semester

Chemistry 107	4
Mathematics 201	4
University Group Req.	3-4
English (BC)	4
UGE 100	1
Total:	16-17

Winter Semester

Freshman Year

Physics 217	5
Mathematics 202	4
University Group Req.	3-4
English (IC)	3-4
Total:	15-17

Sophomore Year

Physics 218	5
Mathematics 203	4
(LS) Elective	4
University Group Req.	3-4
Total:	16-17

Physics 330	3
Physics 520	3
Mathematics 235	3
College Group Req.	3-4
University Group Req.	3-4
Total:	15-17

Junior Year

Physics 530	3
Physics 560	4
Physics 535	3-5
College Group Req.	3-4
Total:	13-16

Physics 685	2
Physics 562	5
Applied Elective	3-4
College Foreign Lang. I	4
Total:	14-15

Senior Year

Physics 650	3
Applied Elective	3-4
Mathematics 507	4
College Foreign Lang. II	4
Total:	14-15

Physics Elective	3-4
Applied Elective	3-4
University Group Req.	3-4
College Foreign Lang. III	4
Total:	13-16

— 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 151, 152, 507 and one additional course in biology; CHM 108, 224, 226, and 227 (which fulfill current medical school requirements); PHY 562 and at least six additional credits in physics at the 500-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.

Fall Semester

Chemistry 107	4
Mathematics 201	4

Winter Semester

Freshman Year

Chemistry 108	5
Mathematics 202	4
Physics 217	5

Fall Semester

Physics 218	5
Biology 151	4
Mathematics 203	4

Winter Semester

Sophomore Year

Physics 330	3
Physics 520	3
Biology 152	4
Mathematics 235	3

Junior Year

Physics 560	4
Chemistry 224	4
Biology 307	4

Physics 562	5
Chemistry 226	4
Chemistry 227	2

Senior Year

Physics Elective	3-4
Biology Elective	4

Physics Elective	3-4
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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 217, 218, 330. A student may present credits in Physics 213, 214 or equivalent, in lieu of Physics 217 and 218, with the consent of the Departmental Undergraduate Adviser.
2. At least seventeen additional credits in physics at the 500 or 600 level including 520 and 560.
3. (a) Elementary Mathematics Sequence: MAT 201, 202, 203, 235.
(b) Intermediate Mathematics Course: MAT 507.
4. Chemistry 107
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.

** The total credits in this typical sequence is 116-130 (not including an oral communication (OC) course and/or a critical thinking (CT) course). If necessary, another applied course may be added to total 120 credits.

Videotaped Courses

All advanced physics lecture courses (500-level and above) may be offered on videotape to accommodate working students. The lecture tapes may be viewed at any time convenient for the student during days, evenings or weekends. The instructors will be available for consultation either by telephone or in person during normal business hours and also by appointment. Examination times are arranged with the instructor.

The videotape lectures make it possible for the working student to complete the Bachelor of Arts or Bachelor of Science in Physics degrees with a minimum of conflict with his/her work schedule.

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 217 and 218 (or Physics 213 and 214) plus Physics 330 and at least two other physics courses at the 300 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 201, PHY 102, 104, 202, and 310. The laboratories connected with AST 201, PHY 102, and PHY 310 satisfy the natural science laboratory group requirements.

UNDERGRADUATE COURSES

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

ASTRONOMY (AST)

201. (PS) Descriptive Astronomy. (Lct: 4; Lab: 2). Cr. 4-5
Meets General Education Laboratory Requirement when elected for 5 credits. Optional lab includes 4 late evening viewing sessions. Material fee as indicated in *Schedule of Classes*. Introduction to the concepts and methods of modern astronomy; the solar system, stars, galaxies, and cosmology; including recent discoveries about the planets, moon, sun, pulsars, quasars, and black holes. Only a minimal knowledge of high school mathematics is needed. (T)

211. Descriptive Astronomy Laboratory. (Lab: 2). Cr. 1
Prereq: AST 201 for 4 credits, or 501 or PHY 501 or written consent of instructor. No credit after AST 201 if taken for five credits. Material fee as indicated in *Schedule of Classes*. Laboratory for AST 201. (T)

501. Astrophysics and Stellar Astronomy. (PHY 501). (Lct: 3). Cr. 3
Prereq: PHY 214 or PHY 218, MAT 201, or consent of instructor. Material fee as indicated in *Schedule of Classes*. Introduction to astrophysics and stellar astronomy for students in science, engineering and mathematics; emphasis on applications and tests of physical principles (i.e. atomic spectroscopy, nuclear physics, quantum mechanics, and the general theory of relativity); stellar interiors and evolution; origin of the elements and electromagnetic and particle radiation; pulsars, quasars and black holes. (B:W)

PHYSICS (PHY)

All courses with a laboratory have a non-refundable materials fee and are so indicated in the *Schedule of Classes*.

100. Conceptual Physics Laboratory. Cr. 1
Prereq: PHY 102 if taken for three credits, or written consent of instructor. No credit after PHY 102 if taken for four credits. Material fee as indicated in *Schedule of Classes*. Laboratory for PHY 102. (F,W)

102. (PS) Conceptual Physics: The Basic Science. Cr. 3-4
Meets General Education Laboratory Requirement when elected for 4 credits. Material fee as indicated in *Schedule of Classes*. 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. (F,W)

104. (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)

105. Problem Solving for the Physical Sciences. Cr. 2
Open only to Research Careers for Minority Scholars students. Offered for S and U grades only. Introduction to mathematical methods of the physical sciences and computer programming concepts for scientific problem solving. (Y)

202. Science, Technology, and War. (HIS 251)(P S 244) (PCS 202). 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)

212. Introductory Physics Preparation: Algebra and Trigonometry Based. Cr. 0
Prereq: high school algebra and trigonometry; coreq: PHY 213. Offered for S and U grades only. For students taking or planning to take PHY 213, in need of help in improving mathematics and problem-solving skills. Not a substitute for PHY 213. Slowly-paced discussion format; common features in a variety of problems. (F,W)

213. (PS) General Physics. Cr. 4
Prereq: high school algebra and trigonometry. Meets General Education Laboratory Requirement. No credit after PHY 217. Material fee as indicated in *Schedule of Classes*. 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)

214. General Physics. Cr. 4
Prereq: PHY 213. No credit after PHY 218. Material fee as indicated in *Schedule of Classes*. Continuation of PHY 213. Electricity, magnetism and introduction to modern physics. (T)

215. Introductory Physics Preparation: Calculus Based. Cr. 0
Prereq: MAT 210; coreq: PHY 217. Offered for S and U grades only. For students taking or planning to take PHY 217, in need of help in improving mathematics and problem-solving skills. Not a substitute for PHY 217. Slowly-paced discussion format; common features in a variety of problems. (F,W)

217. (PS) General Physics. Cr. 4-5

Prereq: MAT 201; coreq: MAT 202. Only engineering students may elect for four credits; others must elect five credits. No credit after PHY 213 except with consent of department. Meets General Education Laboratory Requirement when elected for 5 credits. Material fee as indicated in *Schedule of Classes*. For students specializing in physics, biology, chemistry, mathematics or engineering. Statics, kinematics, dynamics, energy and linear momentum, rotational kinematics and dynamics, angular momentum, simple harmonic motion, optics, continuum mechanics, thermodynamics. (T)

218. General Physics. Cr. 4-5

Prereq: PHY 217, MAT 202. Only engineering students may elect for four credits; others must elect five credits. No credit after PHY 214. Material fee as indicated in *Schedule of Classes*. Electrostatics, currents and circuit elements, magnetic fields, magnetic induction, A.C. circuits, electromagnetic waves, interference of waves, quantum phenomena, atoms, molecules, spectra, nuclear physics. (T)

221. General Physics Laboratory. Cr. 1-2 (Max. 2)

Prereq: PHY 217 or 218 if taken for four credits or written consent of instructor. Open only to engineering students. No credit after PHY 217 or PHY 218 if taken for five credits. Register for one credit per section. Material fee as indicated in *Schedule of Classes*. Laboratory for PHY 217 and PHY 218. (T)

310. (PS) The Sounds of Music. Cr. 4

Prereq: sophomore standing. Meets General Education Laboratory Requirement. Material fee as indicated in *Schedule of Classes*. 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. (Y:F)

330. Introductory Modern Physics. Cr. 3

Prereq: PHY 218 or consent of instructor. 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)

390. Directed Study. Cr. 1-3(Max. 5)

Prereq: written 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)

501. (AST 501) Astrophysics and Stellar Astronomy. Cr. 3

Prereq: PHY 214 or 218, MAT 201 or consent of instructor. Material fee as indicated in *Schedule of Classes*. An introduction to astrophysics and stellar astronomy for students in science, engineering and mathematics; emphasis placed on applications and tests of physical principles (atomic spectroscopy, nuclear physics, quantum mechanics and the general theory of relativity); stellar interiors and evolution; origin of the elements and electromagnetic and particle radiation; pulsars, quasars and black holes; galactic structure and cosmology. (B:W)

503. Plasma Physics. Cr. 3

Prereq: PHY 560, or 218 and consent of instructor and MAT 201. Introduction to plasma physics for students in science and engineering. Motion of charged particles in electromagnetic fields; magnetoionic 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:F)

520. Mechanical Phenomena. Cr. 3

Prereq: PHY 218, or 214 with consent of instructor; MAT 203. Material fee as indicated in *Schedule of Classes*. Dynamics of particles and

systems including central force motion, coupled oscillations and waves in elastic media. (W)

530. Modern Physics II. Cr. 3

Prereq: PHY 330, 520, and MAT 235. Development of the foundations of modern physics based on the concepts of quantum states, photons, probability amplitudes, state vectors and operators. (F)

535. Optics. Cr. 3-5

Prereq: PHY 218 or 214, MAT 203. Only non-physics majors may take course without laboratory. Material fee as indicated in *Schedule of Classes*. Other Course fee as indicated in *Schedule of Classes*. Geometrical and physical optics: wave motion, interference, diffraction, refraction, dispersion, polarization. (F)

555. Basic Electronics. Cr. 4

Prereq: PHY 214. Not open to physics majors. Material fee as indicated in *Schedule of Classes*. Other Course fee as indicated in *Schedule of Classes*. 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. (F)

560. (WI) Electricity and Magnetism I. Cr. 4

Prereq: PHY 218, or 214 with consent of instructor; MAT 235. Material fee as indicated in *Schedule of Classes*. Electric forces, fields, potentials, Gauss' law, electrostatics, currents, Ampere's and Faraday's Laws, vector potential, Maxwell's equations. (F)

562. Electronics and Electrical Measurements. Cr. 5

Prereq: PHY 560 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Other Course fee as indicated in *Schedule of Classes*. Amplifier circuits, operational amplifiers, oscillators, digital electronics, analog and digital measurements. (W)

590. Directed Study. Cr. 1-3(Max. 6)

Prereq: junior standing and written 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)

604. Principles of Physics for Middle and High School Teachers. Cr. 4

Prereq: PHY 102 or 213 or equiv. or consent of instructor. Open only to middle and high school teachers. Understanding nature in terms of energy and the fundamental forces, including: mechanics, vibrations and waves, heat and thermodynamics, electromagnetism, optics, modern physics and astronomy. (I)

620. Theoretical Mechanics. Cr. 4

Prereq: PHY 520 and MAT 235. Material fee as indicated in *Schedule of Classes*. Accelerated reference frames, centrifugal and Coriolis forces, rigid body dynamics, motion of tops and gyroscopes, Lagrange's equations, constraints, Lagrange multipliers, general central force problem, stability of orbits, relativistic mechanics. (W)

630. Quantum Theory I. Cr. 3

Prereq: PHY 530; MAT 507 and MAT 522. 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. (F)

631. Quantum Theory II. Cr. 3

Prereq: PHY 630. Continuation of PHY 630. (W)

635. Applied Modern Optics. Cr. 3

Prereq: PHY 535. Coherent radiation, laser physics and optical devices, optical techniques in experimental science, topics in modern optics. (B:F)

650. Thermodynamics and Kinetic Theory. Cr. 3

Prereq: PHY 218 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Development of the laws of thermodynamics, thermodynamic equilibrium, applications, kinetic theory of gases. (F)

651. Statistical Physics. Cr. 3

Prereq: PHY 650. Basic introduction to the classical and quantum statistical description of physical systems with large numbers of particles. (W)

660. Electricity and Magnetism II. Cr. 3

Prereq: PHY 560 and MAT 507. Material fee as indicated in *Schedule of Classes*. Electromagnetic radiation, electromagnetic waves, magnetic materials, superconductivity, special relativity, 4-vectors, fields in bounded regions, wave guides, resonant cavities. (W)

680. Atoms, Molecules and Solids. Cr. 3

Prereq: PHY 530, 560, MAT 235. Material fee as indicated in *Schedule of Classes*. Study of one-electron atoms using solutions of three-dimensional Schrodinger 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)

681. Nuclei and Elementary Particles. Cr. 3

Prereq: PHY 680. Material fee as indicated in *Schedule of Classes*. Basic understanding of subatomic physics. Modern ideas in nuclear and elementary particle physics; emphasis on common concepts and features. Relationships to experimental results. (W)

685. (WI) Modern Physics Laboratory I. Cr. 2

Prereq: PHY 530 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Techniques and experiments in physics of atoms, atomic nuclei, molecules, the solid state and other areas that have advanced our modern understanding of physics. (W)

686. Computational Physics I. Cr. 3

Material fee as indicated in *Schedule of Classes*. Introduction to computational languages and the local computational environment; data acquisition and processing, graphical representation of physical data; elements of network computing; solution of selected physical problems using techniques of numerical analysis, numerical integration, and numerical solutions of algebraic and differential equations; parallel computing. (B:F)

687. Computational Physics II. Cr. 3

Prereq: PHY 686. Material fee as indicated in *Schedule of Classes*. Continuation of PHY 686. (B:W)

689. Modern Physics Laboratory II. Cr. 2

Prereq: PHY 685. Continuation of laboratory procedures learned in PHY 685. Further presentation of techniques and experiments in the physics of atoms, atomic nuclei, molecules, solid state physics and other areas of current interest. (F)

691. 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. (Y)

692. 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. (Y)

PSYCHOLOGY

Office: Room 214, 71 West Warren; 577-2800

Interim Chairperson: Alan R. Bass

Interim Associate Chairperson: Patricia Siple

Administrative Assistant: Dana R. Leasendale

Professors

Ernest L. Abel, Joel W. Ager, Sheldon Alexander, Lynn R. Anderson, David Asdourian, Alan R. Bass, Robert F. Berman, Sandor B. Brent, C.G. Browne (Emeritus), Donald N. Elliott (Emeritus), Ira J. Firestone, Joseph M. Fitzgerald, LaMaurice H. Gardner, Joseph L. Jacobson, Kalman J. Kaplan, M. Marlyne Kilbey, Gisela Labouvie-Vief, Sheldon J. Lachman, Sheldon G. Levy, Hilary Ratner, Annette U. Rickel, Hjalmar Rosen (Emeritus), Gerald Rosenbaum (Emeritus), Eli Sultz, Carolyn M. Shantz, Charles M. Solley, Ross Stagner (Emeritus), Laurence J. Statner, Rebecca A. Treiman, Francine Wehmer, R. Douglas Whitman, Alice M. Young

Associate Professors

Kenneth Davidson (Emeritus), Winifred R. Fraser (Emeritus), Melissa G. Kaplan-Estrin, Brian Lakey, Cary M. Lichtman, Michael M. Reece (Emeritus), Patricia Siple, Lois Tetrick, Paul Toro, Kathryn Urberg, Glenn E. Weisfeld

Assistant Professors

Douglas Barnett, Rita Casey, Sebastiano Fiscaro, Jeremy Hall (Visiting), Mark Lumley, John Mullenix, Lisa Rapport

Research Professor

Sandra W. Jacobson

Research Scientist

Ali Naqvi

Adjunct Professors

Kenneth M. Adams, Naomi Breslau

Adjunct Associate Professors

Gregory Brown, John Hannigan, Sandra W. Jacobson, Ronald Lewis, Helene Lycaki, Timothy Roehrs, Barry A. Tanner

Adjunct Assistant Professors

Antonia Abbey, Linda S. Angell, Bradley Axelrod, Rebecca D. Baird, Jesse Wylie-Oliver Bell, Jr., Michael Butkus, Allan B. DeHorn, Jerel E. Del Dotto, Grenae D. Dudley, Lisa A. Fruchtmann, Robert Guenther, Melinda Henderson, Mark Kelland, Joan Lessen-Firestone, Ronald Lewis, Ira Louie, Scott Millis, Lynn V. Pantano, William Schaffer

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, consult 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 Secretary of the Psychology Department, who will arrange student appointments with advisers.

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.

Before declaring a major in psychology, students must complete PSY 101, Introductory Psychology, and have at least a 2.0 overall honor 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. See the Undergraduate Secretary in the Psychology Department for additional information.

DEGREE REQUIREMENTS: Candidates for the bachelor's degree must complete 120 credits in course work including satisfaction of College Group Requirements (see page 371) and the University General Education Requirements (see page 25), 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 15-43 and 371 - 376, 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, including seven courses that are not 49x (Directed Study, Field Study, or Special Problems) courses. The sequence of courses must be approved by the student's major adviser. Degree requirements include:

Psychology 101 (LS) Introductory Psychology
Psychology 301 Statistical Methods in Psychology

One lecture/laboratory combination chosen from the list below:

Psychology 304 Psychology of Perception: Fundamental Processes
and
Psychology 305 Laboratory in Psychology of Perception

OR

Psychology 306 Learning and Memory: Fundamental Processes
and
Psychology 307 Laboratory in Learning and Memory

OR

Psychology 309 Cognitive Psychology: Fundamental Processes
and
Psychology 309 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.

Three of the following courses:

Another (second) laboratory course from the selection listed above :
(PSY 304/305, 3306/07, 308/309)

Psychology 240 Developmental Psychology
Psychology 260 Psychology of Social Behavior
Psychology 335 Psychology of Personality
Psychology 402 Research in Psychology
Psychology 405 or 505 Physiological Psychology

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.

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 371.

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 Undergraduate Secretary of the Psychology Department and make an appointment to see the Departmental Honors Program supervisor.

Honors Sections provide smaller classes, somewhat more advanced readings, and opportunities for independent work by students in the following courses: 101 (Introductory Psychology), 240 (Developmental Psychology), 260 (Psychology of Social Behavior), and 331 (Abnormal Psychology). In addition, there is a Senior Honors course (498) in which students complete a senior thesis.

Citation for Majors: Psychology majors earning an over-all grade point average of 3.0 and a grade point average of 3.5 in psychology courses will receive a departmental citation at the time of graduation.

Career-Related Concentrations

For students majoring in the B.A. or B.S. in Psychology Program

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: two laboratory courses in psychology, plus Psychology 240, 260, 301, 402, and 505. 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. The purpose of the following information is to highlight specific courses as desirable background for particular kinds of work. Students interested in such careers should contact the Undergraduate

Secretary of the Psychology Department for referral to an appropriate faculty adviser.

1. *Personnel psychology workers* require knowledge, background and skills in construction, administration, and scoring of psychological tests. They may assist in establishing job requirements, developing interview procedures and rating scales, and organizing training programs and programs to reduce accidents, absenteeism, and turnover. Suggested courses include: Psychology 301 (Statistical Methods in Psychology), Psychology 350 (Industrial/Organizational Psychology), 411 (Psychological Tests), 490, 494 (Special Projects under direction of a faculty member), 554 (Motivation in the World of Work), 653 (Organizational Psychology). Work in computer science is also recommended.

2. *Employee assistance program workers* require knowledge that combines industrial psychology course work with clinical psychology course work and skills. Courses suggested for students interested in preparing for employment as paraprofessionals in this area: Psychology 260 (Social Behavior), 331 (Abnormal), 335 (Personality), 338 (Human Sexuality), 350 (Industrial/Organizational), 437 (Behavior Modification), 507 (Bio-Behavioral Bases of Drug Action), 554 (Motivation in the World of Work).

3. *Mental health workers in psychology (or mental health assistants)* need knowledge, background, and skills in interviewing, routine administration of tests, and various kinds of direct contact with persons. Suggested courses include: Psychology 240 (Developmental), 335 (Personality), 411 (Psychological Tests), 437 (Behavior Modification), 493 (Field Study), 505 (Physiological), 507 (Bio-Behavioral Bases of Drug Action), 528 (Psychoanalytic Theory).

4. *Human Development Specialty:* Some undergraduate psychology majors may elect to emphasize training in human development. This specialty is designed for students whose career goals involve physical or occupational therapy, infant mental health, provision and administration of day care, work with specific groups such as teenage parents, or other programs that serve infants, adults, children, adolescents, the aged, and their families. This specialty can provide an excellent background either for employment at the bachelor's degree level, or for the pursuit of a graduate degree in psychology or other human service professions.

Students who elect this specialty must meet the following requirements:

Psychology 101	(LS) Introductory Psychology
Psychology 240	Developmental Psychology
Psychology 244	Applied Human Development: Childhood
Psychology 301	Statistical Methods in Psychology

One of the following two courses:

Psychology 346	Psychology of Adolescent Behavior and Development
Psychology 349	Psychology of Adult Development and Aging

One of the following three courses:

Psychology 343	Infant Development
Psychology 344	Psychology of Child Behavior and Development
Psychology 348	Parent-Child Interaction Across the Lifespan

One lecture/laboratory combination chosen from the list below:

Psychology 304	Psychology of Perception: Fundamental Processes
and	
Psychology 305	Laboratory in Psychology of Perception

OR

Psychology 306	Learning and Memory: Fundamental Processes
and	
Psychology 307	Laboratory in Learning and Memory

OR

Psychology 309	Cognitive Psychology: Fundamental Processes
and	
Psychology 309	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.

Two of the following courses:

Psychology 260	Psychology of Social Behavior
Psychology 335	Psychology of Personality
Psychology 402	Research in Psychology
Psychology 405 or 505	Physiological Psychology
A second laboratory course: Psychology 305, 307, or 309	

Additional courses in human development are available as electives; see courses numbered 34x, 44x, 54x, and 64x in the *Courses of Instruction* section.

Minor in Psychology

All students considering psychology as a minor field of concentration must 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 101 or 102). At least three of the courses must be taken at Wayne State. Psychology 493 or 494 (offered for S and U grades only) may not be counted in the eighteen required credits.

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 21.

The *McGregor Clinical Psychology Loan Fund* makes loans available to qualified students in this specialty. Contact The Office of Scholarships and Financial Aid for information.

UNDERGRADUATE COURSES (PSY)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

101. (LS) Introductory Psychology. Cr. 4

Meets General Education Laboratory Requirement. Research participation required. No credit after PSY 102. Introduction to the science of behavior. Principles, concepts, and theories of human thought and action. Selected concepts illustrated through laboratory experiments. (T)

102. (LS) Elements of Psychology. Cr. 3

No credit after PSY 101. Research participation required. Principles, theories and applications of psychological knowledge. (T)

- 208. 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)
- 230. Psychology of Adjustment. Cr. 4**
Prereq: PSY 101 or 102. Processes involved in the interaction of individuals with their personal and social environments. Psychological methods for dealing with everyday problems, coping with anxiety, and achieving personal growth. (T)
- 240. Developmental Psychology. Cr. 4**
Prereq: PSY 101 or 102. Facts, principles, theories of psychological development. Development of intellectual, emotional, perceptual, linguistic, and social behavior. Developmental trends. (T)
- 241. Human Development and Health. Cr. 3**
Not for psychology major credit. Life span development from a bio-psycho-social perspective; applied aspects of development and family interactional research. Primarily for students in allied health professions. (Y)
- 242. Applied Human Development: Laboratory. Cr. 2**
Prereq: satisfactory health record; TB test within last six months. Open only to physical therapy students. Direct participation in infant and toddler care within the center setting; observation of parent-toddler interaction. (B)
- 244. Applied Human Development: Childhood. Cr. 4**
Prereq: PSY 240; satisfactory health record and TB test within last six months. Growth and development of the child, age 2-1/2 to 5; methods of care and guidance in a group setting; student participation four hours per week in day care center. (B)
- 260. Psychology of Social Behavior. Cr. 4**
Prereq: PSY 101 or 102. 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)
- 301. Statistical Methods in Psychology. Cr. 4**
Prereq: PSY 101 or 102 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)
- 304. Psychology of Perception: Fundamental Processes. Cr. 3**
Prereq: PSY 101 or equiv. Fundamental theories, concepts, and empirical studies of basic sensory processes and the perception and organization of sensory phenomena. (Y)
- 305. Laboratory in Psychology of Perception. Cr. 2**
Prereq: PSY 101; prereq. or coreq: 304. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of basic perceptual phenomena. (F,W)
- 306. Psychology of Learning and Memory: Fundamental Processes. Cr. 3**
Prereq: PSY 101 or equiv. Fundamental theories, concepts, and empirical findings in field of learning. (Y)
- 307. Laboratory in Learning and Memory. Cr. 2**
Prereq: PSY 101; prereq. or coreq: 306. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of basic learning processes, including sensory and motor learning and complex learning processes. (F,W)
- 308. Cognitive Psychology: Fundamental Processes. (LIN 308). Cr. 3**
Prereq: PSY 101 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)
- 309. Laboratory in Cognitive Psychology. Cr. 2**
Prereq: PSY 101; prereq. or coreq: 308. Material fee as indicated in *Schedule of Classes*. Laboratory investigations of cognitive processes, including attention, memory, language processing and problem solving. (F,W)
- 312. Brain and Behavior. Cr. 3**
Prereq: PSY 101 or 102. No credit after PSY 505. 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)
- 320. Motivation, Feeling and Emotion. Cr. 3**
Prereq: PSY 101 or 102. 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)
- 325. Psychology of Women. Cr. 3**
Prereq: PSY 101 or 102. Scientific issues relating to the psychological understanding of women: gender identity, psychobiology, mental health, achievement motivation, role conflict, psychology of career choice. (T)
- 331. Abnormal Psychology. Cr. 4**
Prereq: PSY 101 or 102. 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)
- 335. Psychology of Personality. Cr. 3**
Prereq: PSY 101 or 102. 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)
- 337. Community Psychology. Cr. 3**
Prereq: PSY 101. Overview of the field of community psychology, including ecological perspectives, prevention, mutual help groups, paraprofessional helping, consultation, deinstitutionalization, homelessness, and methods of social change. (Y)
- 338. Human Sexuality. Cr. 3**
Prereq: PSY 101 or 102. Biological, psychological and socio-cultural aspects of human sexuality. Topics include anatomy and development, sexual behavior, and cultural influences. (T)
- 343. Infant Development. Cr. 3**
Prereq: PSY 240. 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)
- 344. Psychology of Child Behavior and Development. Cr. 3**
Prereq: PSY 240. Developmental processes in childhood; language acquisition, cognitive development, development of peer-peer interactions. (Y)
- 346. Psychology of Adolescent Behavior and Development. Cr. 3**
Prereq: PSY 101 or 102. 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)
- 348. Parent-Child Interaction Across the Lifespan. Cr. 3**
Prereq: PSY 240. 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)

349. Psychology of Adult Development and Aging. Cr. 3
Prereq: PSY 101, 240. The adulthood and aging years from a developmental perspective, including: intelligence, memory, personality, and social behavior. (Y)

350. Psychology and the Workplace. Cr. 3
Prereq: PSY 101 or 102. 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)

401. Points of View in Modern Psychology. Cr. 3
Prereq: PSY 101 or 102. Major systems of psychology, including the influence of scientific thought from other disciplines and countries on models in psychology. (I)

402. Research in Psychology. Cr. 3
Prereq: PSY 101 or 102. 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. (T)

411. Introduction to Psychological Tests. Cr. 3
Prereq: PSY 101 or 102. Typical tests widely used. Problems involved in choosing appropriate tests, elementary methods of presenting test data, reliability and validity, calculation and interpretation, evaluation of test content. Test construction. (F,W)

431. Psychological Disorders of Children. Cr. 3
Prereq: PSY 101 or 102. Points of view, methods of study and research findings regarding psychopathology in children. (I)

432. Introduction to Clinical Psychology. Cr. 3
Prereq: PSY 101 or 102. An introduction to the methods, rationale, and empirical foundations of clinical psychology. Issues in the assessment and treatment of psychopathology. (Y)

490. 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)

491. 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)

493. 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)

494. 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)

495. Special Topics in Psychology. Cr. 3(Max. 6)
Prereq: PSY 101 or 102. Topics of current interest to be announced in *Schedule of Classes*. (Y)

498. 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. (Y)

505. Physiological Psychology. Cr. 3
Prereq: PSY 101 or 102. 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,W)

506. Laboratory in Physiological Psychology. Cr. 3
Prereq: PSY 312 or 505 or consent of instructor. Material fee as indicated in *Schedule of Classes*. Outline of gross neuroanatomy, basic experiments in physiological psychology utilizing brain lesions, chronic electrode implantations in small animals, and measurement of human autonomic responses. (Y)

507. Bio-behavioral Bases of Drug Action. Cr. 3
Prereq: PSY 312 or 505 or equiv., or BIO 102 or equiv.. Physiological and behavioral bases of drug action, with emphasis on brain neurotransmitters, psychopharmacology, and substance abuse disorders. (Y)

510. Applied Statistics in Psychology. Cr. 4
Prereq: PSY 301 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)

528. Psychoanalytic Theory. Cr. 3
Prereq: three courses in psychology. Theories, principles, concepts and applications as developed by Freud and his followers in contemporary times. (I)

549. The Aging Individual in Society. Cr. 3
Prereq: PSY 101 or 102. 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. (Y)

554. Motivation in the World of Work. Cr. 3
Prereq: PSY 101 or 102 and junior or senior standing or consent of instructor. Relationships among motivation, satisfaction, and organizational behavior. Motivational theory and research; organizational influences on motivation and satisfaction; motivational intervention; survey and evaluation. (Y)

558. Consumer Psychology. Cr. 3
Prereq: PSY 101 or 102; junior, senior or graduate standing. Applications of psychological and general behavioral science principles to understanding consumer and buying behavior; research design, sampling, and data collection techniques of use to marketers and consumerists. (Y)

563. Group Dynamics. Cr. 3
Prereq: PSY 260 or consent of instructor. Historical and theoretical development of the "group dynamics" movement and contemporary approaches to conceptualization of small group processes. Communication and power structures; group problem solving, intra- and inter-group conflict and cooperation. (Y)

588. Social Psychology of Personality. Cr. 3
Prereq: PSY 101 or 102. 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)

570. (AFS 570) The Psychology of African Americans. Cr. 4
Prereq: upper division or graduate 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)

571. (PCS 500) Dispute Resolution. (CRJ 594)(P S 589). Cr. 3
Overview of the processes and sectors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

575. Engineering Psychology. Cr. 3
Prereq: PSY 305, 309, 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)

593. (WI) Writing Intensive Course in Psychology. Cr. 0

Prereq: junior standing, satisfactory completion of English Proficiency Examination, consent of instructor; coreq: PSY 305, 307, or 309. 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)

620. Development of Memory. (LIN 620). Cr. 3

Prereq: PSY 309 and 240 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)

642. Psychology of Infant Behavior and Development. Cr. 3

Undergrad. prereq: PSY 240 and either 243 or 244. 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)

644. Psychological Development in Childhood. Cr. 3

Prereq: one course in developmental psychology. Not open to psychology doctoral students. Theories of development applied to understanding cognitive, social, and emotional changes in childhood. Empirical tests of these theoretical perspectives examined; research paper required. (Y)

647. 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)

648. Psychology of Myth, Magic and Religious Experience. Cr. 3

Prereq: PSY 101, 240, 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. (Y)

649. Developmental Psychology of Death, Dying and Lethal Behavior. Cr. 3

Prereq: PSY 101 or 102. 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. (Y)

653. Organizational Psychology. Cr. 3

Prereq: PSY 350 or 260, or graduate standing or written consent of instructor. Application of principles of social psychology to industrial phenomena. Parameters of organization and criteria of effectiveness: profitability, morality. Classical theories of organization. Power, interaction, conflict, and decision theory applied to industrial corporations and unions. (Y)

654. Organizational Staffing. Cr. 3

Prereq: PSY 350 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)

655. Training and Employee Development. Cr. 3

Prereq: PSY 350 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 appraisal process, evaluation of training and development programs. (Y)

656. Psychology of Union-Management Relations. Cr. 3

Prereq: PSY 350 or graduate standing or consent of instructor. Perceptual and motivational factors influencing behavior of workers, executives, union officers. Psychological factors in strikes: principles relevant to union-management cooperation. (Y)

657. Applied Research Methods in Union-Management Relations. Cr. 3

Prereq: one semester of statistics comparable to ECO 510, FBE 540, FBE 609, or PSY 410. 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)

671. Psycholinguistics. (LIN 671). 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 and memory, discussed within the framework of the behaviorist, generative linguistic and information processing approaches to language. (Y)

695. Advanced Special Topics. Cr. 1-3(Max. 6)

Prereq: senior standing; psychology major with 3.0 h.p.a. or honors program seniors. Topics to be announced in *Schedule of Classes*. (Y)



STATISTICS

In addition to the interdepartmental course described on this page, several specialized advanced courses in statistics are offered by individual departments:

ECO 410 —Economic and Business Statistics
ECO 510 —Introductory Statistics and Econometrics
ECO 610 —Introduction to Econometrics
ECO 710 —Econometrics I
ECO 711 —Econometrics II
ECO 810 —Advanced Econometrics
ECO 811 —Applied Econometrics
MAT 221 —Elementary Probability and Statistics
MAT 570 —Introduction to Probability Theory
MAT 582 —Statistics I
MAT 583 —Applied Time Series
MAT 683 —Design of Experiments
MAT 770 —Advanced Probability Theory I

MAT 771 —Advanced Probability Theory II
MAT 780 —Statistics II
MAT 787 —Topics in Statistics
PSY 301 —Statistical Methods in Psychology

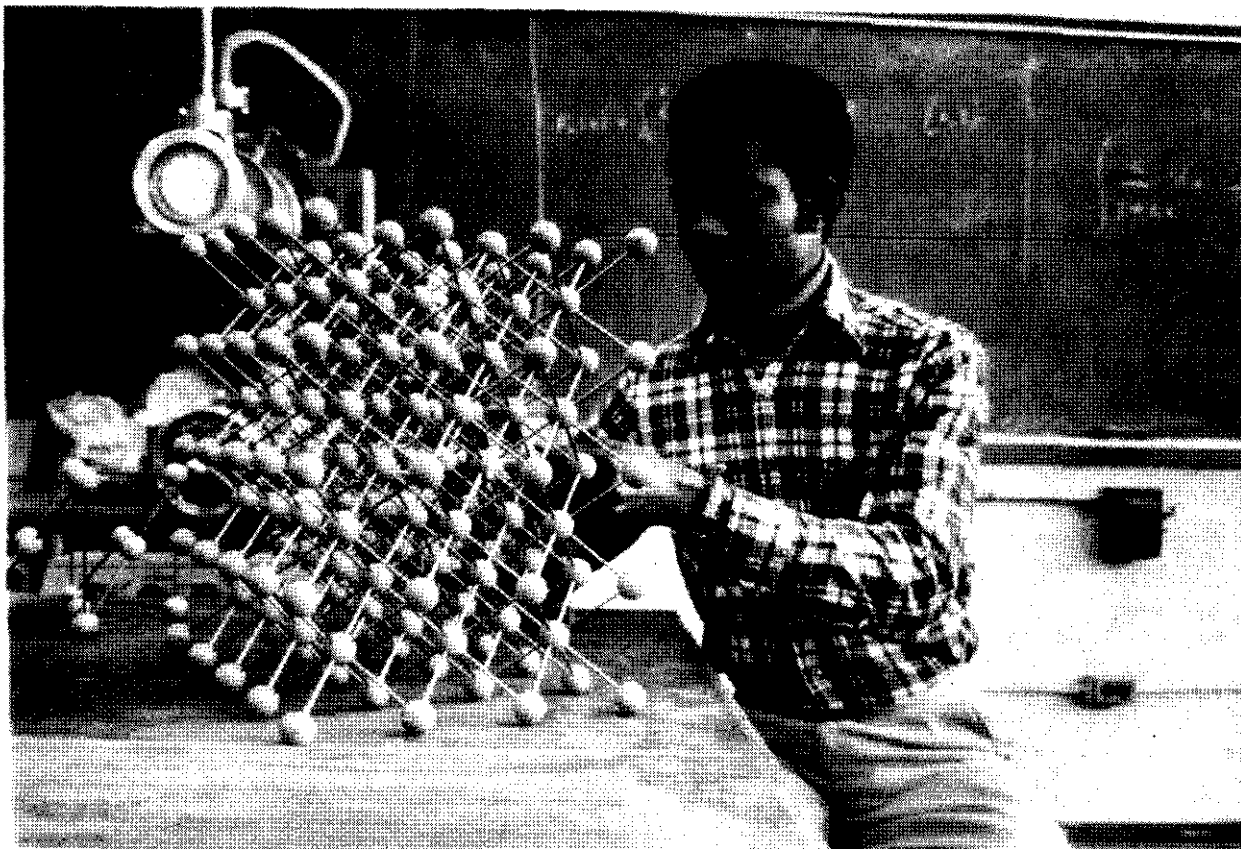
For descriptions of these courses and others, see the respective departmental sections of this bulletin.

UNDERGRADUATE COURSE (STA)

For interpretation of numbering system, signs and abbreviations, see page 463.

102. Elementary Statistics. Cr. 3

Prereq: one and one-half years high school algebra. Not to be counted as a mathematics course by mathematics majors. Student computer account required. Descriptive statistics, correlation and regression, notions in probability, binomial and normal distributions, testing hypothesis. (T)



SCHOOL OF SOCIAL WORK

DEAN: Leon W. Chestang

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, 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 which 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, homophobia, unemployment, and those with emotional disturbances, or physical and/or developmental impairments. 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 for social work practice.

Individual courses are 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 administration and community services; family, children and youth services; health care services; mental health services; and occupational social work. The School conducts special institutes and workshops for persons working in the field of 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 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

North American Association of Christians in Social Work (NACSWs)
21 Thompson Home; Telephone: 577-1639

Trabajadores de la Raza Estudiantil (T.R.E.)
21 Thompson Home; Telephone: 577-1639

Mailing address for all offices: School of Social Work, Wayne State University, Detroit, Michigan 48202.

* For specific requirements, consult the Wayne State University Graduate Bulletin.

FACULTY and ADMINISTRATION

Dean: Leon W. Chestang
Associate Dean: Phyllis I. Vroom
Director of Admissions: Cecille Y. Dumbrigue
Academic Services Officer: Janet M. Clerk
Academic Adviser: Anwar Najor
Business Manager: Edrene R. Teahan

Professors

Creigs C. Beverly, Leon W. Chestang

Associate Professors

Arthur E. Antisdel, Jerrold Brandell, Alison Favorini, Bruce Friedman, Ronald L. Jirovec, Alice E. Lamont, Brenda McGadney, David P. Moxley, Melvyn C. Raider, Chathapuram Ramanathan, Sue M. Smock, Mavis M. Spencer, Eileen Trzcinski, Phyllis I. Vroom, Susan Whitelaw-Downs

Assistant Professors

Ann Alvarez, , Sharen K. Gamer (clinical), Christine Hyduk, Carolyn B. Pryor, Hartford Smith, Jr., James Tripp (clinical), Annette Woodroffe

Instructor

Robert Allen

Lecturers

Roxanne Barzone, Margaret O. Brunhofer, Laura Daniel, Pauline Everette, Lois J. Garratt, Sally Jo Large, Marilyn H. Spurlock, Karen M. Waters, Robert M. Wills

Emeriti Professors

Sidney Dillick, Joseph P. Hourihan, Charles N. Lebeaux, Leon Lucas, Maryann Mahaffey, Betty Rusnack, Kurt Spitzer, Betty L. Welsh, David Wineman

Emeriti Associate Professors

Helen Francis, Theodore Goldberg, Edna S. Harrison, Carl Hartman, Evangeline Sheibley Hyett, Aaron Krasner, Edna P. Miller, Elizabeth J. Phillips, Lois L. Quig, Marian I. Reavey, Sandy G. Reid

Adjunct Faculty

C. Patrick Babcock, Paul A. Koonter, Thomas D. Watkins Jr.

BACHELOR OF SOCIAL WORK

The Bachelor of Social Work degree program prepares for entry level 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. 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 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 honor 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 March 31 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.

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 15 of this Bulletin for the University transfer policy.

Readmission: Students who have been admitted to the Bachelor of Social Work or the Master of Social Work degree program shall be considered to have withdrawn from the program if they are not enrolled in a course and/or field work during any semester of a planned program of study approved by the Office of the Dean. Former students who had been enrolled in a planned program leading to the Bachelor of Social Work degree, who wish to be considered for readmission to complete degree requirements, must follow regular procedures for admission to 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 25–35.

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 25–35.

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 202, recommended)
3. (HS) History—3 credits (Not HIS 130)
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 subject 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.
3. (PS) One course (3–4 credits) to be selected from the following: Physical Science, 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 (200 level or above)—3 credits

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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 100. 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 25–35.

A. Social Sciences: The following distribution of courses is required.

	<i>credits</i>
1. GSS 271 — (SS) Selected Perspectives on Ethnicity	4
2. GSS 272 — Culture, Community, and Identity: Faces of Culture	3
3. AGS 348 — (SS) Theoretical and Political Analysis of Work Organizations	4
4. GSS 151 or AGS 342	
— (AI) American Political Development	4
— (AI) The American Constitution and the Judicial System	4
5. Economics 202 — (SS) Principles of Macroeconomics	3

B. Natural Sciences: The following distribution of courses is required.

1. GST 201 — Health Concepts and Strategies	3
2. GST 202 — (LS) Changing Life on Earth	3
3. GST 231 — Living in the Environment	4
4. GST 242 — (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 231 — Modes of Perception	4
2. GUH 233 — Critical Perspectives on Everyday Life	3
3. GUH 271 — (PL) Art and Aesthetics: Literature and Philosophy	4
4. GUH 273 — (VP) Meaning in the Visual and Performing Arts	3

D. English: The following distribution of courses is required.

1. GIS 151 — (BC) Written Communication Skills	4
2. English (IC) elective, 200 level or above	3

E. Basic Speech:

1. GIS 156 — (OC) Dimensions of Oral Communication	4
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F. Recommended Electives: Select electives from General Education courses in Foreign Culture (FC), Computer Literacy (CL), Critical Thinking (CT), and UGE 100. 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-one credits in field work and related courses and a minimum of nineteen credits in corequisite and elective courses (see below).

Honor Point Average: To be awarded a Bachelor of Social Work degree, the student must achieve a cumulative honor point average of 2.0, and an honor point average of 2.0 during the junior and senior year. 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 25; and consult an undergraduate adviser regarding the pre-Social Work pattern and General Education courses.

Curricula

The undergraduate social work curriculum is structured to provide the knowledge, values and skills essential for entry level 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. 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, statistics, 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 with persons from 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 urged to file an educational plan of work with the Academic Services Officer, and to update the plan periodically.

REQUIRED PROFESSIONAL CONTENT

Junior Year

First Semester

	<i>credits</i>
S W 301—Social Work Practice Method I	2
S W 351—Human Development and Dysfunction	3
S W 371—Social Welfare & the Social Work Profession: History, Trends & Basic Concepts ..	2

Second Semester

S W 302—Social Work Practice Method II	3
S W 361—Organizational and Community Change	2
S W 498—Field Practice in Social Work	5

Senior Year

First Semester

S W 401—Social Work Practice Method III	3
S W 471—Social Welfare in the United States: Current Programs	2
S W 481—Research Methods for Social Workers	3
S W 498—Field Practice in Social Work	5

Second Semester

S W 402—Social Work Practice Method IV	2
S W 452—Social Functioning and the Effect of Stress	2
S W 497—(W) Integrative Seminar in Social Work	2
S W 498—Field Practice in Social Work	5

GENERAL EDUCATION COREQUISITES AND ELECTIVES

Corequisites: The corequisites for the program during the junior and senior years must be distributed as follows:

Anthropology 311 — 3 credits.

History 130 — 3 credits, to be taken no later than the second semester, junior year.

Statistics 102 — 3 credits, to be taken no later than the second semester, junior year.

Electives: Electives must be selected in consultation with the Academic Services Officer.

UNDERGRADUATE COURSES (S W)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses numbered 700–999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500–699 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 461.

101. 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)

301. 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)

302. Social Work Practice Method II. Cr. 3
Prereq: S W 301; coreq: 498. 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)

351. 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)

361. Organizational and Community Change. Cr. 2
Prereq: junior standing; admission to BSW program. Examination of social networks, neighborhoods, interorganizational and organizational behavior within a social work framework; study of change processes within these human communities. (W,S)

371. 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)

401. Social Work Practice Method III. Cr. 3
Prereq: S W 302; coreq: 498. 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)

402. Social Work Practice Method IV. Cr. 2

Prereq: S W 401; coreq: 498. 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)

452. Social Functioning and the Effect of Stress. Cr. 2

Prereq: S W 351; coreq: 498. 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)

471. Social Welfare In the United States: Current Programs. Cr. 2

Prereq: S W 371; coreq: 498. Description and analysis of major social welfare programs in the United States. (F)

481. Research Methods for Social Workers. Cr. 2-3

Prereq: one course in elementary statistics; coreq: S W 498. Basic concepts of research and its utilization: problem formulation, research design, description and analysis of research studies. (F)

490. Directed Study. Cr. 1-4(Max. 4)

Prereq: consent of adviser and authorization of the Dean. Individual direction in reading and research on selected topics. (T)

497. (WI) Integrative Seminar in Social Work. Cr. 2

Prereq: S W 401; coreq: 498, 402. 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)

498. 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)

555. (NUR 525) Introduction to Developmental Disabilities. (SED 505)(P T 505). Cr. 3-4

Prereq: junior standing; senior standing for nursing students. Nursing students must elect for four credits. Cross-disciplinary overview of developmental disabilities, e.g., mental impairment, epilepsy, cerebral palsy, autism, through presentation of contrasting theoretical schools of thought and intervention schema. (Y)

572. 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)

588. (SOC 588) Family Violence: Intervention. Cr. 1-2]

Prereq. or coreq: SOC 587. Open to PACT students; others by consent of instructor. Application of theory and intervention techniques in the family experience of maltreatment. (Y)

644. (SOC 644) Urban Family Intervention. Cr. 1

Prereq. or coreq: SOC 643. Open to PACT students; others by consent of instructor. Application of theory and practice technique in the helping process of urban, minority families in poverty. (Y)

646. (SOC 646) 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)

651. Social Work and the Black Community. (AFS 651). 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)

654. 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)

655. 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)

656. 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)

672. Social Services In Schools. Cr. 2

Structure and history of education in relation to social work and school social work practice; implications of current legislation; the roles of social work in relation to emerging patterns of education; trends and issues and implications for practice. (F,S)

691. Special Topics in Social Work. Cr. 2-4

Topics of current interest to be announced in *Schedule of Classes*. (F,W)



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 Academic Services Officer. The primary responsibility rests with the student. All students are urged to file a plan of work with the Academic Services Officer, and to update the plan periodically. Electives should be selected in consultation with the Academic Services Officer.

The faculty of the School of Social Work has the responsibility to require a student to withdraw at any time prior to receipt of the degree when, in its judgment, the student fails to do satisfactory work. Such decisions may be based on deficiencies in performance in class or field or in personal fitness for the profession. The faculty has adopted a set of criteria and procedures for academic termination.

Every effort is made to assist students whose work suffers as a result of conditions beyond their control such as personal illness, serious illness in the immediate family or similar emergencies.

Attendance and Residency

Students are expected to attend all sessions of courses for which they are registered and to notify the instructor or his or her secretary prior to the class session, if possible, when the student may be absent 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.

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 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 498, 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 498.

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 education 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 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 are evaluated by the University Office of Scholarships and Financial Aid based on financial need as reflected in the information provided by the students and/or their families on the appropriate form. 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 21) to develop the best possible student aid plan from the various scholarships, stipends, grants, or loans available. Such financial assistance will not be assigned or awarded until the student has confirmed his or her intention to enroll after being notified of admission.

Some awards are administered directly by the 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

Application deadline is *August 2* for most financial aid opportunities at the School.

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.

Mary Turner Scholarship. Award of variable amount, made to full-time female students on the basis of academic achievement 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.

A student newspaper, weekly meetings, participation on curriculum and policy committees of the School, social and recreational activities, assistance in attendance at relevant conferences and participation in the National Association of Student Social Workers are other student activities.

National Association of Black Social Work Students

The National Association of Black Social Work Students (NABSWS) is the School of Social Work chapter of the National Association of Black Social Workers. The Association involves itself in educational, research and community service activities on a year round basis. NABSWS assists black students in making the adjustment to the School of Social Work and provides students with supportive educational services. NABSWS 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.

North American Association of Christians in Social Work

The student chapter of the North American Association of Christians in Social Work is a student organization that offers its members and all interested students the opportunity to meet and discuss issues that relate to a Christian perspective on professional social work practice. The organization provides opportunities for fellowship, personal growth, education, and outreach. Although spiritual in nature, the organization does not identify with nor impose any specific religion.

Trabajadores de la Raza Estudiantil (T.R.E.)

Trabajadores de la Raza Estudiantil means Student Workers of the Race. T.R.E. is the organization of students at the School of Social Work who are interested in Hispanic affairs. The objectives of T.R.E. are 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 T.R.E. 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: gay/lesbian group, Jewish students group, Arab/Chaldean students 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 1994-95:

ADULT WELL BEING SERVICES: Joann Bonds, Mary Neff, Neenah Sabir

AGAPE HOUSE: Arthur Antisdal

AIDS CARE CONNECTION: Martha Kerr, H.C. Millbourne

ALTERNATIVES FOR GIRLS: Amy Goode, Martha Laatsch, Beth Singer

ARBOR HOSPICE: Lea Fischer

AREA AGENCY ON AGING: Anne Jaffe, Nancy Thompson

ASSOCIATION FOR RETARDED CITIZENS — SERVICES OF MACOMB: Ann Fenwick

AURORA COMMUNITY PROGRAMS: Glen Whaley

BARAT HUMAN SERVICES: Diane Robinson, Yvonne Williams-Houilles

BEACON DAY TREATMENT: Cindy Grams, Pat Mucha

BEAUMONT HOSPITAL — ROYAL OAK: Bev Solomon

BEAUMONT HOSPITAL — TROY: Ann Carey, Robert Dale

BIG BROTHERS/BIG SISTERS: Carl Herrel

BIO-MEDICAL APPLICATION OF DETROIT, INC.: Barbara A. Hall

BLACK FAMILY DEVELOPMENT: Pat Walker

BLACK UNITED FUND OF MICHIGAN, INC.: Brenda Rayford

BLUE WATER MENTAL HEALTH AND CHILD GUIDANCE CENTER: James Gilan, Gary Rutowski

BON SECOURS HOSPITAL: Joanne Denison, Elese Hairston

BOTSFORD GENERAL HOSPITAL: Alma Skillion, Marita Smith

BOYS' REPUBLIC: Noreen Haggerty, Maryjane Peck

BOYSVILLE OF MICHIGAN: Donald Dozier, Ruth Sanders

BRIGHTMOOR COMMUNITY CENTER: Peter Lisiecki

CAMP OAKLAND YOUTH PROGRAMS, INC.: Cassandra Bowers, Amy Hinelman

CAREGIVERS: Ladora Barnett

CASS COMMUNITY UNITED METHODIST CHURCH: Pauline Everett

CATHOLIC SOCIAL SERVICE OF FLINT: Yvonne Butler, Barbara Jubar

CATHOLIC SOCIAL SERVICE OF MACOMB COUNTY: Patricia Breston, Tracy Chartier

CATHOLIC SOCIAL SERVICE OF OAKLAND COUNTY: Marsha Moran-Sacket, Kathy Phillippi

CATHOLIC SOCIAL SERVICE OF ST. CLAIR COUNTY:
Teresa Ceislinski, Kate Powell

CATHOLIC SOCIAL SERVICE OF WASHTENAW COUNTY:
Marilyn Marsh, Lois Platenfabor

CATHOLIC SOCIAL SERVICES OF WAYNE COUNTY: Sondra
Forest, Charlie Geiger, Robert Wickenheiser

CENTER FOR HUMAN RESOURCES: Tom Pope

CHILDREN'S CENTER OF WAYNE COUNTY: Dr. Marjorie Cabe,
Tunga Constantennia, Pat Dixon, Greg Drowzdowski, Ted Lewis,
Carol Oleksiak

CHILDREN'S HOME OF DETROIT: Yoliswa Akpan, Martha
Maxwell, Kitty Walters

CHILDREN'S HOSPITAL OF MICHIGAN: David Allasia, Shirley
Gray, Amy Masinick, Mary Mueller

CHIPPEWA VALLEY SCHOOLS: Charlene McGunn

CHRIST CHILD HOUSE, THE: Julia Winston

CHRISTIAN FAMILY SERVICES OF LAPEER COUNTY: Barbara
VanLandeghem

CLARKSTON SCHOOLS: Jim Butzine

CLINTON VALLEY CENTER: Joe Corso, Elaine Goulet, Peggy
Kurz

COMMON GROUND: Marcie Haney

COMMUNITY CARE SERVICES: Keith Cornfield, John Schaupner

COMMUNITY SERVICES OF OAKLAND: John Erich

CORNELL CENTER: Jane Diehl

COTTAGE HOSPITAL — HOSPICE: Lois Quig, Diana Tomezak

COUNCIL ON AGING — ST. CLAIR COUNTY: Carolyn Kucsera

COUNSELING ALTERNATIVES: Theresa Camden

CRESTWOOD SCHOOL DISTRICT: Barbara Speranza

CRITTENTON PSYCHIATRIC HOSPITAL: Helen Hand

CROSSROADS OF MICHIGAN: Helen Manderville

DETROIT CENTRAL CITY COMMUNITY MENTAL HEALTH, INC.:
Syed Naveed

DETROIT CITY COUNCIL — PRESIDENT MAHAFFEY'S OFFICE:
Lynn Bloomberg, Sara Gleicher

DETROIT HEALTH DEPARTMENT: Olivia Ramsey

DETROIT PUBLIC SCHOOLS — EAP: Dorothy Merchant

DETROIT PUBLIC SCHOOLS: Marie Hamilton, Harriet Kirk,
Dorothy Merchant, Joya Rush-Keli, Tucker Vikkie

DETROIT RECEIVING HOSPITAL/UNIVERSITY HEALTH
CENTER: Gary Bess, Sandy Bohanon, Cheri Dye, Renee Evans,
Lee Garvin, Clarence Godwin, Linda Imel, Ken Kish, Paul Koonter,
M. Matticello, A. Stephens, Barbara Troy, Al Webb

DETROIT URBAN LEAGUE: Cassandra Nelson

DEVELOPMENT CENTERS, INC.: Lynn Ernst, Steven S. Nims,
Joyce Pringle

DIVERSIFIED YOUTH SERVICES, INC.: Evelyn Foreman, Angela
Olivera, Alice Thompson

DON BOSCO HALL: Jo-Anne Woodard

DOWNRIVER GUIDANCE CLINIC: Peggy Dufalt, M. Grannar,
Barbera Reynolds, Marci Scalera, Sally Stimpson, Bonnie Walker

DOWNTOWN SENIOR CITIZENS CENTER: Sandy Delvillano,
Richard Simmons

EASTWOOD COMMUNITY CLINICS: Steve Candela, Chris Fox,
Tammie Glenn, Linda Gold, Don Healy

EMPLOYEE ASSISTANCE ASSOCIATES: Jessie Bernstein, Phyllis
Ryan

EVERGREEN CHILDREN'S SERVICES: Vicki Johnson

FAIRLANE COMMUNITY MENTAL HEALTH CENTER:
Chris Alpern, Cheryl Anderson-Smith, Anette Wolski

FAIRLAWN CENTER: Ronald Baranski, David Castine

FAMILY COUNSELING AND MEDIATION: Mary Gibson,
David Manville

FAMILY SERVICE OF DETROIT AND WAYNE COUNTY:
John Bowman, Corine Mann, Johnnie McCray, Ramona Smith,
Craig McLean, Sylvia Thompson

FARMINGTON AREA ADVISORY COUNCIL, INC.:
Shelly Rence

FARMINGTON PUBLIC SCHOOLS: Lenore Kingston, Lynn Levin

FERNDALE SCHOOLS: Bob William

FIRST STEP: J. Hamilton, Karen Porter

FITZGERALD HIGH SCHOOL: Polly Hardy

FRANKLIN-WRIGHT SETTLEMENTS, INC.: Yvonne Dulin, Valarie
Johnston

GARDEN CITY HOSPITAL: Karen Neuman

GENESSEE COUNTY COMMUNITY MENTAL HEALTH
SERVICES: Michael Anderson, Robert Distefano, Susan
McPherson, Paul Zick

GIRLSTOWN FOUNDATION, INC.: Mitchell Rosenzweig

GRACE HOSPITAL: Martha Martin, Michelle Tekinski

GREENERY HEALTH CARE CENTER, THE: Barbara Kaner

HARBOR, THE: Sally Currie

HARPER HOSPITAL: Betty Brown, Sharon Hamburg, Debra
McNamara, Myrna Robinson, Elaine Rosenblat

HARPER WOODS SCHOOLS: Elizabeth Parravano

HAVEN: Jill Cole, Claudia Nafsu, Hedy Nuriel

HAWTHORN CENTER: Gene Bennett, Lynn Freeland, Maryann
Reynor

HEALTH MANAGEMENT SYSTEMS OF AMERICA: Arlene Darick,
Yvonne Massenberg, Pete Schneider, Dwight Vauder, John Walker

HENRY FORD CONTINUING CARE: Elizabeth Pewitt

HENRY FORD HEALTH SYSTEM — MAPLEGROVE: Thomas Ghena, Joe Kort, Jo Neal, Marge Redmond

HENRY FORD HOME HEALTH CARE: Karen Ruwoldt

HENRY FORD HOSPITAL: Rod Auton, Tracey Cavender, Margaret Dimond, Julia Gilman, Suzanne Hiyamo, Mary Klipp, Kevin Larry, Madelyne Marcowitz, Joe Mercier, Kathy Ransome, Pamela Theisen

HOLLY AREA SCHOOLS: Christine Samida

HOLY TRINITY SOCIAL SERVICES: Sister Annette Zipple

HOPE, UNITY & GROWTH (HUG): Maisha Kenyatta

HOSPICE OF SOUTHEASTERN MICHIGAN: Sydney Billingsley, Harold Jefferson

HURON SERVICES FOR YOUTH: Sheryl A. Dey

I HAVE A DREAM FOUNDATION: James Tripp

INTERNATIONAL INSTITUTE OF METROPOLITAN DETROIT: Valerie White

JEWISH FAMILY SERVICE: Jan Bayer, Hillary Drucker, Sandy Hyman, Sandra Jaffa, Fay Rosen, Mindi Silver-Weiss

JEWISH FEDERATION APARTMENTS: Laurie Leflein, Andrea Rosner

JEWISH HOME FOR THE AGED: Louise Pilchik

JEWISH VOCATIONAL SERVICE: Luan Master

JUDSON CENTER: Dorothy A. Chodynecki

KADIMA: Janette Shallal

KALEIDOSCOPE COUNSELING: Lori Klein-Shapiro, Marilyn Winkens

LAKE ORION COMMUNITY SCHOOLS: Rich Burrell, Rosalyn Mermell

LAPEER AREA HOSPICE: Beth Riseman

LAPEER COUNTY COMMUNITY MENTAL HEALTH CENTER: Lauren Emmons, Dr. Robert White

LAPEER REGIONAL HOSPITAL: Fred Schade

LOURDES NURSING HOME: Carol Landry

LULA BELLE STEWART CENTER: Ruth Brownstein, Sharon Stewart

LUTHERAN CHILD AND FAMILY SERVICES — BAY CITY: Colleen Gorman, Carolyn Keipinger, Luke Stephan, Mary Lou Stewart, Bill Wilson

LUTHERAN CHILD AND FAMILY SERVICES OF MICHIGAN: Kirk Bradford, Bonita Cobb, Sue Henderson

LUTHERAN SOCIAL SERVICES OF MICHIGAN: Marion McCarthy, Regina Noetzoldt, Gail Simpson

MACOMB COUNTY COMMUNITY MENTAL HEALTH SERVICES: Carol Bartley, Keith Hoffman, Sheila Fox, Michael Usndek

MACOMB FAMILY SERVICES: Margaret Hader, Paul Zimmer

MACOMB INTERMEDIATE SCHOOLS: Nadine Lovell, Phyllis O'Brien

MADISON COMMUNITY HOSPITAL: Elaine Baugh

MCAULEY HEALTH SYSTEMS: Patricia Reid, Larry Voight

MERCY HOSPITAL OF DETROIT: Emma Clarke, Eric Rasmussen

MIGRATION, OFFICE OF: Elaine Hretz, Steven Spreitzer

MULTI RESOURCE CENTERS, INC.: Mary Leonhard, Ken Wolf

NEIGHBORHOOD SERVICES ORGANIZATION (NSO) — CONCORD: Josephine McCrary

NEIGHBORHOOD SERVICES ORGANIZATION (NSO) — GREATER DETROIT LIFE CONSULTATION CENTER: Richard Pfoutz

NORTH OAKLAND CHILD AND ADOLESCENT CLINIC: Ray Buch, Ed Keener

NORTH OAKLAND MEDICAL CENTER (PGH): Audley Bailey, Leslie Craig, Jan Gatz, C. Edward West, Nancy Wucetich, Louise Taplin

NORTHEAST GUIDANCE CENTER: Cheryl Coleman, Cynthia Jackson, Sherry McRill

NORTHVILLE REGIONAL HOSPITAL: Mary Guidobono,

NORTHWESTERN COMMUNITY SERVICES: Shari Schwartz

OAKLAND COMMUNITY MENTAL HEALTH CLINICS: Jerome Avrushyn, Lynn Ebright, Mike Rothenberg

OAKLAND COUNTY CHILDREN'S VILLAGE: Clarence Craft, Paul Dube

OAKLAND COUNTY COMMUNITY MENTAL HEALTH — SERVICES FOR DEVELOPMENTALLY DISABLED: Barbara Altman, Lori DePriest, Robert Thomas

OAKLAND FAMILY SERVICES: Gerald Bayer, Mary Jane Clark, Betty Hitchcock, Beth Snyder, June Walatkiewicz

OAKLAND-LIVINGSTON HUMAN SERVICE AGENCY: Cecelia Lilliston, Ila Schonberg

OAK PARK SCHOOLS: Diane Sheikh

OAKWOOD HOME CARE SERVICES: Regina Vezzosi

OAKWOOD HOSPITAL: Lisa Romanczyk, Jeri Smith

OCCUPATIONAL HEALTH CENTERS OF AMERICA: Michael Hamlin

ORCHARDS CHILDREN'S SERVICES: Trudy Fortino

OXFORD AREA COMMUNITY SCHOOLS: Fern Fosgate

PAUL MARTIN HOME FOR BOYS: Georgene Thornton

PEOPLE'S COMMUNITY SERVICES: David Gallagher

PONTIAC AREA TRANSITIONAL HOUSING: Linda Campbell

PONTIAC SCHOOL DISTRICT: Adela Camerona, Geraldine Lee, John Lusk, Margaret Mitchell

PROFESSIONAL COUNSELING CENTER: Kathryn Rann

RAPE COUNSELING CENTER: Althea Grant
 REHABILITATION INSTITUTE: Patrick Donnellon
 SAGINAW GENERAL HOSPITAL: Janice Timm
 ST. CLAIR COUNTY COMMUNITY MENTAL HEALTH:
 John Odell
 ST. CLAIR COUNTY DEPARTMENT OF SOCIAL SERVICES:
 Ivan Benedict
 ST. JOHN DIALYSIS CENTER: Cynthia Palla
 ST. JOHN HOME HEALTH CARE SERVICES: Karlene Harbour
 ST. JOSEPH MERCY HOSPITAL: Audrey Lichota, Kathleen
 Strader, Diane Wittl
 SALVATION ARMY DENBY CENTER: Phyllis Aronson
 SALVATION ARMY HARBOR LIGHT CENTER: Michael
 Wolf-Branigin
 SANCTUARY, THE: Barbara Broesamle, Steve Overstreet, Ann
 Serra
 SINAI HOSPITAL: Rose Hirsch, Deanne Lautner, Judy Nowinski,
 Ramona Rukstale, Claire Smith
 SOUTHFIELD PUBLIC SCHOOLS: Karen Weiner
 SOUTHGATE COMMUNITY SCHOOLS: Terry Riddle
 SOUTH REDFORD SCHOOL DISTRICT: Carol Winkelman
 SOUTHWEST DETROIT COMMUNITY MENTAL HEALTH: Pat
 Miller, Thom Stark, Graciela Villalobos
 TAYLOR SCHOOLS: Pat Collins
 TAYLOR TEEN HEALTH CENTER: Janice Fialko
 TODD-PHILLIPS DEVELOPMENT CENTER, INC.: Dolores Gillery,
 Zelda Williams
 TRAVELERS AID SOCIETY: Norma Tucker
 UNIVERSITY MIDDLE SCHOOL — FORDHAM PROJECT:
 Roxanne Barzone, Marilyn Spurlock
 UNIVERSITY PSYCHIATRIC CENTER: Lynn Margolis
 UPWARD BOUND — HIGHLAND PARK SCHOOL: Marlene Harper
 UTICA COMMUNITY SCHOOLS: Pat McKinnon, Bev Solomon
 VETERANS' ADMINISTRATION MEDICAL CENTER —
 ALLEN PARK: Olivia Stallings
 VETERANS' ADMINISTRATION MEDICAL CENTER —
 ANN ARBOR: Roderick Fitch
 VAN DYKE PUBLIC SCHOOLS: Joe Fedorczyk, Mary Reilly
 VANTAGE POINT/NLC: Linda Woodward
 VISITING NURSES ASSOCIATION OF SOUTHEAST MICHIGAN:
 Judith Lewis, Sharon VanDeWinkle
 VISTA MARIA: Candice Kidd
 WALLED LAKE SCHOOLS: Cheryl Abel

WALTER P. REUTHER PSYCHIATRIC HOSPITAL: Rita Falconer,
 Joyce Skinner
 WATERFORD SCHOOL DISTRICT: Kim Foo, Sherryann Kollin
 WAYNE CENTER: Cheryl Betz, Bob Strozier
 WAYNE STATE UNIVERSITY — DEVELOPMENTAL
 DISABILITIES INSTITUTE: Karen Wolf-Branigin
 WAYNE STATE UNIVERSITY — PSYCHOLOGY CLINIC:
 Shirley Berman
 WAYNE STATE UNIVERSITY COUNSELING/PLACEMENT
 SERVICES: Amy McCollum
 WEDGEWOOD ACRES CHRISTIAN YOUTH HOMES:
 Judith Walton
 WESTLAND COUNSELING CENTER: Doreen Lightner
 WYANDOTTE HOSPITAL & MEDICAL CENTER: Patricia Modin
 YMCA: Rick Crawford, Linda McQueen



**COLLEGE OF URBAN,
LABOR, and METROPOLITAN AFFAIRS**

DEAN: Sue Marx Smock

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 is designated to include the Center for Chicano-Boricua Studies; the Labor Studies Center; the Center for Urban Studies; the Department of Geography and Urban Planning; the Master of Arts in Industrial Relations (MAIR) program; the Center for Peace and Conflict Studies; the Archives of Labor and Urban Affairs; and the University's Urban Professorship Program.

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; 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 the Dean, College of Urban, Labor, and Metropolitan Affairs, 3198 Faculty Administration Building; 577-5071.

Archives of Labor and Urban Affairs

Walter P. Reuther Library; 577-4024
Director: Leslie S. Hough

The Archives of Labor and Urban Affairs was established in 1960 to collect, preserve and make available to qualified researchers 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 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.

Industrial Relations

Office: 1262 Faculty Administration Building; 577-4380
Interim Director: William Cooke

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 240.)

- **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*

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, consult 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 25) and the College of Liberal Arts Group Requirements (see page 207). 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 29.

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 26-29.

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 the Dean, 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 an honor 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:

Areas	maximum degree credit
Dance (approved courses)	16
Health	8
Applied Music (including the limitation stated in the paragraph 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 280	University Bands
MUA 281	University Symphony Orchestra
MUA 282	Jazz Lab Band
MUA 283	Men's Glee Club
MUA 284	Choral Union
MUA 285	Concert Chorale
MUA 287	Women's Chorale
MUA 288	Chamber Music and Special Ensembles
SPR 267	Radio–Television–Film Laboratory
SPC 224	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) honor 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 300 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.

Honor Point Average

All students are required to maintain an over–all honor point average of C (2.0) for all degree work elected. See 'Honor Point Average' in the General Information section of this Bulletin, page 42.

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 recently initiated an Undergraduate Student Exchange in Urban Affairs with the University of Salford, England. Students in good academic standing in any college or program 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 h.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 210; 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 honor point averages at Wayne State University fall within approximately the upper 5%, the next 5% and the next 10% of the senior class, respectively. The honor points used to identify the lower limits for each designation will be based upon the honor 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 Honor Point Average: Student's whose honor point average falls below 2.0 will be placed on academic probation. If serious honor 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 Honor Point: Students on academic probation who incur serious deficiencies or fail to raise their honor point averages within a reasonable length of time, may be excluded from the College. 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 the Dean.

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: Sue Marx Smock
 Interim Associate Dean: Robin Boyle
 Assistant Dean: Carlton Maley
 Business Manager: Mary Clayton
 3198 Faculty/Administration Building 577-5071

Archives of Labor and Urban Affairs

Director: Les Hough
 Interim Associate Director: Margaret Raucher
 231 Reuther Library 577-4003

Center for Chicano-Boricua Studies

Director: Jose Cuello
 Assistant Director: Javier Garibay
 3324 Faculty/Administration Building 577-4378

Center for Peace and Conflict Studies

Director: Fred Pearson
 2319 Faculty/Administration Building 577-3453

Center for Urban Studies

Director: Larry Ledebur
 Associate Director: Diane Brown
 3043 Faculty/Administration Building 577-2208

Detroit Orientation Institute

Director: Elaine Driker
 3231 Faculty/Administration Building 577-0171

Geography and Urban Planning

Interim Chairperson: Robert Sinclair
 225 State Hall 577-2701

Industrial Relations

Interim Director: William Cooke
 Assistant to the Director: William McKitter
 1262 Faculty/Administration Building 577-4380

Labor Studies Center

Director: Hal Stack
 3168 Faculty/Administration Building 577-2191

Skillman Center for Children

Administrator: Ernestine Moore
 3198 Faculty/Administration Building 577-5225

University Professors

Irving Bluestone, University Professor of Labor Studies
 Douglas Fraser, University Professor of Labor Studies
 Coleman A. Young, University Professor of Urban Affairs
 253 Reuther Library 577-5196

CHICANO-BORICUA STUDIES

Office: 3324 Faculty Administration Building; 577-4378
 Fax: 577-1274/8800

Director: Jose Cuello

Assistant Director for Recruitment and Retention: Javier Garibay

The Center for Chicano-Boricua Studies (CBS) is a multi-service unit which plays an important part in the University's urban mission. The Center engages in teaching, research, student support and community services. It offers courses, as well as a co-major program, which are designed to serve the educational interests of students who wish to increase their knowledge of Mexican-American, Puerto Rican, and other Hispanic groups both in the United States and in other countries; of those who plan to enter a bilingual education program; and of those who wish to complement their field of study with a co-major in Chicano-Boricua studies.

Co-Major Program

The Chicano-Boricua Studies Co-Major Program is an undergraduate, multi-disciplinary course of study designed to strengthen the career preparation of students who plan to work in a multi-ethnic urban setting. This program leads to a bachelor's degree with co-major designation. All students who have fulfilled the course requirements of the co-major program will receive this notation on their transcript.

Admission: Students may apply for acceptance to the Chicano-Boricua Studies Co-Major Program by submitting a *Declaration of Major Form* for approval at the beginning of their junior year. See page 441 for instructions on declaring a major.

Student Success Program: The Center has a two-year program for students who fall below University admissions requirements. The program is also open to students who meet regular admission requirements. Students receive support services such as academic, personal, and career counseling, and study skills training. Requirements for admission to the program include submission of an official *Application for Undergraduate Admission* and a high school transcript, an interview, and a student-parent contract.

MAJOR REQUIREMENTS: The co-major program requires completion of the following core courses and a minimum of eighteen credits in elective courses. Appropriate courses may be substituted for the core and elective courses listed below with the prior approval of the director.

Required Core Courses (fifteen credits) credits

CBS 201 — Introduction to Chicano-Boricua Studies	3
CBS 210 — Chicano Literature and Culture	3
CBS 211 — Puerto Rican Literature and Culture	3
CBS 241 — (FC) History of Mexico	3
CBS 242 — (FC) History of Puerto Rico and Cuba	3
CBS 243 — History of Latinos in the United States	3

Elective Courses (eighteen credits)

ANT 311 — Detroit Minorities: Arabs, Hispanics and Blacks	3
ANT 354 — (FC) Cultures and Societies of Latin America	3
CBS 351 — Precolumbian Mesoamerican Cultures	3
CBS 212 — Latin American and Latina Women	3

CBS 245 — Latin America from Independence to the Present	3
P S 577 — Government and Politics of Latin America	4
SPA 363 — Survey of Spanish American Literature	3
SPA 556 — Spanish American Cultures and Their Traditions	3
SPA 662 — The Spanish American Novel II	4

Financial Aid and Awards

Latino En Marcha Grant: Students who demonstrate financial need and are enrolled in two core CBS courses are eligible to receive the Latino En Marcha Grant. Applicants should contact the Center for further information.

Latino Honors and Service Award: Award open to Latino graduate and undergraduate students with cumulative Wayne State h.p.a. of 3.4 or higher, or who can document an average h.p.a. over the previous two semesters which is at least one full grade higher than that of the cumulative h.p.a. of the semester previous to this period; and who can document a history of community, public or university service.

Latino Scholars Award for Entering Undergraduate Freshmen: Annual award open to two first-time entering undergraduate Latino students (excluding transfer students) with high school grade point average of at least 3.0 and ACT composite scores of 20 or higher. Selected students must maintain full-time status with a cumulative minimum 2.5 h.p.a.



UNDERGRADUATE COURSES (CBS)

The following courses, numbered 090–699, are offered for undergraduate credit. Courses in the following list numbered 500–699 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 461.

- 141. Chicano–Boricua Practicum. Cr. 1(Max. 2)**
Prereq: consent of instructor. Open only to students in Chicano–Boricua program. Developing academic skills. (T)
- 201. 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)
- 210. Chicano Literature and Culture. (SPA 240). Cr. 3**
Examination of Chicano literature. Themes and figures in a social and historical context. (B)
- 211. Puerto Rican Literature and Culture. (SPA 250). Cr. 3**
Examination of Puerto Rican literature. Themes and figures in a social and historical context. (B)
- 212. Latin American and Latina Women Writers. (SPA 260). Cr. 3**
Creative writings by Latin American and Latina women writers; feminist theory and literary criticism from throughout Latin America with comparison to Latina women's writings. (I)
- 241. (FC) History of Mexico. (HIS 244). 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)
- 242. (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)
- 243. History of Latinos in the United States. (HIS 243). 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)
- 245. Latin America from Independence to the Present. (HIS 191). Cr. 3**
Historical overview of modern and contemporary Latin America from early 1800s to the present. Themes include nation-formation, revolutions, nationalism, development/dependency, U.S. involvement. (Y)
- 351. (ANT 551) Precolombian Mesoamerican Cultures. Cr. 3**
Prereq: ANT 210 or consent of instructor, or CBS 201. Survey of the history and characteristics of culture in Mesoamerica prior to colonization, from the Maya and Olmec to the Aztec. (Y)
- 556. (SPA 556) Spanish American Cultures and their Traditions. Cr. 3**
Prereq: SPA 461 or SPA 462 or consent of instructor. Panorama of Latin American civilization and culture from the pre-Columbian period to the present. (Y)

GEOGRAPHY and URBAN PLANNING

Office: 225 State Hall; 577-2701; Fax: 577-0022

Interim Chairperson: Robert Sinclair

Professors

Robert M. Boyle, Fred E. Dohrs (Emeritus), Robert J. Goodman (Emeritus), George J. Honzatko (Emeritus), Robert Sinclair

Associate Professors

Eugene D. Perle, Laura Reese, Gary Sands, Robert D. Swartz, Bryan Thompson

Lecturer

Susan Turner

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.

Undergraduate degrees in geography are offered by the College of Liberal Arts (see page 240). 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.

* For specific degree requirements, consult the Wayne State University Graduate Bulletin.

UNDERGRADUATE COURSES (U P)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses in the following list numbered 500-699 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 461.

121. Understanding the Built Environment. Cr. 3

Elements that affect the shape of the built environment; emphasis on design and land development controls. (Y)

311. Principles of Planning. (GPH 311). Cr. 3 or 4

Application of urban planning principles to the problems and issues of the urban community. (I)

501. 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)

510. 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)

511. Urban Planning Process. Cr. 3 or 4

Scope and historical development of planning. Topics relevant to the practice of planning: theory, planning practice, social and physical development policy. (Y)

515. (P S 522) Issues in Urban Public Policy and Management. Cr. 4

Prereq: P S 224 and P S 231 or consent of instructor. No graduate credit in political science. Examination of influences on urban policy formation and implementation. Problems of service distribution, policy impacts and policy evaluation in urban areas. Public administration in urban settings with focus on: program development/implementation, public facilities planning, land use controls, and program and public services. (B)

521. (SOC 550) Urban and Metropolitan Living. Cr. 3

Examination of the development and organization of urban living as it emerged from village to city to metropolitan region. Topics include: causes of urbanization and its consequences for the ecological and social structure of the city, intergroup relations, crime and poverty in the city. (Y)

531. Current Planning Practice. Cr. 3 or 4

Practical application of planning theory to current issues of planning and community development, including land use, economic development, and environmental concerns. (B)

542. (GEG 615) Internal Structure of the City. (GPH 615). 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)

552. (GEG 624) Industrial Geography. (GPH 624). 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)

562. (GEG 628) Marketing Geography. (GPH 628). 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)

- 570. (GEG 570) Urban Canada. (GPH 570). 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)
- 582. (ECO 580) Urban and Regional Economics I. Cr. 3**
 Prereq: ECO 201 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)
- 599. Special Topics. Cr. 1-4(Max. 8)**
 Open only to graduate students. (Y)
- 601. (GEG 613) Advanced Urban Geography. (GPH 613). Cr. 4**
 Selected themes in urban geography: current theoretical developments, city systems in advanced societies, the evolution of urban patterns, recent regional shifts in American urbanization, the metropolis as a social unit. (B)
- 610. Comparative Planning Systems. Cr. 3**
 Comparative analysis of planning systems; examples from North America, Europe, and Japan. (Y)
- 612. Planning Studies and Methods. Cr. 4**
 Economic base, population, and land use studies. Discussion of approaches used to solve selected community development problems. (Y)
- 618. Comparative Planning Systems. (GEG 618). Cr. 3-4**
 Study of urban and regional planning systems in selected countries in North America, Europe, and Asia. Examination of legislative, procedural and practical issues in different countries as well as cross-national policy exchanges. (Y)
- 621. Urban Design Elements. Cr. 3**
 Introduction to the role of urban design and the concept of design criteria, design variables, and terminology. (B)
- 631. Housing Development. Cr. 3**
 Process of urban residential development; emphasis on housing market analysis, the construction industry, and residential finance. (Y)
- 632. Quantitative Techniques I. (GEG 642)(GPH 642). Cr. 4**
 Statistical inference with emphasis on applications including control tendency, dispersion, hypothesis testing, correlation and regression. (Y)
- 635. 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)
- 640. 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)
- 642. Quantitative Techniques II. Cr. 4**
 Student computer account required. Material fee as indicated in *Schedule of Classes*. Multivariate analysis with emphasis on applications, including matrix algebra, vector spaces, linear and non-linear models, principal components analysis, and programming approaches. (B)
- 651. Urban and Regional Systems. (GEG 651)(GPH 651). 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)
- 652. Transportation and Planning. Cr. 4**
 Introduction to the role of transportation in the planning process involving both regional and urban considerations. (Y)
- 655. (ULM 621) Regional, State, and Urban Economic Development: Policy and Administration. (P S 644)(ECO 665). Cr. 3**
 Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)
- 665. Planning and Development Law. Cr. 2 or 3**
 Techniques available to guide land development. Concepts in zoning, subdivision regulations, timing and sequence of land development. (Y)
- 667. (ULM 615) Political Economy of the Urban Ghetto. (ECO 681)(SOC 685). 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)
- 672. (GEG 665) Computer Assisted Mapping. (GPH 665). Cr. 4**
 Science of computer assisted mapping and hands-on computer assisted map production; geo-management issues. (B)
- 675. (ECO 552) State and Local Finance. Cr. 4**
 Prereq: ECO 201. Taxation, expenditure and debt management problems of state and local governments; grants-in-aid, subsidies, shared revenues and coordination of the financial policies of federal, state and local governments. Attention to problems, policies, and practices of governmental units in Michigan and neighboring states. (Y)
- 685. Cost-Revenue Workshop. Cr. 3 or 4**
 Offered for S and U grades only. No credit after U P 605. 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)
- 682. (GEG 672) Computer Applications for Spatial Analysis. (GPH 672). Cr. 4**
 Prereq: course in elementary statistics recommended. Introduction to computer software for spatial analysis, including spatial statistics, computer graphics, and computer cartography. (Y)

LABOR STUDIES

Office: 3178 Faculty/Administration Building

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 207) and the University General Education Requirements (see page 25), 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 15–43 and 442–443, respectively.

REQUIRED CORE COURSES (Twenty-one Credits)

	Credits
LBS 250 — Introduction to Labor Studies	4
LBS 470 — (WI) Senior Seminar	3
ECO 441 — Labor Institutions	4
HIS 529 — American Labor History	4
PSY 350 — Psychology of the Workplace	3
SOC 570 — Inequality and Social Class	3

Applied and Specialized Curriculum: Four courses (twelve credits) must be selected from the following lists:

RELATED COURSES (12 credits)

LBS 450 — Applied Labor Studies: Collective Bargaining	3
LBS 450 — Applied Labor Studies: Labor Law	3
LBS 450 — Applied Labor Studies: New Forms of Work Organization	3

PSY 571 — Dispute Resolution	3
PSY 554 — Motivation in the World of Work	3
PSY 563 — Group Dynamics	3
PSY 656 — Psychology of Union-Management Relations	3
HIS 563 — Socialism and the European Labor Movement	3
MGT 574 — Collective Bargaining	3
MGT 575 — Administering the Labor Agreement	3
PCS 500 — Dispute Resolution (Crj 594, P S 589, PSY 571)	3
P S 302 — Political Parties and Elections	4
P S 303 — Power and Pressure Groups	4
P S 304 — The Legislative Process	4

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, 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.

Effective Reading — Reading speed and comprehension.

America, Past and Present — Significant events and people in 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 — Function and benefits of 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)

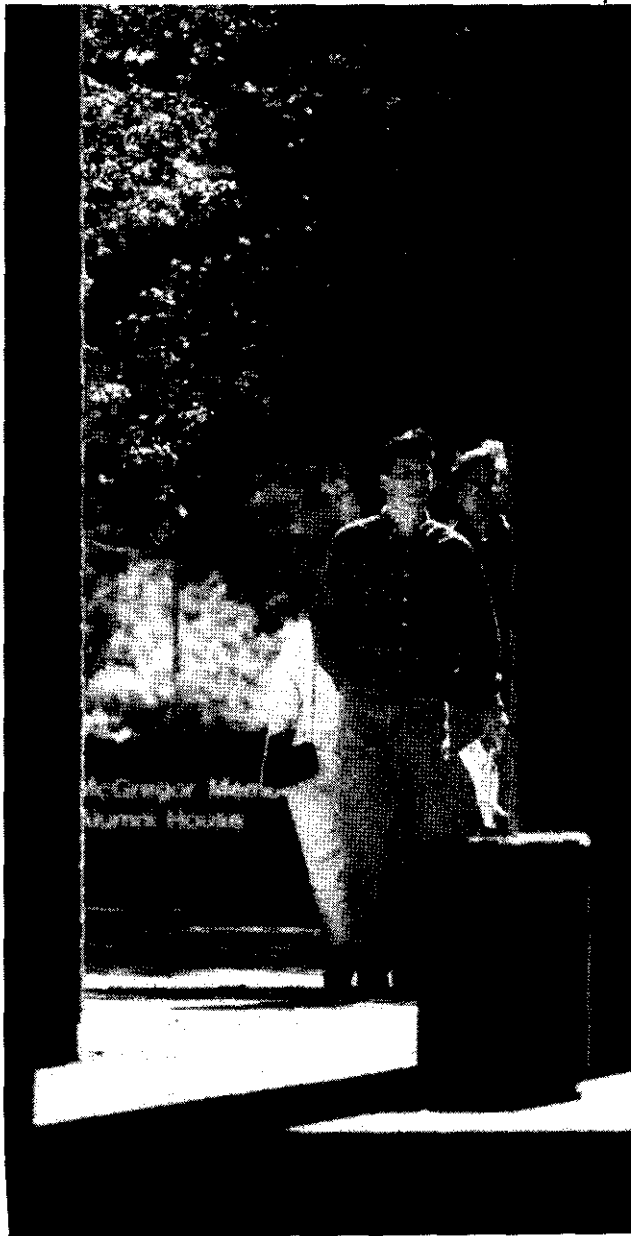
The following courses, are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

250. (HUM 250) Introduction to Labor Studies. Cr. 4
Diverse history of labor as reflected in the popular arts (films, songs, stories, and graphics). (T)

450. 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)

470. (WI) Senior Seminar. Cr. 3 (Max. 6)
Prereq: consent of instructor. Research, reflection, discussion and analysis of labor relations practice. (Y)

490. 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; 577-3453
Director: Frederic S. Pearson

Executive Committee

Sheldon Alexander, *Psychology*
Ronald Aronson, *Weekend College*
Barbara Aswad, *Anthropology*
Ronald Brown, *Political Science*
Gayle Chlebnik, *Physics*
Marc Cogan, *Humanities*
Jenni Dones, *College of Urban, Labor and Metropolitan Affairs*
Otto Feinstein, *Political Science*
Charlene Firestone, *Center for Urban Studies*
Lillian Genser, *Center for Peace and Conflict Studies*
Joella Gipson, *Education*
Eboe Hutchful, *Africana Studies*
Marjorie Katz, *Detroit Council of World Affairs*
Mark Kahn, *Economics (Emeritus)*
Bernice Kaplan, *Anthropology*
M. Marlyne Kilbey, *Psychology*
Jay Levin, *Economics*
Alexis Manaster-Ramer, *Computer Science*
Michael T. Martin, *Africana Studies*
Eugene Perrin, *Medicine*
Anne Rawls, *Sociology*
Jerome Reida, *Interdisciplinary Studies*
Alvin Saperstein, *Physics*
Gary Shields, *College of Urban, Labor and Metropolitan Affairs*
Melvin Small, *History*
James T. Statham, *Adjunct Faculty*
Maurice Waters, *Political Science*
Marvin Zalman, *Criminal Justice*

Co-Major Program

The Peace and Conflict Studies (PACS) Co-Major Program integrates a variety of practical courses and in-depth research programs within the study of universal human problems, offering students the unique opportunity to combine with their own majors training and study in the emerging field of dispute resolution. The curriculum deals with the most fundamental of human problems: how to resolve conflict, at the local, national, or international level. 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 social justice, ethnic and racial disputes, and violence.

The program complements a variety of disciplines dealing with resolving disputes, including: pre-law, sociology/psychology, government, economics, science and pre-medicine, business, history, social work, Africana studies, languages, criminal justice, religion, education, communications and media. The aim of the PACS program is to present peace studies in a practical, comprehensive format by: (1) encouraging individuals to take advantage of the hands-on experiences that they can obtain through the Center for

Peace and Conflict Studies and internships; (2) coordinating the approaches to human conflict now being presented in the University; (3) providing the tools and expertise needed for graduate work and the expanding career opportunities in fields associated with conflict resolutions, such as health care institutions or schools.

The PACS program is designed around core courses, a senior seminar, and seventeen credits in conflict-related elective courses, of which at least six credits must be upper-divisional. It is possible for some of the elective courses to count toward satisfaction of the requirements of the major department or to fulfill college Group Requirements. Students are encouraged to participate in the development of their curricula; in addition to selecting from the wide variety of suggested PACS electives, PACS co-majors are able to choose other elective courses with prior consent of the Director. Co-majors may also participate in the Peace and Conflict Studies Student Forum, which organizes speakers and other special educational programs on various subjects.

<i>CORE REQUIREMENTS (16 Credits)</i>	<i>credits</i>
PCS 200—Introduction to Peace and Conflict Studies	3
PCS 600—Senior Seminar in Peace and Conflict Studies	3

and any three of the following:

ECO 530—International Economic Relations	4
HIS 513—American Foreign Relations Since 1933	4
PCS 201—Topics in Peace and Conflict Studies	3-4
PCS 202—Science, Technology and War	4
PCS 500—Dispute Resolution	3
PCS 501—Internship on Dispute Resolution	3
PCS 550—Ethnicity	4
PHI 110—(PL) Contemporary Moral Issues	3
P S 281—World Politics	4
PSY 563—Group Dynamics	3
PSY 656—Psychology of Union-Management Relations	3
SOC 555—Collective Behavior: Masses, Mobs and Social Realities	3

ELECTIVES (17 Credits)

The University offers a large number of conflict-related courses 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.

College of Liberal Arts

AFS 260—Race in American Political and Social Institutions	3
AFS 321—The Black Community and Public Policy	4
AFS 342—Pan Africanism	4
AFS 386—Race, Class and the Criminal Justice System	3
AFS 511—Black Women in America	3
AFS 557—Race Relations in Urban Society	3
AFS 574—Ethnicity: The Politics of Conflict and Cooperation	4
ANT 310—Cultures of the World	3-4
ANT 311—Detroit Minorities: Arabs, Hispanics, and Blacks	3-4
ANT 514—Biology and Culture	3
ANT 520—Social Anthropology	3
ANT 524—Cross Cultural Study of Gender	3
BIO 569—Animal Behavior	3
CBS 243—History of Latinos in the United States	3
CLA 510—Law and Ancient Society	3-4
ECO 441—Labor Institutions	4
ECO 530—International Trade	4
ECO 560—Introduction to Development Economics	4
ENG 273—Languages of the World	3
FRE 270—(PL) Anguish and Commitment: European Existentialist Literature	3-4
GER 341—(FC) New Soil, Old Roots: the Immigration Experience	3

GPH 110—(SS) World Regional Patterns	4-5
GPH 581—Locational Issues in Hazardous Waste Management	3
HIS 305—United States and the Vietnam Experience	4
HIS 522—The Changing Shape of Ethnic America	3-4
HIS 529—American Labor History	4
HIS 548—Nazi Germany	3-4
PHI 327—Foundations of law	3
PHI 524—Special Topics in Social and Political Philosophy	4
P S 251—Introduction to Political Ideologies	4
P S 557—Marxism and Socialist Thought	4
P S 581—American Foreign Policy and Administration	4
P S 582—International Law	4
P S 583—International Conflict and Its Resolution	4
PSY 260—Psychology of Social Behavior	4
PSY 331—Abnormal Psychology	4
PSY 563—Group Dynamics	3
SOC 382—Theories of Crime and Delinquency	3
SOC 480—Outsiders, Outcasts, and Social Deviants	3
SOC 540—The Family	3
SOC 557—Race Relations in Urban Society	3
UP 521—Urban and Metropolitan Living	3

College of Education

EDS 662—Sociology of Urban Schools	2-3
SSE 673—New Perspectives in Social Studies Education	3

School of Business Administration

MGT 574—Collective Bargaining	3
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College of Lifelong Learning

GIS 316—(HS) World War I as a Turning point: Historical Perspectives	4
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School of Social Work

SW 101—Introduction to Social Work and Social Welfare	2-3
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Minor Program

The center for Peace and Conflict Studies offers an undergraduate minor program. Minor requirements consist of three courses: PCS 200, 202, and 600 (to be taken in order of their numerical sequence), as well as a minimum of six credits to be elected from courses in the lists of Co-Major Core Requirements and Electives cited above.

UNDERGRADUATE COURSES (PCS)

The following courses, numbered 090-699, are offered for undergraduate credit. Courses numbered 700-999, which are offered for graduate credit only, may be found in the graduate bulletin. Courses in the following list numbered 500-699 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 461.

200. Introduction to Peace and Conflict Studies. (HIS 250)(P S 282). 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)

201. Topics in Peace and Conflict Studies. (P S 283)(HIS 252). Cr. 1-4

Special topics relating to peace and conflict studies. (Y)

202. (PHY 202) Science, Technology, and War. (HIS 251) (P S 244). 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)

500. Dispute Resolution. (CRJ 594)(P S 589)(PSY 571). Cr. 3

Overview of the processes and sectors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. (Y)

501. Internship in Dispute Resolution. Cr. 3

Prereq: PCS 500. Offered for S and U grades only. Internship in dispute resolution or mediation agency in Detroit area. (T)

550. (P S 574) Ethnicity: The Politics of Conflict and Cooperation. (AFS 574). 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)

600. 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; 577-0541; Fax: 577-0022tr

Director: Bryan Thompson

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: Three core courses (ten credits) and twenty-two 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 15-43) and those of this college (see pages 442-443) and of the college sponsoring the major program taken as a cognate to the urban studies curriculum.

Core Requirements (10 credits)

	credits
U S 200 —(SS) Introduction to Urban Studies	4
U S 401 —Interdisciplinary Pro-Seminar	3

One of the following:

U S 292 —Political Science Internship	4
U S 600 —Internship	3
U S 601 —Supervised Field Experience	3
U S 605 —Independent Field Study	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:

AFS 321 — The Black Community and Public Policy	4
AFS 557 — Race Relations in Urban Society	3
ANT 311 — Detroit Minorities: Arabs, Hispanics, and Blacks	3-4
ANT 506 —Urban Anthropology	3
ECO 580 —Urban and Regional Economics I	3
ECO 665 — Regional, State and Urban Economic Development: Policy and Administration	3
GPH 311 — Urban Community	3-4
GPH 313 — (SS) Introductory Urban Geography	4
GPH 565 —Metropolitan Detroit	4
GPH 570 —Urban Canada	4
GPH 613 —Advanced Urban Geography	4
GPH 615 —Internal Structure of the City	4
GPH 624 —Industrial Geography	4
GPH 628 —Marketing Geography	4
GPH 651 —Urban and Regional Systems	4
HIS 530 — Economic History of the United States	4

HIS 534 — History of Ancient Rome	3
HUM 103 — (VP) Exploring the Arts in Detroit	4
N E 303 —Great Cities of the Near East	3
P S 224 —(SS) Introduction to Urban Politics and Policy	4
P S 522 — Issues in Urban Public Policy and Management	4
PSY 558 — Consumer Psychology	3
SOC 202 — (SS) Social Problems	3
SOC 351 —(SS) The Nature and Impact of Population on Society	3
SOC 540 — The Family	3
SOC 550 —Urban and Metropolitan Living	3
ULM 621 — Regional, State and Urban Economic Development: Policy and Administration	3
U P 121 — Understanding the Built Environment	3
U P 511 —Urban Planning Process	3-4
U P 605 — Financial Aspect of Urban Planning	3-4
U P 631 —Housing Development	3
U P 652 —Transportation and Planning	4
U P 665 —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 090-699, are offered for undergraduate credit. Courses in the following list numbered 500-699 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 461.

URBAN STUDIES (U S)

- 200. (SS) Introduction to Urban Studies. (SOC 250) (GPH 200)(HIS 200)(P S 200). 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)
- 292. (P S 292) 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)
- 401. Interdisciplinary Pro-Seminar. Cr. 3**
Prereq: U S 200. Undergraduate credit only. Topics to be announced in *Schedule of Classes*. (Y)
- 456. Salford-WSU Exchange: Interdisciplinary Seminar. Cr. 12**
Prereq: consent of departmental adviser. Open only to students admitted to Salford-WSU Exchange Program. The Salford-WSU Exchange is a program offering juniors and seniors an opportunity for cross-cultural comparative study, particularly as it relates to learning about urban-related concerns. Salford courses are chosen by students with approval of their department, consistent with their course of study. (Y)
- 600. (CRJ 600) 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
452 *College of Urban, Labor, and Metropolitan Affairs*

state, county and local levels; opportunities include agency procedure and policy, patrol, case analysis, report writing and research. (T)

601. Supervised Field Experience. Cr. 3

Prereq: U S 401 and written consent of instructor. Undergraduate credit only. Field experience correlating theory with practical work. Meets with FAC 592. (Y)

605. (GEG 652) Independent Field Study. (GPH 652). Cr. 2-4(Max. 4)

Prereq: U S 401 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 (ULM)

307. Michigan Politics. (P S 307). Cr. 4

History and overview of Michigan politics: structure, process, current issues. (B)

325. (P S 325) Detroit Politics: Continuity and Change in City and Suburbs. (HIS 324). 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)

599. Special Topics. Cr. 1-4(Max. 8)

Prereq: junior, senior, or graduate standing. (Y)

610. Class, Race, and Politics in America. (P S 605) (HIS 511)(SOC 733)(U P 703)(AFS 610). Cr. 3

Prereq: senior standing or consent of instructor. Historical and analytic investigation into the role of class and race in American politics. (Y)

615. Political Economy of the Urban Ghetto. (ECO 681) (U P 667)(SOC 685). 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)

621. Regional, State, and Urban Economic Development: Policy and Administration. (P S 644)(ECO 665) (U P 655). Cr. 3

Prereq: graduate standing. Examination of regional, state, and local economic development theory, analysis, policy and administration. (B)

635. Sociology of Urban Health. (SOC 675). 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)

699. Special Topics. Cr. 3

Open only to graduate students. (I)

ADDITIONAL ACADEMIC PROGRAMS

UNIVERSITY COUNSELING and PLACEMENT SERVICES

Office: 573 Student Center; 577-3398; Fax: 577-0617

Executive Director: John A. Crusoe, M.B.A.

Office: 652 Student Center

Academic Development Staff

Deborah B. Daiek, Ph.D., Associate Director

Victoria Cliett, M.A.

Deborah M. Holland, M.A.

Mark A. Jackson, Ph.D.

Career and Personal Development Staff

Janice W. Green, Ph.D., Associate Director

Wayne H. Chubb, Ph.D.

Debby T. Tang, Ph.D.

In addition to services described on pages 29 and 41, University Counseling Services offer non-credit courses to help students ensure successful educational outcomes, develop skills for University and career life, and avoid commonly-encountered difficulties.

UNDERGRADUATE COURSES

For interpretation of numbering system and signs, see page 461.

READING EFFICIENCY (R E)

090. Learning Theory and Study Skills. Cr. 0

Offered for S and U grades only. No degree credit. Learning and memory theory to develop basic reading skills and effective study habits. Memory improvement, time scheduling, note-taking methods, textbook chapter reading and test-taking techniques. (T)

091. 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 available. (T)

094. 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)

095. Analytical Reading for Textbook Study Cr. 0

Offered for S and U grades only. No degree credit. Analytical, developmental reading method to increase reading comprehension; critical thinking skills required for textbook study-reading. (T)

096. 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)

098. 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)

091. 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 (313) 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 February 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 \$100.00 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 \$100.00 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 eight 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 wish to become Air Force pilots receive approximately thirteen hours of dual

and solo light aircraft instruction under the supervision of an Air Force instructor pilot. This training usually takes place between the junior and senior 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.

UNDERGRADUATE COURSES (ASC)

The following courses are offered for undergraduate credit. For interpretation of numbering system, signs and abbreviations, see page 461.

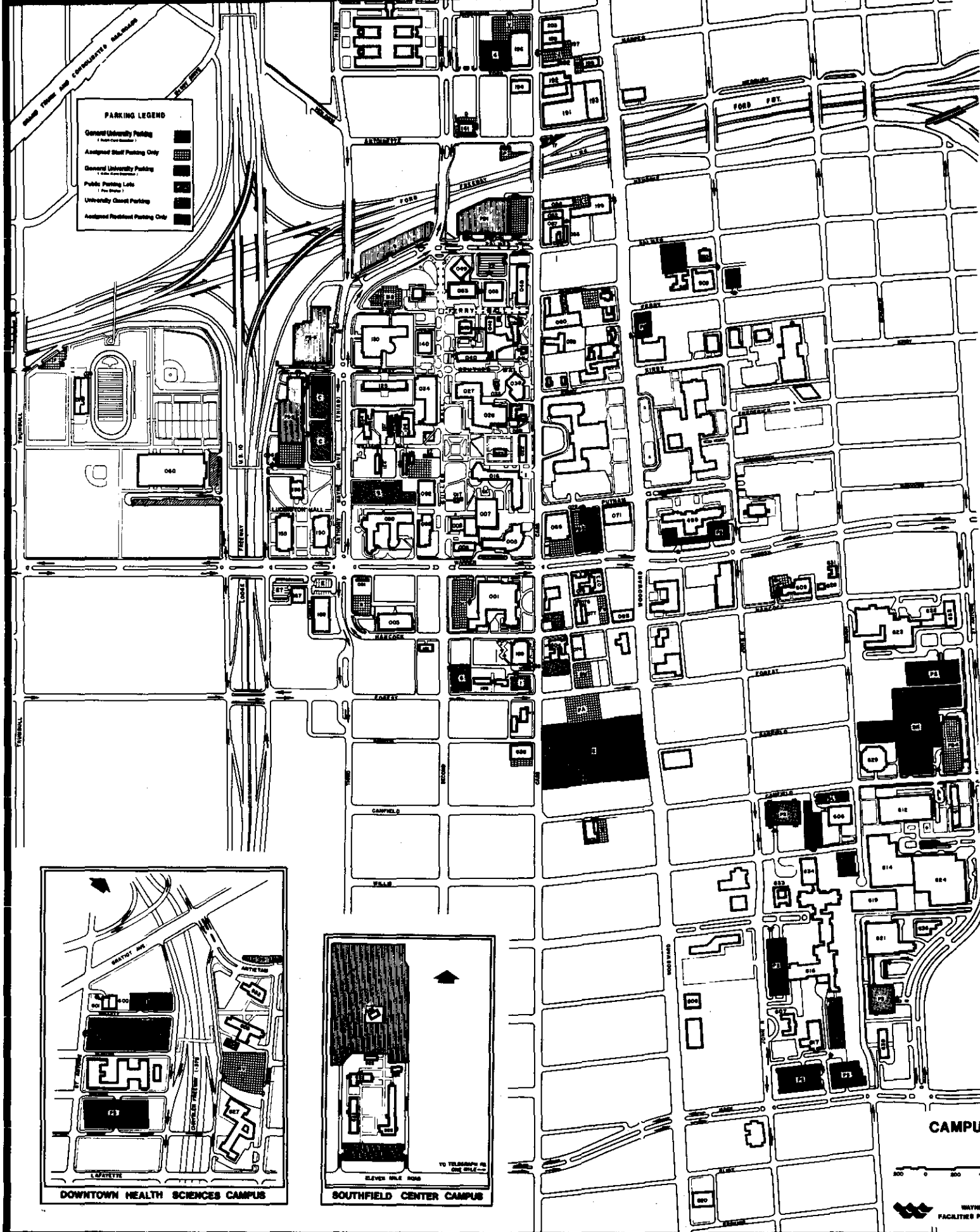
102. Air Force Today II. Cr. 1

Prereq: admission to ROTC; consent of instructor. Continuation of ASC 101. (W)

411. National Security Forces in Contemporary American Society II. Cr. 3

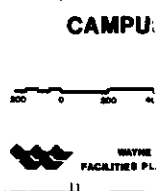
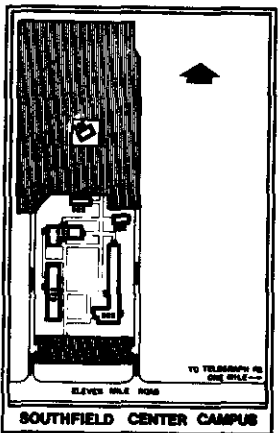
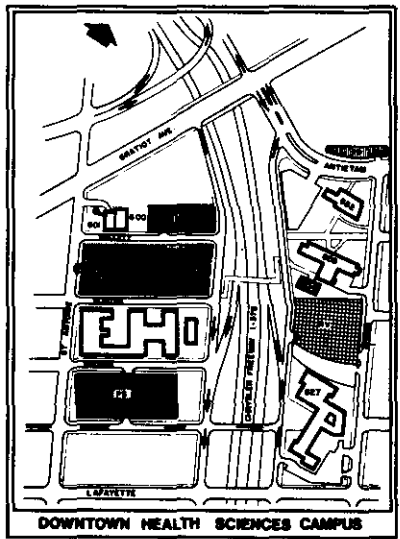
Prereq: admission to AFROTC and consent of instructor; ASC 410. Continuation of ASC 410. (W)

**CAMPUS MAPS
SIGNS and ABBREVIATIONS
INDEX**



PARKING LEGEND

General University Parking (1 Hour Cost Included)	[Symbol]
Academy Staff Parking Only	[Symbol]
General University Parking (1 Hour Cost Included)	[Symbol]
Public Parking Lots (1 Hour Cost)	[Symbol]
University Chautauk Parking	[Symbol]
Academy Resident Parking Only	[Symbol]



LEGEND OF UNIVERSITY AND ASSOCIATED BUILDINGS

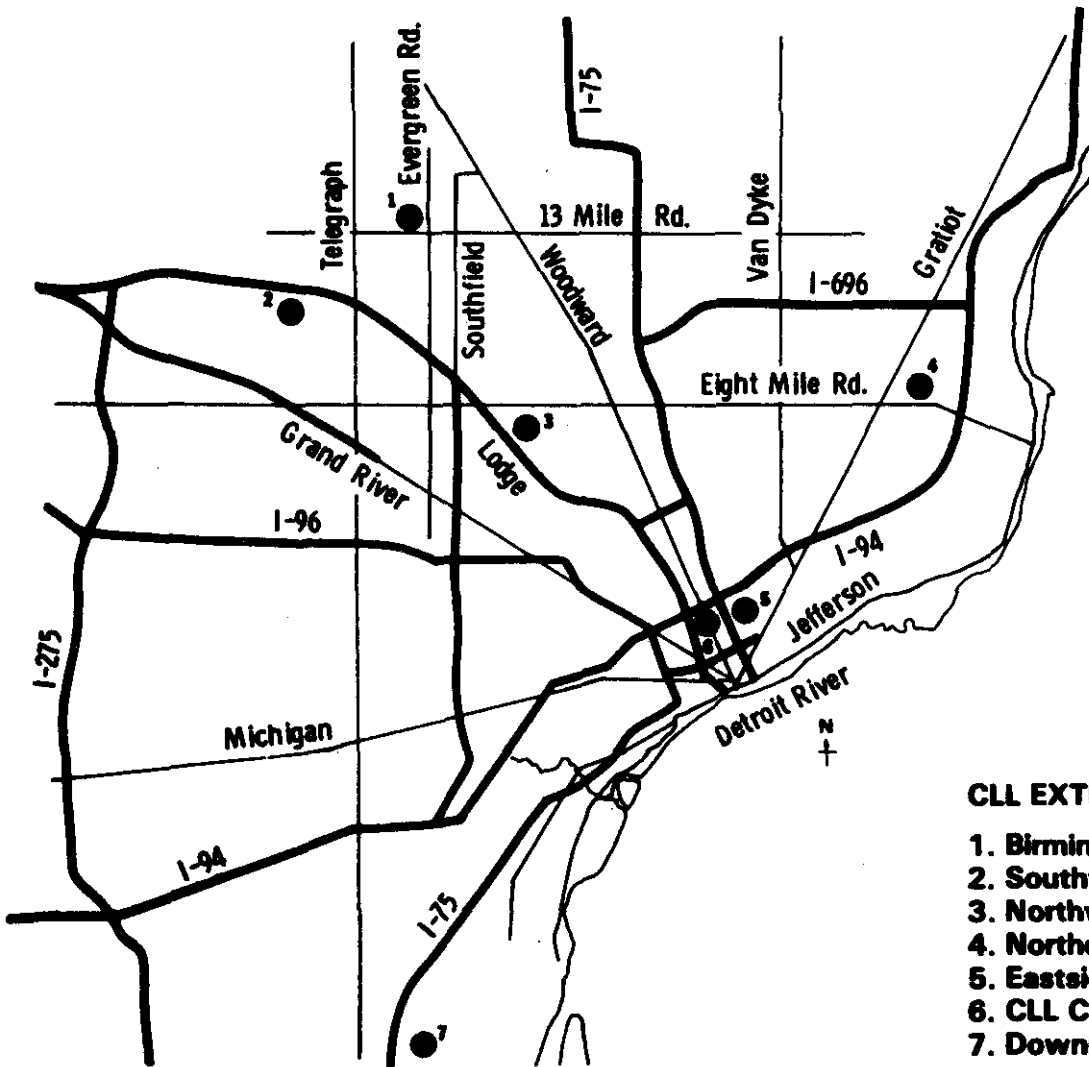
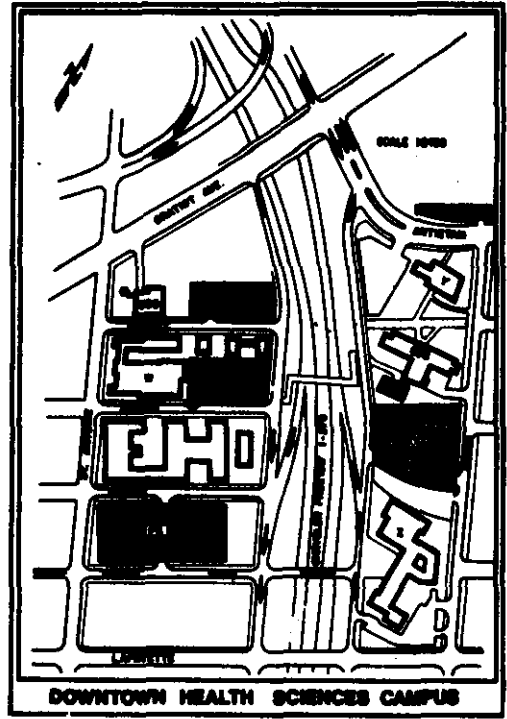
- 001 Old Main – 4841 Cass Ave.
- 003 Physics Building – 666 West Hancock Ave.
- 005 Science Hall – 5045 Cass Ave.
- 006 Life Science Building – 5000 Gullen Mall
- 007 Chemistry Building – 5101 Cass Ave.
- 008 Science & Engineering Library – 5048 Gullen Mall
- 016 State Hall – 5143 Cass Ave.
- 017 Frederick Linsell House – 5104 Gullen Mall
- 022 Meyer & Anna Prentis Building – 5201 Cass Ave.
- 023 Helen L. DeRoy Auditorium – 5203 Cass Ave.
- 026 G. Flint Purdy Library – 5244 Gullen Mall
- 027 Kresge Library – 5294 Gullen Mall
- 028 William C. Rands House – 5229 Cass Ave.
- 033 Max Jacob House (Art History Bldg.) – 451 Reuther Mall
- 034 Student Center Building – 5221 Gullen Mall
- 036 W. P. Reuther Library of Labor & Urban Affairs – 5401 Cass Ave.
- 038 Emma Lazaroff Schaver Music Building – 5451 Cass Ave.
- 039 Community Arts Center – 450 Reuther Mall
- 040 Art Building – 5400 Gullen Mall
- 041 Music Annex – 5415 Cass Ave.
- 042 Alumni House – 441 Ferry Mall
- 043 McGregor Memorial Conference Center – 495 Ferry Mall
- 045 Parking Structure #5 – 5501 Anthony Wayne Dr.
- 048 Richard Cohn Building – 5557 Cass Ave.
- 049 Law School Annex – 495 West Palmer Ave.
- 050 Natural Science Building – 5501 Gullen Mall
- 051 Parking Structure #1 – 450 West Palmer Ave.
- 052 Art Building North – 5740 Cass Ave.
- 053 Law School Building – 468 Ferry Mall
- 054 University Storage Warehouse – 5750 Cass Ave.
- 055 70 West Palmer Ave.
- 056 Parking Structure #2 – 5150 John Lodge Service Dr.
- 057 5700–5724 Cass Ave.
- 058 Thomas S. Sprague House – 80 West Palmer Ave.
- 060 University Services Building – 5454 Cass Ave.
- 064 Beecher House (University Development Offices) – 5475 Woodward Ave.
- 069 David Mackenzie Hall – 5050 Cass Ave.
- 072 Parking Structure #3 – 69 Putnam St.
- 073 51 West Warren Ave.
- 074 95 West Hancock Ave.
- 075 Psychology Building – 71 West Warren Ave.
- 076 Biology Research Building – 84 West Hancock Ave.
- 077 Public Safety Building – 76 West Hancock Ave.
- 078 Stadium Auxiliary Building – 1401 Edsel Ford Service Dr.
- 079 Wayne State Stadium – 1401 Edsel Ford Service Dr.
- 080 Matthaei Physical Education Center – 5101 John Lodge Service Dr.
- 081 Auxiliary General Office Building – 701 West Warren Ave.
- 089 Biological Sciences Building – 5047 Gullen Mall
- 090 Engineering Building – 5050 Anthony Wayne Dr.
- 092 Wayne State University Bookstore – 5125 Gullen Mall
- 117 5165 Gullen Mall
- 120 Katherine Faville Residence Hall – 645 Williams Mall
- 121 Humanities Office – 631 Williams Mall
- 124 Santa Fe Apartments – 681 Williams Mall
- 125 Helen N. Joy Student Services Building – 655 West Kirby Ave.
- 130 Faculty/Administration Building – 656 West Kirby Ave.
- 134 Helen L. DeRoy Apartments – 5200 Anthony Wayne Dr.
- 136 Chatsworth Tower Apartments – 630 Williams Mall
- 137 Chatsworth Annex – 650 Williams Mall
- 140 Education Building – 5425 Gullen Mall
- 141 Music Building North – 5900 Second Ave.
- 150 General Lectures – 5045 Anthony Wayne Dr.
- 155 Alex Manooogian Hall – 906 West Warren Ave.
- 156 St. Andrew's Church – 918 Ludington Mall
- 167 Engineering Technology Building – 4855 Fourth St.
- 169 Bioengineering Building – 818 West Hancock Ave.
- 181 Sherbrooke Apartments – 615 West Hancock Ave.
- 186 Forest Apartments – 460 West Forest Ave.
- 188 David Mackenzie House – 4735 Cass Ave.
- 189 Hilberry Theatre – 4743 Cass Ave.
- 191 Administrative Services Bldg. #1&2 – 5950 Cass Ave.
- 192 Administrative Services Bldg. #3 – 5980 Cass Ave.
- 193 Computing Center Building – 5925 Woodward Ave.
- 194 Pontiac Building (Transp. Services Bldg.) – 425 York St.
- 195 University Custodial Grounds Bldg. – 5743 Woodward Ave.
- 196 Criminal Justice Building – 6001 Cass Ave.
- 197 General Services Annex #1 – 6012 Cass Ave.
- 198 General Services Building #2 – 6030 Cass Ave.
- 199 Leonard N. Simons Building – 5959 Woodward Ave.
- 503 77 West Canfield Ave.
- 504 Thompson Home – 4756 Cass Ave.
- 509 Pauline Knapp Bldg. (Merrill-Palmer) – 87 East Ferry Ave.
- 510 Skillman Building (Merrill-Palmer) – 100 East Palmer Ave.
- 511 Charles L. Freer House (Merrill-Palmer) – 71 East Ferry Ave.
- 522 Southfield Center – 25610 West Eleven Mile Rd.
- 600 Clinical Laboratory Building – 645 Mullett St.
- 601 Occupational & Environmental Health Lab – 625 Mullett St.
- 604 Health Science Annex – 1390 Chrysler Service Dr.
- 605 Shapero Hall – 1400 Chrysler Service Dr.
- 608 Vera Shiffman Medical Library – 4325 Brush
- 609 C. S. Mott Center – 275 East Hancock Ave.
- 610 Mortuary Science Building – 627 West Alexandrine St.
- 611 Helen Vera Prentis Lande Bldg. – 550 East Canfield Ave.
- 612 Gordon H. Scott Hall of Basic Medical Science – 540 East Canfield Ave.
- 613 Parking Structure #4 – 545 East Canfield Ave.
- 615 Kresge Eye Institute – 3994 John R. Ave.
- 620 Bonstelle Theatre – 3424 Woodward Ave.
- 628 Louis M. Elliman Clinical Research Bldg. – 421 East Canfield Ave.
- 639 Federal Mogul Library Annex – 4455 Cass Ave.
- A Detroit Historical Museum – 5401 Woodward Ave.
- B Detroit Public Library – 5201 Woodward Ave.
- BB First Unitarian Universalist Church – 4605 Cass Ave.
- C Public School Center Building – 5057 Woodward Ave.
- CC Our Lady of the Rosary Church – 5930 Woodward Ave.
- DD Cathedral Church of St. Paul – 4800 Woodward Ave.
- E International Institute – 111 East Kirby Ave.
- EE First Congregational Church of Detroit – 33 East Forest Ave.
- F Detroit Institute of Arts (DIA) – 5200 Woodward Ave.
- FF First Church of Christ, Scientist (Reading Room) – 4830 Cass Ave.
- G Rackham Educational Memorial Building – 60–100 Farnsworth Ave.
- H Detroit Science Center – 5020 John R. Ave.
- I Center for Creative Studies – 245 East Kirby Ave.
- J Michigan Cancer Foundation – 110 East Warren Ave.
- K Hannan House – 4750 Woodward Ave.
- M Harper Hospital – 3990 John R. Ave.
- N Rehabilitation Institute – 261 Mack Ave.
- P Children's Hospital of Michigan – 3901 Beaubien St.
- R Ronald McDonald House – 3911 Beaubien St.
- T University Health Center (UHC) – 4201 St. Antoine Blvd.
- U Detroit Receiving Hospital (DRH) – 4201 St. Antoine Blvd.
- W-1 Hutzel Hospital – 4707 St. Antoine Blvd.
- W-2 Hutzel Professional Building – 4727 St. Antoine Blvd.
- W-3 Hutzel Annex – 4827 Brush St.
- W-4 4454–4466 Woodward Ave.
- Y Wayne County Medical Society – 1010 Antietam St.
- Z Lafayette Clinic – 951 East Lafayette Blvd.



MAP
 100 FEET
 AUGUST 26, 1988
 UNIVERSITY
 OF MICHIGAN

DOWNTOWN MEDICAL CENTER

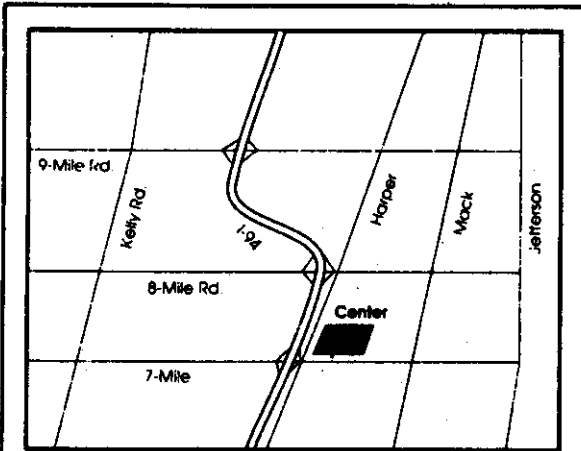
- 600 Clinical Laboratory Building
- X Detroit General Hospital
- W Detroit Memorial Hospital
- 604 Health Sciences Annex
- 605 Health Sciences
- Z Lafayette Clinic
- Y Wayne County Medical Society



CLL EXTENSION CENTERS

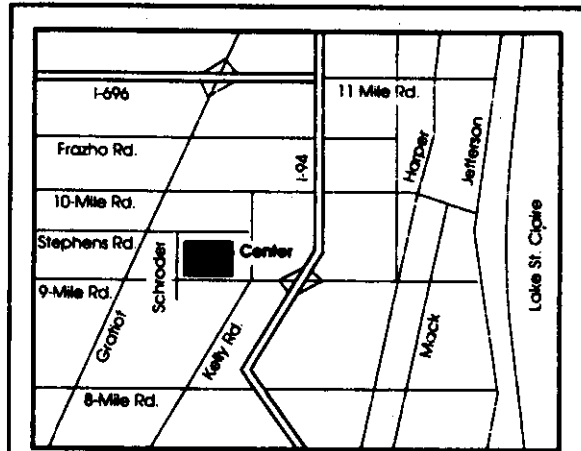
1. Birmingham Center
2. Southfield Center
3. Northwest Center
4. Northeast Center
5. Eastside Center
6. CLL Campus Office
7. Downriver Center

CLL CENTER LOCATIONS



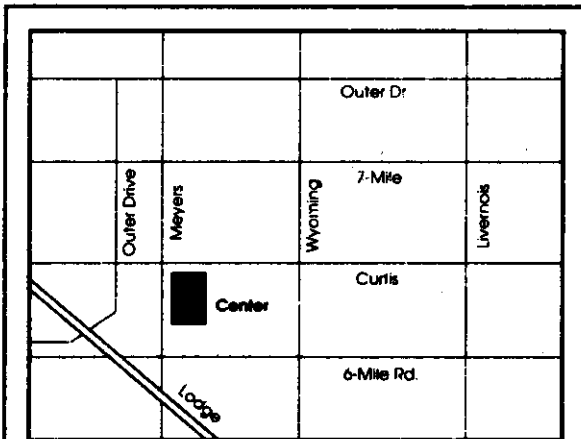
Harper Woods Center
 Bishop Gallagher H. S.
 19360 Harper
 Harper Woods, MI 48225
 881-2438

Center Hours:
 M-Th 5:00 p.m. - 10:00 p.m.
 (Counseling by appointment)



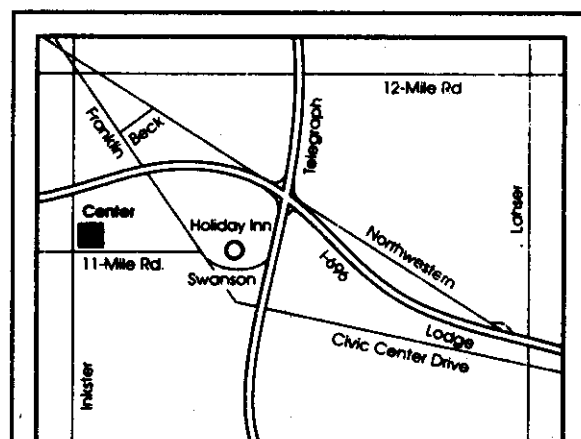
Northeast Center
 St. Basil School
 22860 Schroeder
 East Detroit, MI 48021
 771-3730

Center Hours:
 M-Th 8:30 a.m. - 10:00 p.m.
 F 8:30 a.m. - 5:00 p.m.
 S 9:00 a.m. - 4:00 p.m.
 (Counseling by appointment)



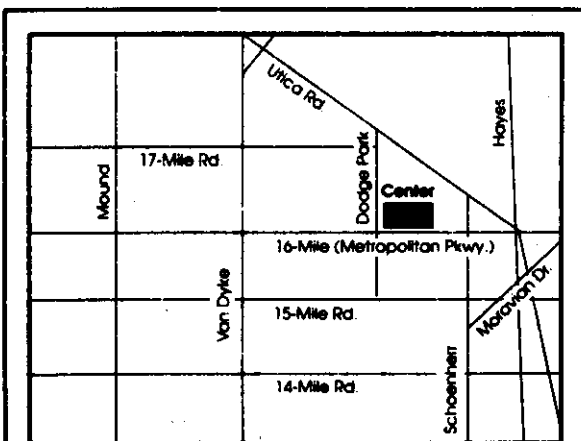
Northwest Activities Center
 18100 Meyers
 Detroit, MI 48235
 577-2937

Center Hours:
 M-Th 8:30 a.m. - 10:00 p.m.
 F 8:30 a.m. - 5 p.m.
 Sat 8:30 a.m. - 12:30 p.m.
 (Counseling by appointment)



Southfield Center
 Signature Office Building
 27300 W. Eleven Mile
 Southfield, MI 48034
 358-2104 577-3592

Center Hours:
 M-Th 8:30 a.m. - 10:00 p.m.
 F 8:30 a.m. - 5:00 p.m.
 S 9:00 a.m. - 4:00 p.m.
 (Counseling by appointment)

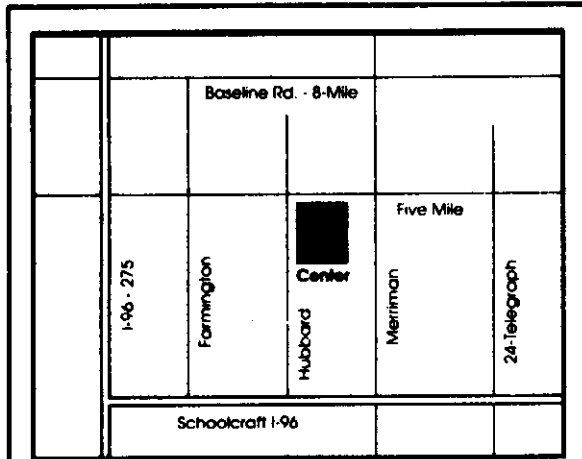


Sterling Heights Center
 Heritage Junior High
 37400 Dodge Park
 Sterling Heights, MI 48312
 978-7881

Center Hours:
 M-Th 8:30 a.m. - 10:00 p.m.
 F 8:30 a.m. - 5:00 p.m.
 S 9:00 a.m. - 4:00 p.m.
 (Counseling by appointment)

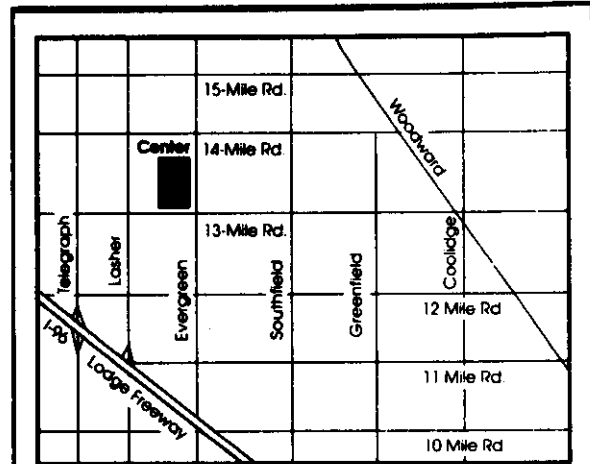
PLEASE NOTE: CLL Center office hours and hours of registration ARE DIFFERENT. For information on specific registration hours, please contact any CLL Center.

CLL CENTER LOCATIONS



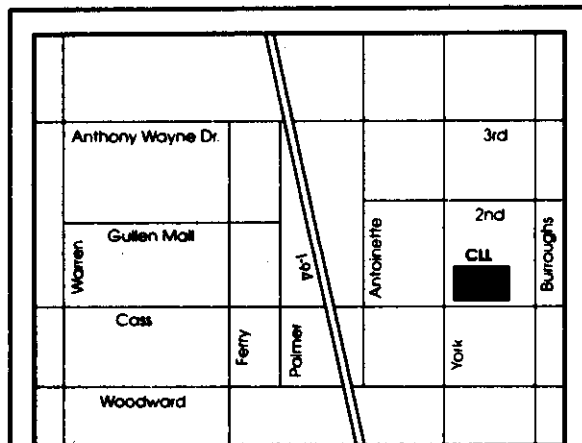
Bentley Center (Livonia)
 15100 Hubbard
 Livonia, MI 48154

Center Hours:
 Contact the US/WCP
 Office at 577-0832
 (Counseling by appointment)



Birmingham Center
 Groves High School
 20500 W. Thirteen Mile
 Birmingham, MI 48010
 642-2661

Center Hours:
 M-Th 8:30 a.m. - 10:00 p.m.
 F 8:30 a.m. - 5:00 p.m.
 S 9:00 a.m. - 4:00 p.m.
 (Counseling by appointment)

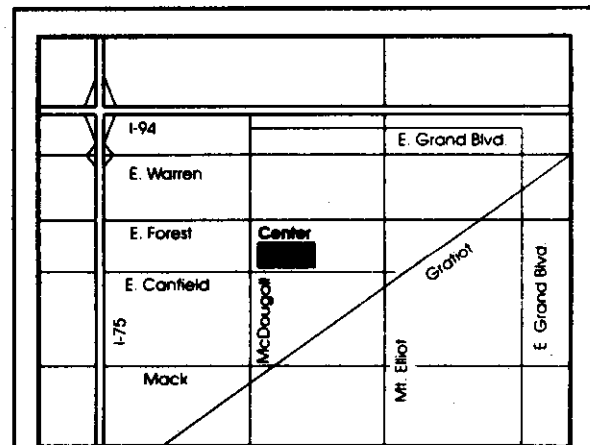


CLL Registration Services
 Criminal Justice Building
 6001 Cass, Room 329
 Detroit, MI 48202
 577-0832

Office Hours:
 M-F 8:30 a.m. - 5:00 p.m.

**US/WCP
 Registration Services**
 Criminal Justice Building
 Detroit, MI 48202
 577-0832

Office Hours:
 8:30 a.m. - 5:00 p.m.



Eastside Center
 3127 E. Canfield
 Detroit, MI 48207
 577-4701
 (Counseling by appointment)

Center Hours:
 M 8:30 a.m. - 8:30 p.m.
 Tu 8:30 a.m. - 8:30 p.m.
 W 8:30 a.m. - 9:30 p.m.
 Th 8:30 a.m. - 8:30 p.m.
 F 8:30 a.m. - 5:00 p.m.

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PLEASE NOTE: CLL Center office hours and hours of registration ARE DIFFERENT. For information on specific registration hours, please contact any CLL Center.

SIGNS and ABBREVIATIONS

SUBJECT AREA CODES

Subject area codes are two- or three-letter prefixes to the numbers used to identify courses offered by the University. The following index identifies the subject content of these codes and indicates the page number on which courses may be found.

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COURSE NUMBERING SYSTEMS

For the College of Education

000-499 Undergraduate credit only.
500-699 Undergraduate or graduate credit.

For the Faculty of Pharmacy

000-299 Preprofessional Courses.
300-399 First Professional Year Courses.
400-499 Second Professional Year Courses.
500-599 Third Professional Year Courses.
600-699 Undergraduate/Graduate Courses.

For all other Schools and Colleges

000-099 No degree credit; graded S and U.

School of Business Administration: Elementary courses auxiliary to the usual academic program.

College of Engineering: Orientation courses.

100-199 Primarily freshman courses; open to all undergraduates.

200-299 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.

300-499 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.

500-699 Junior and senior courses; undergraduate and graduate credit.

SYMBOLS and ABBREVIATIONS

Used in Course Listings

Course Offering Frequency: Parenthetical letters at the end of course descriptions identify the term and frequency courses will be offered.

(T) Offered every term.
(Y) Offered at least once every academic year (Fall or Winter, not Spring/Summer).
(F) Offered Fall Term.
(W) Offered Winter Term.
(S) Offered Spring/Summer Term.
(B) Offered every other year.
(I) Offered irregularly.

Course Activity: The following abbreviations used in Courses of Instruction 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
TV — Television

Cr. *credit:* Amount of credit is 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.

Prerequisite courses must be completed prior to enrollment in courses for which they are listed. *Corequisite courses* must be taken simultaneously. It is the responsibility of students to complete all prerequisites before registering for a course with such requirements and to register for corequisites indicated for a course. Departments may waive prerequisites and corequisites in accordance with academic policy.

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.

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